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Biblical Measures and their Translation

Notes on Translating Biblical Units of Length, Area, Capacity, Weight, Money and Time

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Abstract

This paper presents an overview of all units of measurement in both the Old and New Testaments. And, as a help for translators, it specifically provides the modern equivalent for each measure. Special attention is also given to the differences between the *short* and the *long cubit*, as well as a discussion about the sizes of the *ephah* and the *bath*. In addition, this paper argues that the acknowledged differences between pre- and postexilic units of measurement should be taken into consideration in any translation, even if precise definitions may not be possible. Furthermore, it proposes that measures of capacity should be rendered as certain measures of weight, if this is more acceptable in the host culture. Lastly, while the usage of metric equivalents is seen as fitting in certain situations, this approach may also raise unique problems, and these are addressed. Some of these problems include dealing with symbolic numbers and verses which, in the original text, explain one measurement term by using another, and thus function as a kind of footnote. Other issues of translation are also touched upon as well; however, what is not included is a discussion of those discrepancies that seem to exist between some passages of I & II Chronicles on the one side, and their parallel texts in I & II Kings on the other.

Contents

Acronyms and abbreviations

English Translations

AB	Anchor Bible
CEV	Contemporary English Version
ESV	English Standard Version
GW	God's Word
JB	Jerusalem Bible
NAB	New American Bible
NASB	New American Standard Bible
NCV	New Century Version
NET	New English Translation
NIV	New International Version
NJB	New Jerusalem Bible
NLT	New Living Translation
NRSV	New Revised Standard Version
REB	Revised English Bible
RSV	Revised Standard Version
TEV	Today's English Version

German Translations

GCL	German Common Language Translation ("Gute Nachricht Bibel")
HFA	Hoffnung für alle ("Hope for All"), translation into colloquial German

Reference Works

ABD	Anchor Bible Dictionary
BASOR	Bulletin of the American Schools of Oriental Research
BHQ	Biblia Hebraica Quinta
BHS	Biblia Hebraica Stuttgartensia
DCH	Dictionary of Classical Hebrew
HALOT	Hebrew and Aramaic Lexicon of the Old Testament
HOTTP	Hebrew Old Testament Text Project
ICC	International Critical Commentary
ISBE	International Standard Bible Encyclopedia
LN	Greek-English Lexicon by Louw and Nida
NBD	New Bible Dictionary
NICOT	The New International Commentary on the Old Testament
NIDOTTE	New International Dictionary of Old Testament Theology and Exegesis
NP	Der neue Pauly. Enzyklopädie der Antike
RH	Realia Handbook
SDBH	Semantic Dictionary of Biblical Hebrew
TBT	The Bible Translator
TH	UBS Handbooks for Translators
TOTC	Tyndale Old Testament Commentaries
WBC	Word Biblical Commentary
WSB	Wuppertaler Studienbibel

For details, see Appendix A.

Abbreviations

cf.	compare
cm.	centimeter(s)
ff.	following pages
fig.	figurative
fn.	footnote
fr.	from
LXX	Septuagint
MT	Masoretic Text
m.	meter(s)
NT	New Testament
OT	Old Testament
PS	Peter Schmidt (that is, I, the author's personal comment)
rd.	read
sic	spelling/grammatical error copied as originally written
s.v.	under the word
vrss.	versions

Note: Emphases marked by italics, either within short quotes in the text or set off as extended quotes, are mine. In addition, words that appear within brackets in the same environments are my interpretation of the contextual referent. Translations of quotes from works written in German are mine as well. (*PS*)

Introduction

The topic of Biblical measurements can be confusing to the translator. To begin with, there are approximately forty units of measurement mentioned in the Bible, most of which are not used today and therefore generally unknown. Then, not all measures fit into one system and differing systems exist side by side. Furthermore, scholars generally lack specific evidence to determine the value of each term precisely and consequently today's translations do not all follow the same system of conversion. Nor does it help that American, British and International metric systems are all used in Biblical literature when giving modern equivalents.

In translating the entire Bible, one can take the pragmatic approach and follow one widely-known translation throughout. However, for those who want to make more informed decisions for the translation on which they are working, it seems advisable to first establish a framework for rendering the various measures, rather than treating each on a case by case basis. The down side of taking that route, of course, is consulting different resources from different Biblical works and perhaps ending up with contradicting data in the translation! This would be especially true, if a number of people work on different Biblical books.

As always in translation, one needs to take two steps and for both of these steps this paper should be helpful. First, an effort is made by the translator to collect the data available from various reference works for determining the value of an ancient measurement. This, I have attempted to do in this paper in order to save the translator from doing his own research for each measure.[1] Secondly, the actual value of each measure needs to be translated; that is, communicated meaningfully into the host language. Thus, several aspects regarding this task are also discussed and suggestions presented.

Before leaving the introduction, I need to add: In this paper I do not pretend to contribute anything particularly new to the research that has already been published regarding weights and measures, but rather I present the data—and arguments—from relevant books as far as they seem necessary for making informed translation choices. Some simplifications, however, are unavoidable. Lastly, the few occurrences of terms of measurement in the Aramaic sections of the Old Testament are included, but those problems regarding numbers cited in I & II Chronicles—which seem to mismatch those in I & II Kings—could not be dealt with at this time.

1 Length and distance

1.1 Table and remarks

The אַמָּה *('amâ) "cubit"* is by far the most frequently used measure for length in the Old Testament, and thus will serve as the basic unit in this paper. Table 1 shows the system of units related to the *cubit*. For more on the length of the *cubit*, however, see section 1.4.

[1] Perhaps a caveat is warranted here in that scholars at times admit that there are many open questions in this process.

Table 1

OT terms	*finger* אֶצְבַּע	*hand-breadth* טֶפַח	*span* זֶרֶת	*cubit* אַמָּה	*long cubit*	*reed* קָנֶה
ratio to *cubit*	1/24	1/6	1/2	1	1 *cubit* & 1 *hand-breadth*	6 *long cubits*
in cm	1.875	7.5	22.5	45	52.5	315
in inches	0.73	2.92	8.75	17.5	20.5	123
NT term					πῆχυς	

The אֶצְבַּע *(’eṣba‘) “finger”* as a measure only occurs in Jeremiah 52:21 as “four *fingers*”—which is equal to a *handbreadth*.

The טֶפַח *(ṭepaḥ)* / טֹפַח *(ṭōpaḥ) “handbreadth”* is the breadth of the four *fingers*; that is, the breadth of the palm at the base of the *fingers*. The form טַפְחָה *(ṭapḥâ)* is used figuratively of a lifetime in Psalms 39:5 [MT6].

The זֶרֶת *(zeret) “span”* is the distance between the stretched-out extended thumb and the tip of one’s little finger.

The אַמָּה *(’amâ)* or πῆχυς *(pēchus) “cubit”* is the distance from elbow to fingertip.

The קָנֶה *(qaneh) “reed”* denotes both the *reed* as a plant; and, derived from that, a measuring rod of a defined length. In this latter sense it only occurs in Ezekiel.

1.2 Additional measures of length

The גֹּמֶד *(gōmed)* is found only in Judges 3:16 in describing Ehud’s sword. Although the exact meaning is unknown, some read it as a *“cubit.”* This interpretation certainly is a possibility. Brown-Driver-Briggs in *Brown et al.* (1906) state: “…*cubit* (fr. elbow to knuckles of clenched (contracted) hand…)” HALOT, however, notes: *“short cubit…*, ? *span.”* In any case the sword was short enough to be hidden under one’s clothing, but long enough to be driven through a “very fat man,” that is, Eglon’s belly and back.

The phrase כְּבַחֲצִי מַעֲנָה צֶמֶד שָׂדֶה *(k^{e}baḥ^{a}ṣî ma‘^{a}nâ ṣemed śādeh)* “…in about *half of a furrow* in an acre of land,” which occurs in I Samuel 14:14, requires some interpretation. NASB renders the verse as: “That first slaughter, which Jonathan and his armor bearer made was about twenty men *within about half a furrow in an acre of land.*” Then, TH comments:

> FOX… follows the MT but includes within parentheses information that seems to be implicit: “(over) about half a furrow (that) a brace [= yoke] (of oxen might plow) in a field…” CEV states: “before they had gone a hundred feet,” although some commentators estimate the distance to be more like fifteen or twenty meters (Klein, Driver). FRCL has a more general expression, namely: “in a very restricted space.”[2]

[2] Note that both here and below I have attempted to reduplicate each quote—extended or otherwise—exactly as it originally appeared in the source text. This includes abbreviations, bold or italicized fonts, single or double quotes, etc., even if any one of them may not appear to be a generally accepted norm.

Before we leave the translation of *"half a furrow,"* I suggest that the translator consult other English translations for additional ideas of rewording this phrase; for example, NCV renders it as: "over a half-acre of ground," which turns the distance into the size of a prescribed area.

The use of a חֶבֶל *(ḥebel) "measuring line"* for measuring land is attested to several times in such books of the Old Testament as Psalms 16:6 (used figuratively); 78:55; Amos 7:17; Zechariah 2:1 [MT5]; Micah 2:5; cf. II Samuel 8:2. However, we have no indication that there was a standardized length for the *measuring line*.

The nautical unit ὀργυιά unit *(orguiá) "fathom,"* which occurs only twice in Acts 27:28, matches a man's arms stretched out horizontally. It is generally understood to be approximately 1.80 meters (NP: 1.85 meters). For the Acts reference above, LN suggest: "…about 40 meters... about 30 meters."

A στάδιος *(stádios) or "stade"* consisted of 600 feet. Since the "foot" differed in distinct regions, the *stade* differed too; namely, from 178 to 192 meters. For the New Testament many favor the Alexandrian *stade* measuring 185 meters, although this too is debatable. Thus, in a verse like Luke 24:13 in NIV we have: "Emmaus, about seven miles from Jerusalem," which one might also render as: "…about 11 kilometers."

A ὁδός σαββάτου *(hodós sabbátou)*; that is, "a Sabbath day's walk" was, according to Jewish sources, 2,000 *cubits* long, which matches some 900 meters. However, others arrive at anywhere between 800 and 1,100 meters. The footnote on NIV's rendering of Acts 1:12; namely, "They returned to Jerusalem from the hill called the Mount of Olives, a Sabbath day's walk from the city," states: "This is about 3/4 of a mile (or about 1,100 meters)." Another expression that could equally be used in the text is: "…close to / about one kilometer." This is particularly acceptable, if the translator wants only to express the distance. However, he/she might also want to take into consideration the discussion regarding this term under section 7.1 "Original measurements versus modern equivalents".

The Roman μίλιον *(mílion) "mile"* was 1,479 meters long. But in the only place where the *mile* occurs, which is Matthew 5:41, NIV renders it as: "If someone forces you to go one mile, go with him two miles." The exact distance does not seem to be in focus, although TH points out: "One mile was presumably the distance a Roman soldier could force a Jew to carry his equipment." In this case, something like "a kilometer" should work just as well in most translations.

1.3 *"A day's journey"*

In the expression דֶּרֶךְ יוֹם *(derek yôm)* "the journey of a day," time is also used to measure approximate distance. Thus, journeys or walks of one, three, seven or eleven days are mentioned in Genesis 30:36, 31:23; Exodus 3:18, 5:3, 8:27 [MT23]; Numbers 10:33, 11:31, 33:8; Deuteronomy 1:2; I Kings 19:4; and II Kings 3:9. For example, in Deuteronomy 1:2 it reads: "It takes eleven days from Horeb to Kadesh-barnea...."

In ISBE, under the term: *"day's journey,"* we see:

> The distance traveled must of course differ largely according to the difficulties of the way... The rate of travel with a loaded mule is now commonly reckoned at 3 mi. (about 5 km.) per hour, and a day's journey is generally eight hours. Hence a day's journey is about 24 mi. (40 km.) and this may be taken as a fair estimate for Bible times.[3]

NET gives a rather lower estimate in its footnote on Deuteronomy 1:2, where it states: "An eleven-day journey would be about 140 miles (233 kilometers)[4]"—thus 12.7 miles or approximately 20 kilometers

[3] NB: 1 mile equals 1.609 kilometers.

[4] Note that 1 km. is usually considered to equal 0.62 miles, or 1 mile matches 1.61 km. So, mathematically speaking, 140 miles would equal 225 km., not 233 km. I am not sure what the basis for NET's conversion is.

per day. In the New Testament the only place with similar wording is found in Luke 2:44. NASB reads: "[His parents] supposed him to be in the caravan and went a day's journey." NIV translates this as: "Thinking he was in their company, they traveled on for a day." And TH comments:

> Jewish sources differ considerably as to the length of a day's journey, ranging from 15 to 40 miles[5] but it is safe to assume that a caravan of pilgrims would not do more than 15-20 miles a day.

In most cases a translation of the expression *"a day's journey"* will communicate just fine and is to be preferred over indicating a concrete distance in kilometers, which cannot be definitively confirmed.

1.4 The length of the *"short cubit"* and the *"long cubit"*

The *cubit* is historically considered the distance from elbow to fingertip. However, some scholars debate how long the standardized unit of this measurement actually was. ISBE, while cautious with interpreting other measures, proposes 44.4 centimeters as "generally accepted," and builds this on the evidence that we have from the Siloam tunnel in Jerusalem and other similar constructions. Likewise, NBD gives the figure of 44.45 centimeters as "generally accepted" and sees various present-day observable buildings as supporting their conclusion. However, ABD—seemingly reluctant to give precise equivalents—holds that "…50 cm recommends itself as a rule of thumb..., because it is the midpoint of values (44 to 56 cm) derived from the 'natural' *cubit*." But ABD does not explain to us why the "natural" *cubit* should govern the interpretation of the unit, when there is the above mentioned archeological evidence.

For the *cubit* in the New Testament, NBD explains that there were two different measurements: the Roman *cubit* of 44.40 centimeters, which is virtually equal to the Old Testament one; and the Philetarian *cubit* of 52.50 centimeters. Based on what Julian of Ascalon (Hakin 2001) writes, the latter was customary in Palestine, and this is probably the one referred to in New Testament writings. But ISBE applies the Roman *cubit* without discussion. ABD states that the length of the *cubit* in the New Testament is "…as uncertain as the Old Testament *cubit*," although Julian of Ascalon is mentioned in the same article.

Since the translator does not have the option to leave things undecided, and since *some* evidence—however contestable it might be—is better than an approximate, it seems appropriate to go by a *cubit* of 45 centimeters, or approximately 17.5 inches in the Old Testament; and 52.5 centimeters, or approximately 20.5 inches in the New Testament. Parenthetically, this also happens to match the Old Testament's *long cubit*. The figures in Table 1 are calculated in such a way that the *short* and the *long cubit* are given as exactly as possible, while still coming up with reasonably round numbers in centimeters and inches respectively.

In addition to the problem of defining the *cubit* precisely—or, as part of it—there is the fact that, in the Ancient Near East, people utilized common (or: *short*) *cubits* and long (or: *royal*) *cubits*. This becomes especially evident in Ezekiel 40:5, as well as 43:13. Thus NIV has:

> The length of the measuring rod in the man's hand was six [long][6] *cubits*, each of which was a *cubit* and a *handbreadth*.

In Israel, the *long cubit* likely consisted of seven *handbreadths*, and the ordinary one of six, which can be seen in Table 1. The question is where in the Old Testament text does *"cubit"* mean this long one and where does it mean the short one?

Lovett (2005), who is mainly concerned with issues concerning the dimensions of Noah's Ark, is convinced that "…the evidence is definitely in favor of a "royal" sized cubit for Noah's Ark." He states:

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[5] cp. Strack-Billerbeck II, 149.
[6] Note that the word "long" is not in the Hebrew text.

"Noah's Ark was constructed a long time before the nation of Israel appeared on the scene. That is, Noah was no Hebrew!" It is therefore not appropriate to take the common Hebrew *cubit* as the most likely interpretation for Genesis 6:15. In fact, Lovett states in his abstract:

> According to a straightforward reading of the Bible, the Babel tower should have inherited Noah's cubit. From there, the same cubit would be transported to the fledgling nations, explaining why this type of lineal measure is so widespread so early.

And further below he explains:

> It is difficult to imagine how a supposedly non-anatomical measure could turn up in different nations with distinct subdivisions yet have a suspiciously similar length. Looking in the ancient Near East (ANE) for the best clues, we find the longer *cubits* employed in the earliest major works in Egypt and Babylon. This makes it a natural choice for the *cubit* of Genesis 6:15.

Then Lovett (2005) further argues that there is no evidence that the common *cubit* predates the *royal*, as if the oversized *royal cubit* was introduced when standardization became necessary. In fact, from my perspective, the *royal cubit* is so unsuitable under practical considerations that it is more likely that people switched to the "natural" *cubit* later. A possible reason for the origin of the *royal cubit* is that it derives from the people who lived before the Flood; that is, those who may have been taller than the average person in later Biblical times …or today for that matter. To put it the other way round: the *short cubit* was too short to fit Noah's physical size. And citing Lovett (2005) once again: "In Egypt, the *royal cubit* is clearly observed well before any 'certain vestiges of the *small cubit* have been recorded.'"

There are two Biblical references that are meant to give some indication about the nature of the *cubit* at that time. However, both of these references are rather difficult to read. The first one is found in Deuteronomy 3:11 (NASB:)

> For only Og king of Bashan was left of the remnant of the Rephaim. Behold, his bedstead was an iron bedstead; it is in Rabbah of the sons of Ammon. Its length was nine *cubits* and its width four *cubits by ordinary cubit.*

The phrase בְּאַמַּת־אִישׁ *(b*ᵉ*ʾamat-ʾiš)*, which NASB translates: "by ordinary *cubit*" is literally: "by the *cubit* of a man," and often understood to refer to the short *cubit*.[7] HALOT states:

> usual *cubit* = two *spans*[8] or six or seven *hand-breadths*[9]

ISBE (vol. 4 p. 1048) mentions:

> ...but the word *ʾîš*, "man," can also mean "an important man," and so Tgs. Onkelos and Neofiti translate the phrase "by the royal cubit" (cf. Pesh. "by the hero's cubit"; Tg. Pseudo-Jonathan "by his own cubit," i.e., as measured by Og's own larger-than-normal forearm).

One argument in favor of this view is that the passage talks about a *giant* and a *king*. But the point of this explanatory note in the text is to enable the reader to picture the size of Og's bed (or sarcophagus). Thus, it makes sense to assume the ordinary cubit, which was commonly known. Because explaining the size of the giant's bed by the size of a giant's cubit would mean explaining the unknown by the unknown.

In Lovett's (2005) view, it is striking that Moses never qualifies the kind of *cubit* to which he refers, except in this case, which clearly refers to an object that can still be inspected at the time of writing. So, all the other measurements—both those referring to historic objects like Noah's ark and those referring to the construction of a sacred place like the Tabernacle—would be understood as using the other *cubit*; namely, the royal one.

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[7] for example: by AB, NET, NLT.
[8] which makes it equal to the *short cubit.*
[9] which keeps interpretation open to understand a *long cubit*!

The second reference is in II Chronicles 3:3 (NIV):

> The foundation Solomon laid for building the temple of God was sixty *cubits* long and twenty *cubits* wide *(using the cubit of the old standard)*.

There is no absolute certainty whether, at the time of the Chronicler's writing, "the old standard"—or: "former/first measure"—was the long one or the short one. According to Lovett (2005), it would not be logical to assume it to be the "usual" *cubit* of the Hebrews, as it is found in archeological evidence like the Siloam tunnel, because that would not justify such a remark. But considering that the Chronicler wrote some 500 years after the events occurred, the "former standard" might well mean "the standard measure of Solomon's times." And this is most likely the correct understanding, since the parallel text in I Kings 6:2 uses the same figures—and the writer of Kings probably used those measures used by his contemporaries. Thus, "old" here likely means "short."

The next question is: which standard was used in the other occurrences of *"cubit"* in I & II Chronicles? Firstly, the text of II Chronicles 6:13 is not found in I Kings, but nevertheless refers to the dedication of the Temple, and thus, the same short *cubit* as in II Chronicles 3:3 is likely to have been in view. Secondly, II Chronicles 25:23 is not related to the Temple, but has a parallel text in II Kings, and clearly uses the same measure as there: again the short one. This leaves us with one reference, namely in I Chronicles 11:23, where we need to decide whether the author applied his own contemporary *cubit*, which would be the long one, or the same short one as in other places. For simplicity in translation, one will likely assume the short one.[10]

To my knowledge, the only reference work that actually suggests where to assume which *cubit* is in view is NIDOTTE.[11] In his article in NIDOTTE Fuller (1997) mentions the Mishnah and Talmud recognizing *three* different *cubits* for the Biblical period and among these, yet additional distinctions. I shall not repeat those details here, but only to state that for the "postexilic" period the *cubit* represented 52 centimeters, which Fuller sees, as used in Ezekiel, Esther, Daniel, and Zechariah, but not in Ezra. In addition, for Deuteronomy 3:11 and II Chronicles 3:3, he also proposes the short one.

1.5 On translating length and distance

Where words like *cubit*, *span* and *handbreadth* already exist in the host culture, this will make the translation process relatively easy. Where a technical term like *"cubit"* does not exist, however, one might sometimes be able to translate a descriptive term like an *"arm-length."* Otherwise, in most cases, meters and centimeters will need to be used. For multiple units, one ought to start with precise measures.

In rounding up or down, the translator needs to reconcile two needs: On the one hand is the need for precision and a true rendering of corresponding references in the Bible. On the other hand is the need to create a smooth text that does not distract readers by being unduly precise, where the measurement is not in focus. This, of course, occurs especially when the Hebrew text itself gives a rounded number, the equivalent of which cannot be determined with certainty.

Let's take the size of Noah's Ark, as described in Genesis 6:15, as an example: Its measurements of length, breadth and height are 300, 50, and 30 *cubits* respectively. If one converts these—assuming a *long cubit* of 52.5 centimeters—he/she gets 157.50 / 26.25 / 15.75 meters. In this environment there would be no point of putting such precise figures in the text. Yet, if one rounds them up and down individually, for instance to 158 / 26 / 16 meters, the proper ratios between them are lost. Thus, in this case, it does

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[10] Note that in the length of Noah's Ark (Genesis 6:15), for instance, applying long or short *cubits* results in 157.5 versus 135 meters, which is not a negligible difference.

[11] cf. see bibliography.

seem better to work with round numbers like 150 / 25 / 15 meters, as GCL and HFA have done. As always, the translator will have to explain his basic premise somewhere below the text. An example involving weights would be Numbers 7:13 and the verses that follow, where there is talk of two vessels of 130 and 70 *shekels* respectively.

While discussing the *cubit* in particular, in light of the preceding paragraph, we expose a challenge to every translator: Is one supposed to distinguish between *short* and *long cubits*? If so, I present three options:

a) The first option is using the host culture's equivalent for the word *"cubit"* in all instances. This, of course, will only work if there is an adequate expression in the host language, which is meaningful to the average reader. However, in any instance a clarifying note, whether in the form of a footnote or something integrated into the introduction or glossary, may be needed to explain the existence of varying standards of the *cubit*, and their modern equivalents.

For example, in the footnote for II Chronicles 3:3 NLT, the translators have explained for the reader that they assume a *short cubit*, whereas the translators for the NIV Study Bible assume the long one.[12] NLT, in its first edition (1996) has footnotes in Ezekiel stating: "In this chapter, the distance measures are calculated using the Hebrew *long cubit*, which equals 21 inches or 53 centimeters." The footnote of the NIV Study Bible on Ezekiel 40:5 reads: "In using the *long cubit*..., which was older than the shorter *cubit*..., Ezekiel was returning to more ancient standards for the new community...." Likewise the Turkish Bible[13] in its appendix, points out that in Ezekiel 40–48 the *long cubit* applies.

b) The second option is using modern equivalents, assuming the same *cubit* everywhere. This would be the pragmatic approach. And, since it cannot be determined with certainty which *cubit* is to be applied in all references, one reckons with the same equivalent everywhere, (except in Ezekiel 40:5, where the text states: "*long cubits*, each of which was a *cubit* and a handbreadth)." This will likely require some note(s) about the underlying simplification.
NIV in their *Table of Weights and Measures* gives "18 inches" and "0.5 meter" as approximate equivalents and so do LN for the New Testament. This is helpful in that it gives the reader a rough idea of the measurements involved, but it can also be misleading in that it leaves the impression that a *cubit* could be anywhere between 46 centimeters and 50 centimeters long, whereas in reality one *cubit* was 44–45 centimeters long, and the other one around 52 centimeters. To make a *cubit* worth half a meter is a simplification that neglects the existence of two standards.

c) The third option is using modern equivalents and distinguishing the two standards. That is, where the *short cubit* occurs, the measure is converted on the basis of a value of 45 centimeters (or 17.5 inches); and where the *long cubit* occurs, the measure is converted using a value of 52.5 centimeters (or 20.5 inches). However, although I believe this is the "proper" way of handling the *cubit*, my experience leads me to the conclusion that this option might not always be so realistic, in that the ratio for converting the *cubit* into metric—or whatever other standard is used—will at times differ in different places in the Old Testament! Thus, it will be the responsibility of the translator to determine in which context which *cubit* should be applied. For the Pentateuch one would likely use the *long cubit*. This would also hold true for the postexilic books. Yet, in the early historical books and pre-exilic prophets the short one is likely the proper choice. In the New Testament, the equivalent of the *long cubit* should be used.

Admittedly, in some places the decision will be debatable due to unresolved issues in the dating of certain Old Testament books, but one cannot avoid the issue. Measurements demand exegesis, just like other elements of the text do. And as indicated previously, it is safe to say that there were two different

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[12] Curiously, in the standard edition of the NIV, the conversion of a *short cubit* was used. Therefore, both NLT and NIV end up as 90 feet.
[13] The Bible Society in Turkey / The Translation Trust, 2008.

standards in OT times; thus, to ignore this fact would not be acceptable. And in a place like II Chronicles 3:3 the translator is forced to choose one way or another.

Lastly, if the third option is taken, it will call for explanatory notes somewhere, lest the attentive reader face different factors of conversion within the same Bible and may well judge that they result from carelessness on the part of the translator![14]

1.6 Symbolic numbers

Regarding symbolic numbers there are two places in Revelation—and possibly other places—that need special attention. In these situations, the translator should try to retain the symbolic numbers in some way. These references, with their footnotes imbedded, are found in Rev 21:16 & 17 (NIV) below:

> [16] The city was laid out like a square, as long as it was wide. He measured the city with the rod and found it to be *12,000 stadia*[α] in length, and as wide and high as it is long. [17] He measured its wall and it was *144 cubits*[β] thick[χ] by man's measurement, which the angel was using.
>
> fn. [α]: That is, about 1,400 miles (about 2,200 kilometers).
> fn. [β]: That is, about 200 feet or about 65 meters.
> fn. [χ]: Or: *high.*

Worthy of note regarding these two verses is what Pedro Ortiz (TBT 1996:4) writes below:

> In the book of Revelation the symbolic use of numbers is especially important: the number seven is the base of many numerical references, as a symbol of fullness, perfection, and totality. The number twelve also symbolized totality and fullness, especially in its relationship to the people of God (with its base in the twelve tribes of Israel and the twelve apostles). *In this way, the description of the New Jerusalem should not be understood as a literal, mathematical description but rather as symbolic (italics mine).*Therefore, when the dimensions are given as "twelve thousand stadia in Revelation. 21:16, the actual numbers (twelve with a thousand) are more important than their equivalent value. And it is better in translating this verse to keep the number and the original measurement (that is, "twelve thousand stadia"), even though the reader will not immediately have an exact idea of how many kilometers or miles these dimensions represent. What these numbers really intend to indicate are the final fullness and totality of the people of God, represented by symbolic numbers: twelve multiplied by a thousand. It can be made clear in a note that twelve thousand stadia is equivalent to 2,400 kilometers (1,500 miles).

Elsewhere, UBS Handbook for Translators on Rev 21:17 states:

> The purpose of the footnote at the end of verse 17 in TEV is to allow the reader to appreciate the fact that the numbers 12,000 and 144, in verses 16 and 17, may have symbolic value, since they are both multiples of twelve (12 x 1000; 12 x 12), a number in the Bible that indicates completeness. This fact can be carried over into translation by using the biblical terms stadia and *cubits*; but neither of them, in English at least, is in current usage. But the two can be used, and in footnotes the modern equivalents may be given. One translation has tried to represent the text by stating: "12,000 kilometers…144 arm's lengths" (an "arm's length" in that language is a standard measure). This may be possible in other languages.

Lastly, GCL has a footnote on Ezekiel 40:5. It explains the difference between the *short* and *long cubit* and goes on to state that in chapters 40–48 *cubits* are not converted to meters, as the basic number 50 seems to have symbolical significance in this section.

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[14] For a similar situation with different standards in different times, see section 3.1 "Capacity—Table and remarks."

2 Area

In Biblical days, apart from measuring the length and breadth, there were other ways of describing the size of a piece of land, namely by relating it to agricultural activities. For example:

a) the amount of what a team of oxen could plow in a day. Thus, in Isaiah 5:10, we see the phrase עֲשֶׂרֶת צִמְדֵי־כָרֶם *([a]śeret ṣimdê-kerem)* "ten yokes of vineyard." In NIV it reads:

> A ten-acre vineyard[d] will produce only a *bath* of wine.
> fn.[d]: Hebrew: *ten-yoke*, that is, the land plowed by 10 yoke of oxen in one day.

The footnote in the NET Bible explains it this way:

> *Heb* "a ten-yoke vineyard." The Hebrew term צֶמֶד (*tsemed*, "yoke") here, is a unit of square measure. Apparently a ten-yoke vineyard covered the same amount of land it would take ten teams of oxen to plow in a certain period of time. The exact size is unknown.

b) the amount of seed used as in Leviticus 27:16 (NIV), which reads:

> If a man dedicates to the LORD part of his family land, its value is to be set according to the amount of seed required for it, fifty *shekels* of silver to a *homer* of barley seed.

Note that the syntax of the last phrase needs some care—no matter whether one uses Hebrew or modern units of measurement. A wording like in NET: "… a *homer* of barley seed being priced at fifty *shekels*[15] of silver," almost makes it sound as if the discussion is about the price of barley. NCV seems to do a better job of translating the meaning: "It[16] will cost about one and one-fourth pounds of silver for each six bushels of barley seed needed." Even easier for following the thread of thought is GW:

> Ground planted with 2 quarts of barley will be worth 20 ounces of silver.

Regarding the phrase "according to the amount of *seed required for it*," TH recommends to follow what a minority holds:

> JB, on the other hand, understands this expression to mean "according to its productivity" (NJB has "…its yield"). That is, according to the amount of seed (or grain) it would produce rather than the amount it would require for sowing. This latter interpretation seems to be more in keeping with what agricultural experts would expect. So translators are advised to follow the model provided by NJB, in which seed is understood as referring to the amount of grain produced rather than the amount planted.

This interpretation is not impossible, but זֶרַע *(zera‘)* more commonly means "seed," although it is used exceptionally in the sense "yield" in Job 39:12.

Finally, I Kings 18:32 (NIV) states:

> He dug a trench around it large enough to hold two *seahs* of seed.

Possibly, this was not a trench holding two *seahs* of seed, but a trench around an area so large that it took two *seahs* of seed to sow it.[17] However, no major English translation seems to follow this. The German "Hoffnung für alle" has a footnote stating: "…so broad that one could have sown 10 kilograms of seed." GCL interprets it as: "…a trench so broad that one could sow out 12 kilograms of seed into it[!]". [Translations into English mine. PS.][18]

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[15] for "*shekel*" and "*homer*" see the relevant passages below.
[16] i.e., the field!
[17] ISBE vol. 4 p. 1051.
[18] cf. the extensive treatment of the issue in TH.

3 Capacity

3.1 Table and remarks

Some Biblical measures were primarily used for units of dry-goods, others for liquids, but it has not been definitively proven that this distinction was valid throughout the whole system. Fuller (NIDOTTE)[19] states:

> At least by the late seventh or early sixth century BC Israel began to merge their liquid and dry measures into one system of measure.

The *ephah* was the most frequent measure for capacity. The Table 2 gives an overview of the system. While the modern equivalent of each term is debated, there is not much uncertainty about the ratios between each measurement.

Table 2

OT terms	*log* לֹג	*kab* קַב	*omer** עֹמֶר *issaron* עִשָּׂרוֹן	*hin* הִין	*seah* סְאָה	*ephah* אֵיפָה / *bath* בַּת	*homer** חֹמֶר / *kor* כֹּר
	liquid	dry	dry	liquid	dry	dry / liquid	dry / liquid
ratio to *ephah*	1/72	1/18	1/10	1/6	1/3	1	10

* Note the difference between *"omer"* and *"homer."*

It would be overly simplistic to choose one measure for conversion—for instance by equating a *bath* with 22 liters—and to calculate the equivalents in liters for all other measures by it. Thus, Table 3 below takes into regard several factors.

1. With regard to the עֹמֶר *('omer) "omer,"* ABD states that in the account of the manna in Exodus 16, especially in vss. 16 & 22, we are told that the *omer* is identified as the daily food ration at that time, and further explains:

> The ancient norm for a daily food ration seems to have been widely regarded as approximately 1 liter, usually of barley...

Thus, one may equate an *omer* with a liter.

2. The word חֹמֶר *(ḥomer) "homer"* is likely – but not definitively – related to the word for "ass."[20] If this hypothesis is correct, the original meaning would be "an ass-load," which is a unit that was also used in Mesopotamia. ABD argues that, since "…the weight which a donkey can carry lies somewhere in the 90 kilogram range," the *homer* matches 100–200 liters, depending on the kind of grain and allowing for some deviations. The word *"homer"* can also be used with the meaning "heap," as in Exodus 8:14 [MT10]).

3. In preexilic times, dry and liquid measures did not match each other, and the אֵיפָה *('êpâ) "ephah"* and the בַּת *(bat) "bath"* were not yet equated.

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[19] vol. 1 pg. 383.
[20] cf. HALOT.

4. Later, the prophet Ezekiel gave the following equations in Ezekiel 45:11&12 (NIV):

> The *ephah* and the *bath* are to be the same size, the *bath* containing a tenth of a homer and the *ephah* a tenth of a homer; the homer is to be the standard measure for both.

5. The evidence for the value of the *ephah* and the *bath* can be confusing. Some fragments of jars discovered by Albright (ISBE)[21] mention a *"bath"*, and others a *"royal bath,"* whereby the difference in size cannot be determined with precision, but both of them seem to approximate 22 liters. The royal *bath* was probably a little bigger, so as to provide a safe-guard against fraud.[22]

This *"royal bath"* is not to be confused with the much bigger *bath* of later times; namely the *"double bath"*—for which evidence is found in Josephus's writings. For some reason, numbers given in various reference works for this extra large or *double bath* differ with some references indicating an amount of about 36 liters, but others about 39 liters.[23] Thus, the translator is left to decide which quantity seems more likely.

The Jewish historian, Josephus, writing in the first century AD, explains the Hebrew measures he uses in various places by giving Greek and Roman equivalents. In doing so, he was probably not interested in giving mathematically clean equations, but practical near-equivalents. And, as for the values of the Greek and Roman measures, for our purposes we rely on NP. Josephus's data, then, points to an *ephah/bath* in the 39-liter-range, as in: Ant. 3.197, 8.57, 9.62, 9.85, except for one reference in Ant. 3.142 that makes a container approximately 19 liters in size. This is perhaps not due to a mistake in calculation, but rather reflects a more ancient size of the *ephah* and matches Table 3 with its wide spectrum for the *ephah/bath*.

Given the OT background, where the *bath* was much smaller in earlier times, the 36-liter-comparison might not be completely wrong either, but one seems on the safer side when calculating a *bátos* at 39 liters in the time of the New Testament.

ISBE (IV 1051), after discussing various possibilities, states:

> Although most authorities today tend to favor the 22-liter *ephah/bath*, the presently available evidence does not make a final decision possible.... Thus Israel may have had both a *bath* and a double-*bath*.

And Fuller NIDOTTE[24] states with caution:

> To best harmonize the evidence, perhaps one should accept most of Josephus's evidence as referring to the exilic/post-exilic period, and Albright's evidence as referring to the pre-exilic period.

This seems to me to be a practical suggestion. For some reason, in the concrete examples from I Kings 5, things are left undecided and both equivalents are offered. Some of the figures from NIDOTTE have been included in Table 3.

For purposes of translation, the interpretation of the discrepancies means that—analogously to dealing with the *cubit* above (see section 1.5)—one will need to determine whether a certain measure is used in pre- or post-exilic context; for example, the "hin" in Exodus 29:40 would be understood as 3.7 liters, while the "hin" in Ezekiel 4:11 corresponds to 6.5 liters. An *"ephah"* in Judges 6:19 would be 10-plus liters, in Ezekiel 45:24 it would be 39 liters. This complicates the matter, but to deny the considerable

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[21] ISBE under the word "Weights and Measures" refers to: W. Albright, BASOR, 31 (Oct. 1928), 10.
[22] cf. below under section 4.5 "The '*sanctuary shekel*' and the '*king's weight.*'" However, in relation to the *cubit*, the word "*royal*" is used differently, which can be seen above under section 1.4
[23] Note that the situation with regard to the Greek βάτος *(bátos)* "batos" is quite similar.
[24] cf P. 385.

differences does not seem right. And if no difference is made within the Old Testament, it will have to be made between the corresponding Old Testament and New Testament measures as we see below:

Table 3

OT terms		*log* לֹג (liquid)	*kab* קַב (dry)	*omer* עֹמֶר *issaron* עִשָּׂרוֹן (both dry)	*hin* הִין (liquid)	*seah* סְאָה (dry)	*ephah* אֵיפָה (dry) // *bath* בַּת (liquid)	*homer* חֹמֶר (dry) // *kor* כֹּר (dry and liquid)
ratio to *ephah*		1/72	1/18	1/10	1/6	1/3	1	10
Equivalents in liters**	**preexilic dry**		0.6	1		3.3 (+?)	*ephah* 10 (+?)	100 (up to 200?)
	preexilic liquid	0.3			3.7		*bath* 22 double *bath* 39?	220
	two changes	⇓ increasing of amount ⇓ ⇓ equating of *ephah* and *bath* (dry and liquid measures) ⇓						
	postexilic dry and liquid				6.5	(13)*	39	390
NT terms						σάτον *sáton*	βάτος *bátos*	κόρος *kóros*
Equiv. in liters						13	39	390

* No occurrence in Old Testament, but included to show the relation to the New Testament figure.
** The correlation between liter and quart is as follows:
1 liter = 0.88 quart [UK], or 0.91 quart [US, dry], or 1.06 quart [US, liquid].

Equivalents in liters are given only for those cases that actually occur in the OT; for example, there is no postexilic reference for the *omer*.

לֹג *(lōg)* "log": Only in Leviticus 14:10, 12, 15, 21, 24.

קַב *(qab)* "kab": Only in II Kings 6:25 (NIV):

> There was a great famine in the city; the siege lasted so long that a donkey's head sold for eighty *shekels* of silver, and *a quarter of a cab* of seed pods[e] for five *shekels*.
>
> fn.[e]: Or: of dove's dung. (PS)

For the textual difficulty, please see the note on Table 4 in section 3.6.

עֹמֶר *('omer)* "omer": Only in Exodus 16:16, 18, 22, 32, 33 & 36 of the manna.

עִשָּׂרוֹן *('iśśārōn) "issaron":* This word is built from the root for "ten." The unit of reference is regularly omitted (ellipsis), but the term is commonly assumed to mean the tenth of an *ephah*, and it always refers to "fine flour." The Biblical text includes occurrences of one tenth, two tenths and three tenths. They are found in the following verses: Exodus 29:40; Leviticus 14:10,21; 23:13, 17; 24:5; Numbers 15:4, 6, 9; 28:9, 12, 12, 13, 13, 20, 20, 21, 21, 28, 28, 29, 29; and 29:3, 3, 4, 9, 9, 10, 10, 14, 14, 15, and 15.

אֵיפָה *(ʾêpâ) "ephah"*: The preceding note on *"issaron"* means that if the translator seeks to determine all those contexts where the unit *"ephah"* is used or implied, then for the sake of consistency, the occurrences of *"issaron"* should also be included.

The בַּת *(bat) "bath"* and the כֹּר *(kōr) "kor"* also occur as an Aramaic word with an identical spelling of the base form and both are found in Ezra 7:22.

The Greek word κόρος *(kóros) "kor/koros"* is found only in Luke 16:7 in the *Parable of the Shrewd Manager*. In regard to Luke 16:7, LN states: "An equivalent metric unit could be thirty metric tons."[25] NET has: "A hundred measures of wheat."

Likewise, the βάτος *(bátos) "bath/batos*" is used only in Luke 16:6 in that same parable.

Finally, the σάτον *(sáton) "saton"* and the plural form: *sata*, only occurs in the *Parable of the Yeast* in Matthew 13:33 and Luke 13:21 (NIV): "The kingdom of heaven is like yeast that a woman took and mixed into *a large amount of flour*" (italics mine).

3.2 Numbers 11:31 & 32: How many quails?

Numbers 11:31&32 is a difficult text that includes three measurements. It reports the Lord's provision with quail in the desert and reads (NASB):

> (31) Now there went forth a wind from the LORD and it brought quail from the sea, and let them fall beside the camp, *about a day's journey on this side and a day's journey on the other side*, all around the camp and *about two cubits* deep on the surface of the ground. (32) The people spent all day and all night and all the next day, and gathered the quail (he who gathered least gathered *ten homers*) and they spread them out for themselves all around the camp.

For "a day's journey," special attention has already been given to this unit of measure in section 1.3. For the Numbers 11:31–32 rendition above, it could have been some 20 kilometers. More problematic, however, is the phrase: "…about two *cubits* deep on the surface of the ground." If the quail had lain that high; that is, close to a meter in depth, then there would have been no need to "gather" them; and no room—for that matter—for walking, nor for spreading the quail afterward. However, if one holds on to this meaning of the Masoretic text, as both NIV[26] and NCV[27] do, he/she ought to say, "…all around the camp and *up to* about two *cubits* deep on the surface of the ground"[28]—that is, in some places they lay that high. But as the various translations indicate, there is another possible understanding:

> Suddenly the LORD sent a wind that brought quails from the sea, *flying three feet above the ground*. They settled on the camp and all around it for miles and miles in every direction. (TEV).[29]

And it happens that there is a known custom in the Middle East to catch low-flying birds with nets. Yet, as TOTC points out, the verb in the MT does not support this understanding of "flying." The interpretation becomes more likely if one considers a correction to the text. NICOT states:

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[25] Note that this would be weight, not volume; see digression: "Capacity versus Weight" below.
[26] "It brought them down all around the camp to about three feet above the ground…" [quoted without footnotes].
[27] "The quail were about three feet deep on the ground…"
[28] cf. WSB.
[29] cf. REB, NLT.

> G. R. Driver proposed that MT *wyts* should be repointed to read *wayyatos*, from *tus*, a rare word in Biblical Hebrew, meaning "to fly, flutter, swoop," which occurs in Job 9:26. This solution seems plausible.

And this understanding is also adopted in HALOT: "rd. וַיָּטָשׁ *[wayyāṭāś]* (>טוּשׁ *[ṭwś]*) for וַיִּטֹּשׁ *[wayyiṭṭōš]*"[30] listed as a possibility in a NET footnote, as well as in BART; but, not dealt with in HOTTP. Thus, the traditional "let them fall" would then seem to result from a misreading of the consonants for "flying/fluttering." NICOT translates the same verse as:

> And a wind went up from Yahweh, and he brought quail from the sea; and they flew over the camp, about a day's journey on the one side and about a day's journey on the other side, round about the camp, and about two *cubits* above the surface of the ground.

If one states: "let them fall" as the more accurate rendition, then the last clause should indicate to us the approximate number of quails there actually were. However, if one chooses: "fluttering," the sense of this last clause is to make it plausible how the people could get hold of the birds that came through flying. Syntactically, this clause is somewhat removed from the verb. Therefore, it must be admitted, this interpretation too is somewhat questionable. Another weakness is that the "gathering" in v. 32 must have implied some way of catching the birds and any translation of the verse would have to make this clear.

Finally, how much is "ten *homers*"? חֹמֶר *(ḥōmer)* can also mean, how many "heaps," but since the word comes with a number and the sentence is there specifically to indicate an enormous amount, it is unlikely that this "lose" meaning is intended here. Also, the next clause states they were spread out, not piled up. And "ten piles" assumes a standard size of a pile, which itself is indefinite. On the other hand, in Exodus 8:14 [MT10], where the frogs in Egypt are piled up, we are provided with a parallel expression in that it is also about dead animals. Thus, if we assume an equivalent of at least 100 liters per *homer*,[31] then the amount gathered is at least 1,000 liters per gatherer, or a pile equaling 1cubic meter.

3.3 Ruth 3:15: Which *"measures"*?

In NIV Ruth 3:15 reads:

> He [Boaz] also said, "Bring me the shawl you are wearing and hold it out." When she [Ruth] did so, he poured into it *six measures* of barley and put it on her. (bracketed portion is mine)

The unit in which the barley is measured is named neither here, nor in v. 17, to which TH comments:

> ... It is possible to say "six measures of barley" (RSV, NAB, and NEB), but this is not very useful in determining the amount involved. Some scholars believe that this is a reference to the ephah, but six ephah would amount to approximately 240 liters (well over 500 pounds), an impossible load for Ruth to carry back to the city. It is possible that the measurement was a se'ah (one-third of an ephah) in which case the total capacity would be approximately 80 liters (about 200 pounds). Since some have felt that even this was too heavy a weight for Ruth to carry, this hypothesis has not found large support. Others have concluded that the measure was an 'omer, which would be equal to one-tenth of an ephah, or approximately 24 liters (somewhat over 50 pounds). This is the interpretation accepted by a majority of modern scholars. It does seem important to indicate that this was an impressive amount of barley—not merely from the fact that Boaz had to help her lift it, but because it was evidently designed to impress both Ruth and Naomi with Boaz's generosity and his determination to help them in every way that he could.[32]

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[30] cf. NEB
[31] cf. the discussion under section 3.1 above.
[32] Note: 1 pound = 0.45 kilogram.

The line of the argument presented here is based on an *ephah* of 40 liters. At the time of Ruth, an *ephah* was almost certainly not that large. On top of this, the calculation does not take into account the differences between weight and capacity (see section 3.6). Actually, Hubbard's calculation (NICOT) seems more realistic. He assumes a lighter *ephah* and therefore judges:

> ... Boaz measured out six portions of barley (lit. "six of barley"). The barley was threshed and ready for immediate use. Unlike 2:17, the statement omitted a standard unit of measure, a common practice in ancient sources and in the Old Testament. The *"ephah"* (cf. 2:17) is immediately excluded since six *ephahs* would weigh between 175 and 285 pounds, depending on one's standard – a rather impossible burden even for someone of Ruth's character. Instead, the *"seah"* (...) seems more likely (so Targ., which also credited Yahweh with giving her the strength). Six *seahs* would weigh between 58 and 95 pounds – an amount of both generous quantity and manageable weight.

In his footnote, Hubbard adds:

> Hertzberg (p. 277) reports seeing young Palestinian women carrying two water cans each weighing nearly 45 pounds atop their heads – and over long distances, too. The alternative, the "omer" (...) suffers two drawbacks. First, 6 omers would not fit the generosity for which the context calls; indeed, they would amount to only three-fifths of what she gleaned earlier (2:17). Second, the masc. numeral "six" grammatically requires a fem. noun (*seah* or *ephah*), whereas omer is masc. (against Gerleman, p. 33; et al.).

If we do our own calculation based on Table 3 and taking into regard the difference between capacity and weight, we arrive at the following results:

Supposing an *ephah*: 6 x 10 l (minimum) = 60 liters(+). 60 l x 0.62 = 37.2 kg.

Supposing a seah: 6 x 3.3 l (minimum) = 19.8 liters(+). 19.8 l x 0.62 = 12.28 kg.

If one assumes the *ephah*, which, due to its prominence, is the more likely measure to be dropped in ellipsis, the question remains whether 37 kilograms could be carried in a "shawl" or "cloak"[33]—even if one reckons that Ruth was able to bear the weight. On the other hand, if one assumes the *seah*, then 12 killograms do not seem as generous a gift as Boaz might have intended. Perhaps at the time the *seah*, and the *ephah* for that matter, already had a somewhat higher value.[34] For example, assuming a *seah* of 5 liters would result in over 18 kilograms; that is, approximately 41 pounds, it would not be too much to be carried. And at the same time it was more than Ruth herself had gathered earlier. Also, some 5 liters, or 3 kilograms, sounds like a realistic amount for a regularly used container for scooping grain.

Thus, in view of the lack of clarity, if a translator wishes to avoid a definite decision, it might not be the worst solution to simply translate the word "measure" as a generic "measure" in the host language. In fact, in many languages there will be such a word, and if so, altogether natural. Testing, of course, will reveal whether or not the typical reader understands. The drawback perhaps is that without any definiteness, the reader may not able to visualize the proportion between what Ruth had gathered herself—found in 2:17—and what Boaz had given her!

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[33] the exact nature of Ruth's piece of garment is unknown.
[34] see discussion above.

3.4 Haggai 2:16: Fifty *"pressings"*

A literal rendering in English of Haggai 2:16 appears as follows:

> How did you fare? When one came to a heap [of what?] of twenty [what?], there were but ten.
> When one came to the wine vat to draw fifty [what?] *purah* there were but twenty.

There are at least three issues related to measurements in this verse: First, it does not indicate of what the "heap" consisted. Probably it was grain. Secondly, the number word "twenty" is not followed by a unit of measure; it is simply implied. It could be an *ephah* or a *seah*. The LXX understood the latter.[35] Thirdly—and this is the most difficult question: it is not clear how the word פּוּרָה *(purah)* "winepress(?)" following "fifty" is to be understood.

For the second line of the verse, there are altogether three interpretations possible. If one retains *"purah"* in the text, as the MT has it, this allows for two interpretations:

1. *"Purah"* is taken with the first clause. Thus, the text would read:

> When one came to the wine vat to draw fifty *pressings*, there were but twenty.

In this case the word "measure" needs not be added, because the Hebrew text *has* a measure, namely *"purah."* This reading is recommended here. For details, see below.[36]

2. *"Purah"* is seen as the subject of a new clause and translated "press."

> When one came to the wine vat to draw fifty *(measures)*, the press would yield but twenty.

Thus, the word *"measures"* is added after "fifty," as in the first half of the verse after "twenty" as well. Parenthetically, NICOT understands it in this manner.

3. If one considers *"purah"* a later gloss, and drops it in translation, then rendering the sentence results in this:

> When one came to the wine vat to draw fifty (measures), there were but twenty.

Most English translations present a rendering like this. Again, the word *"measures"* is added; TEV, NLT, NCV use "gallon" or "jarful" instead.

However, before I comment on these interpretations, the words used for "winepress" should be clarified. There are two objects mentioned in the verse. The one translated with "vat" above is: יֶקֶב *(yeqeb)* and the other one is: פּוּרָה *(pûrah)*.

יֶקֶב *(yeqeb)*, according to SDBH, is a "large container normally hewn out of stone and part of a winepress where the grape juice is collected; that is, a wine vat."

RH agrees, using the term "the collecting vat," and HALOT does also in this verse as well as in some other places, where: "lower reservoir, the collecting sink" is utilized. Yet HALOT points out that elsewhere it can also indicate the upper part, stating: "…like *gat* elsewhere, the upper reservoir, the crushing sink, indicating the whole installation."

On פּוּרָה *(pûrah)*, SDBH states: "…a basin hewn out of a rock or lined with plaster into which harvested grapes were thrown and trampled to squeeze out the juice, which from there flowed into a trough or vat…"

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[35] cf. …the discussion on Ruth 3:15 above.
[36] cf. NASB's footnote: "troughs full."

RH: “The Hebrew word *purah* may refer to a measure of pressed juice or the act of pressing out the juice in a wine press.”

HALOT: For *(pûrah)* in this verse the dictionary reads it as: “tub, trough,” and it takes *pûrah* either as a gloss on *yeqeb*, as BHS does, or suggests reading it with the prefix *min*- “from.”

DCH, for the present verse, translates *(pûrah)* as: “fifty (measures of) liquid (from) the winepress.”

We now come back to evaluating the three interpretations above. In interpretation option 1, *pûrah* is taken as “winepress” in the sense of *“pressings,”* and thus functions as a sort of measure going together with the number fifty. In interpreting option 2, it stands parallel to “vat” and means “press.” NICOT seems to concur and comments:

> If the pressed grape juice is already in the wine vat, there could hardly be a divergence between expectation and reality, because the content of the lower cavity could have been precisely judged. The point, however, is that the amount of grapes in the upper cavity, in the “wine press,” were (sic) such that it boosted the expectation, but in reality it yielded less juice than could rightfully have been expected. In the same manner, the grain had been of poor quality, and when threshed, had yielded less than the farmer would have expected when he saw the crop growing.[37]

Regarding option 1: HOTTP grades a reading that includes *pûrah* as a less than perfect B-rating, and renders the phrase as “fifty measures / pressings,” thus suggesting interpretation 1. Then, HOTTP further explains: “The term פורה refers either to the act of pressing out the grapes or to the quantity of juice which is pressed out.[38] Against this interpretation one could argue that fifty *pressings*/vats full seems an inordinate quantity in comparison to the twenty measures of grain. On the other hand, the MT interpretation is not unintelligible as it stands:

> When one came to the wine vat to draw fifty pressings [worth of wine / loads full of wine / vats full of wine] there were but twenty.

BHQ also sees the word *pûrah* as part of the text and comments: “Uncertainty as to the meaning of this rare word probably accounts for its omission by S and for the different renderings of the other vrss....” And since no translation is provided, this view theoretically allows for interpretation 2 as well.

On interpretations 2. and 3., NICOT (translating *pûrah* as “press”) explains in a footnote:

> “Heb. *pura* is deleted by Pesh. and translated as a kind of measurement by LXX, Vulg., and Targ. Rudolph’s remark is appropriate: one does not explain words with a clear meaning with unknown words (against those who regard *pura* as a gloss).”

In the commentary, additionally it states:

> “*pura*... means the trough of a wine press (cf. Isa. 63:3, the only other place where it is used), but it may also include the vat underneath in which the juice is collected. Most scholars deem this word a gloss intending to define *yeqeb* as a wine press rather than an oil press. The JPSV, however, retains the word as part of the sentence and translates: “and if one came to wine vat to skim off fifty measures, *the press* would yield only twenty,” which makes sense.

A major problem with this last interpretation is that, syntactically speaking, the Hebrew conjunction *waw* should stand before, not after *pûrah*. If not impossible, it would at least be very unusual for the subject to precede this conjunction. It would also make this line less parallel to the preceding one.

Parallelism could be taken as one additional argument for choosing interpretation 3, which continues the similarity of the two lines better than the others.

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[37] cf. Clark.

[38] Their suggestion is: "fifty per / fifty measures,”. See also DCH above.

Translation: For interpretations 1 & 2, see my comments above. If one follows interpretation 3, then the options would include: Either one would simply provide the implied word "measure," as did, for example NIV; or, a modern measurement is used, as did for example TEV; namely, "gallons." The middle way is to use a more concrete term than simply "measure," while leaving the exact amount unspecified, as for example NCV does; namely 'jarfuls." Note also TH, where their comments are based on interpretation 3. However they do not discuss the textual question.

3.5 Additional measures of capacity

The term לֶתֶךְ *(letek)* is commonly interpreted as half a *kor/homer*—although there is no certainty—and occurs only in Hosea 3:2. And here NIV renders it as: "So I bought her for fifteen *shekels* of silver and about a *homer* and a *lethek* of barley.)

The term χοῖνιξ *(chóinix)* is unanimously considered to be—and thus rendered—a unit of capacity very close to one liter.[39] It occurs, however, only twice in the Bible and that in Revelation 6:6, where NIV renders it: "A quart of wheat for a day's wages, and three quarts of barley for a day's wages...."

The term μετρητής *(metrētḗs)* is a measure of Attic origin, but matches the Hebrew *bath* in content, where it was discussed and noted in the table above. It occurs only in John 2:6, where NIV renders it: "Nearby stood six stone water jars, the kind used by the Jews for ceremonial washing, each holding from twenty to thirty gallons.[f]"

fn.[f]: Greek: two to three *metretes* (probably about 75 to 115 liters).

The term μόδιος *(módios)* "bushel" holds approximately 8.5 liters,[40] but is used in the New Testament only for the container itself, not for its contents. It is rendered in Matthew 5:15 as: "No one lights a lamp and puts it under a *bowl/basket.*" Other solutions include "meal-tub" (REB) and "clay pot" (CEV).

3.6 Capacity versus weight—Or: "How heavy is a liter of flour?"

In the Bible, dry things were measured according to their capacity, as the data above shows. However, this is not the same in all cultures. For instance, while Americans often measure flour in cups (that is, by volume), Germans go by grams (by weight). Thus, it would be wise that a translation expresses the amount given in terms that are commonly used in the host culture. And, if dry things are measured in weight, values occurring in the Bible need to be converted similarly.

The German translations "Gute Nachricht Bibel" (GCL) and "Hoffnung für alle" (HFA) actually do this. [GCL, in its glossary under the word "EFA"*(ephah),* explains the following: For the *ephah* one assumes a capacity of ca. 22 liters. Then, for grain, a weight of 750 grams per liter is applied, so that the capacity of 1 *ephah* matches a weight of 16–17 kilograms, whereas for flour, a weight of 500–600 grams per liter is applied, so that the capacity of 1 *ephah* matches a weight of only 10–12 kilograms.] Thus, for the *ephah* of barley in Ruth 2:17, for example, the text has *etwa* 17 *kilos*, which is approximately 17 kilos. HFA parenthetically uses 15 kilograms.

Table 4 lists all dry substances that the Old Testament measures in volume. Their weight is provided where it is known.

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[39] cf. NP: 1.09 l.
[40] cf. NP: 8.75 l

Table 4

Hebrew	English	Weight (in kg.) per liter	Sample Reference
חִטָּה	wheat (grain)	0.75	II Sa 17:28
שְׂעֹרָה	barley (grain)	0.62	II Sa 17:28
קָלִי	roasted grain (unspecified)	?	II Sa 17:28
קֶמַח	wholemeal / wholewheat, NIV: *flour*	?	I Sa 1:24
קֶמַח שְׂעֹרִים	wholemeal of barley	?	Nu 5:15
סֹלֶת	semolina (of wheat), NIV: *fine flour*	0.59 (weight of today's “flour”)	Ex 29:40
מָן	manna	?	Ex 16:31
זֶרַע	seed (unspecified)	?	I Ki 18:32
הַקַּב חִרְיוֹנִים	“dove's dung” (?)*	?	II Ki 6:25 MT

*HOTTP: “We no longer know what this name "pigeon dung" actually designated. It is better, then, to leave the name as it stands and as it was read by all the ancient versions. Corrections, without support from textual witnesses, would only be mere guesses.” For other interpretations, see the English translations and other works.

Various sources have been consulted to determine the weight figures. Unfortunately, their information differs and thus precise figures are not easy to obtain for all measures. In addition, one should account for the fact that our grain—in whatever form—will differ in its quality from grain in ancient times. In addition, what is usually translated as “fine flour” was probably more similar to *semolina*. Finally, the weight of grain depends on how densely it is packed. If one is willing to approximate each measure to our current system for grain in its various forms, one can calculate with a rule-of-thumb ratio of two thirds; that is, 1 liter matches 2/3 of a kilogram.

As an example for how these calculations are helpful, consider Leviticus 5:11. It states in NIV: “He is to bring as an offering for his sin *a tenth of an ephah of fine flour* for a sin offering.” The footnote in NIV states: “That is, probably about 2 quarts (about 2 liters).” Whether one agrees with the conversion or not, a quantity given in liters is not so helpful to readers, if they are used to weighing flour. CEV, for instance, has “two pounds,” and TEV has “one kilogram.”

Larger amounts appear in I Kings 4:22.[41] NIV renders it as: “Solomon’s daily provisions were thirty *cors* of fine flour…” with the footnote: “That is, probably about 185 bushels (about 6.6 kilo-liters).” Parenthetically they apparently multiplied 30 with 220 liters. This results in 6,600 liters. However, if this is converted into kilograms by the factor 0.59, only 3,894 kilograms remain! That is why HFA ends up with *etwa 4 Tonnen*; that is, “approximately 4 tons”. GCL has *drei Tonnen* or “3 tons”.

Another example would be the amount of grain Ruth gleaned in Ruth 2:17. Leaving the discussion on the *ephah* aside for the moment, for a reader in the host language community who is used to measuring grain in kilograms, “9 kilograms” is more meaningful than “15 liters.”

The issue, however, could also come up in liquid measurements. In II Chronicles 2:10, for example, ESV states:

> I will give for your servants, the woodsmen who cut timber …and *20,000 baths of oil*.

Here oil is measured by capacity. However, in a culture where oil is weighed, there will be a mismatch that needs to be addressed: 1 liter of olive oil weighs less than 1 kilo; that is, only somewhat more than

[41] cf. MT5:2.

900 grams. Thus, the appropriate conversion into liquid weight would be more meaningful for the local reader of II Chronicles 2:10.

4 Weight

4.1 Table and remarks

Today it is difficult to define exactly how much a certain historic Hebrew unit measured, as compared to modern equivalents. One reason is that in ancient times precision in producing weights was difficult to achieve. It was apparently more important for buying and selling that the *same* weight was used, rather than an *exact* weight. ISBE (vol. 4 p. 1054) states:

> In all probability, instead of giving a particular weight as the "ideal" for a shekel and its subdivisions, we should speak of an ideal range. The ideal range for a shekel would be 11-12 gm, for a beka 5.5-6.0 gm, for a gerah 0.55-0.60 gm. The approximate values of the weights, then, would be as follows: talent: 33-36 kg., mina: 550-600 gm (50 shekels), or 660-720 grams (60 shekels), shekel: 11-12 grams, beka: 5.5-6 grams, gerah: 0.5-0.6 gm.

Another reason is that the *shekel* was apparently devaluated over time. Some weights were between 12.5 and 12.88 grams, while others were in the range of 11.08 to 12.25—their average weight being 11.38 grams.[42] Still, some other evidence points us towards the 10-gram-range.

Since in translation one needs to decide one way or the other, and fixed numbers are preferable over against ranges of values, one possibility is to use a 12-gram shekel in the conversion. This divides more nicely into the smaller units than an 11.4-gram shekel. See the table 5.

Table 5

OT terms	*gerah* גֵּרָה	*beka* בֶּקַע	*shekel* שֶׁקֶל	*mina* מָנֶה	*talent* כִּכָּר
ratio to *shekel*	1/20	1/2	1	50 (or 60?)	3,000
in grams*	0.6	6	12	600 (or 720?)	36,000

* For the correlation between gram and ounce, see appendix.

The שֶׁקֶל *(šeqel) "shekel"* is the basic unit of the weight system. In some places, no unit is given in the text and this is taken as an ellipsis for the *shekel*. Thus, this is the case that both ABD and NIDOTTE vol. 4 p. 237 point us to in: Genesis 20:16, where Abimelech vindicates Sarah; in Genesis 37:28, where Joseph is sold by his brothers; and in Judges 17:2–4 & 10, where Micah steals from his mother. HALOT likewise points us to the same phenomenon in Genesis 24:22, where Rebekah receives bracelets. Still other places, where the shekel is implied, are found in: Judges 8:26; I Kings 10:29; and II Kings 5:5; 6:25.

While the shekel and its corresponding units are weights, they also served to determine payments in this precious metal. Thus, the translator also needs to take this into account in choosing the words he/she will use in the host language. Compare the two verses below found in NIV:

> I Samuel 17:5: (referring to Goliath): He had a bronze helmet on his head and wore a coat of scale armor of bronze *weighing five thousand shekels*.

[42] cf. NBD.

> Exodus 21:32: If the bull gores a male or female slave, the owner must *pay thirty shekels of silver* to the master of the slave, and the bull must be stoned.

Under King Darius I, who reigned from 550 to 486 BC, there was also a coin named *"shekel"* in Babylonia. Thus, there is a possibility that in Nehemiah 5:15 and 10:32[43] while referring to taxes for the governors and the Temple tax, the term *"shekel"* denotes this coin.[44] However, since this cannot be definitively verified, I think it plausible to translate, as NIV and NLT do, with a footnote. In addition, TEV and CEV utilize the word "silver coins," whereas elsewhere in their translations they use "pieces of silver" for "*shekels*."

Note also that, even if silver—or gold for that matter—were weighed in *shekels* and used as payment, this does not necessarily mean they existed as coins, as ISBE (vol. 3 p. 403f.) under the term "Money" explains:

> By approximately 1500 B.C. metal bars, ingot tongues, and animal heads, in addition to flat discs and then rings made of gold, were used for commercial transactions. ... Since coins apparently were not known in Palestine before the Exile, biblical references to money in the pre-exilic period are to the weight of metal.

Translation: Some English translations use the foreign word "shekel"—with or without an explanatory note. The alternative is to use modern equivalents.[45] In the above-mentioned case of I Samuel 17:5, for example, each of the following translations makes use of "pounds:" NCV, TEV, CEV, NLT, and GW. In the above-quoted Exodus 21:32, which topic is about a certain payment, some translations, such as NCV and GW, use a unit of weight as well, namely "ounces;" while others, such as TEV and CEV, speak of "pieces of silver." The latter expression could be understood to mean coins, which they were not! However, it might still be the simplest way of referring to un-minted weights. NLT even speaks of "silver coins"—but they provide a footnote on both the Hebrew wording and the modern equivalent. GCL has *"Silberstücke;"* that is, "pieces of silver," and provides a glossary entry. This seems sensible, especially if the same expression is also used for certain coins in the New Testament.

Regarding מָנֶה *(māneh) "mina"*: The determination of the value of the *mina* is highly complex and the issue does not seem to have been solved satisfactorily to date. For the sake of simplicity, however, it is recommended to go by a 50-*shekel mina*. I provide some aspects of the discussion here: Historical evidence is ambivalent. And as such, ISBE leaves it undecided whether or not to understand a *mina* as consisting of 50 *shekels*—and that being 1/60 of a *talent* or of 60 *shekels*—and being 1/50 of a *talent*. In addition, according to some additional interpretation, the *mina* could even have been comprised of 100 *shekels*. The argument for the 50-*shekel mina* is that several numbers in the Old Testament are multiples of 50 *shekels*; for example, the "400 *shekels*" in Genesis 23:15, which calculation NBD favors. But even this argument is not conclusive, in that such texts principally show a calculation in *shekels* as "normal," while the use of the *mina* at that time was rare—and when it did occur, it was late in history. Thus, if one assumes a 50-*shekel mina*, then the place in Ezekiel 45:12 is apparently a re-definition: Ezekiel talks of the 60-shekel *mina*. Noteworthy also is that both NIV and NLT base their translation on the 50-shekel *mina*, and add a footnote for Ezekiel 45:12, which points out the specific difference. For more details on Ezekiel 45:10–15, I refer the reader to the following section 4.2.

In addition, the 50-*shekel mina* appears to go altogether well with the New Testament, where the *mina* was 50 *didrachmas*; that is, 1/60 of a talent. Other neighboring countries to Israel also had *minas* weighing 1/60 of the talent. But, even if one decided to use a 60-*shekel mina* everywhere in the Old Testament, this would not interfere with consistency in the New Testament, because the only place where the *mina* is used in the New Testament is in the Luke 19 parable, where the *mina* is multiplied by

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[43] cf. MT33.
[44] cf. ABD, NBD.
[45] cf. the discussion under section 7.1.

5 and by 10. However, this needs not be defined in actual value as we shall see below.[46] Lastly, I point out that the Old Testament occurrences of *mina* are found in: I Kings 10:17, Ezra 2:69, Nehemiah 7:70 & 71 and Ezekiel 45:12.

As noted earlier, the כִּכָּר *(kikkār) "talent"* is used exclusively in the context of gold and silver. Table 5 is a simplification. However, some findings point to a talent of approximately 30 kilograms, as does NBD. This would be too light to match 3,000 *shekels*, even if one assumed a shekel of only 11 grams. On the other side of the argument, it is not disputed that a *talent* consisted of 50 x 60 (or 60 x 50) *shekels*. Thus, some ambiguity remains.

NIV contains a table with approximate weight equivalents. The values taken by themselves lie within the possible range, but they do not fully correlate with each other, because they are rounded numbers.

In the Aramaic sections of the Old Testament the כִּכָּר *(kikkār) "talent"* occurs with the same spelling as in Hebrew, and appears in Ezra 7:22. As for the *mina* and the *shekel*, I refer the reader to section 4.4, where *"Mene mene teqel uparsin"* is discussed.

The term ταλαντιαῖος *(talantiáios)* "weighing a talent" only occurs in Revelation 16:21, where NIV renders this verse as: "From the sky huge hailstones of about a hundred pounds each fell upon men." It is not clear whether for this "talent" a Jewish or a Roman background has to be assumed. AGD states: "[B]y the late Jewish definition of the talent [it was] at least 20.4 kg." Yet, if one relies on other evidence, the talent equals 125 "libra," resulting in almost 41 kilograms.[47] The latter is assumed in LN, while suggesting the use of: "…an expression with a more general sense, for example, 'great stones of hail weighing almost a hundred pounds' or '… forty kilos.'" Lastly TH comments:

> Heavy as a hundredweight: in the American system a hundredweight equals one hundred pounds; in the British system, one hundred and twelve pounds. The Greek word is "(the weight) of a talent," which may be a way of stating: "an enormous weight"; so RNAB "like huge weights," and Phps "like heavy weights." But the writer may have had in mind the actual weight of a talent (which was a unit of weight). Estimates vary between eighty, and one hundred and twenty pounds. NRSV and NIV both have "about one hundred pounds." The metric equivalent of one hundred pounds is forty-five kilograms. SPCL translates "more than thirty kilograms and FRCL "up to forty kilograms."

For the "talent," as a Greek monetary unit, I refer the reader to the discussion under section 5. 2.

4.2 Ezekiel 45:10–15: "20 *shekels*, 25 *shekels*, 15 *shekels*"

The text of Ezekiel 45:10–15 is very difficult. In NIV, verse 12 reads:

> The shekel is to consist of twenty *gerahs*. Twenty *shekels* plus twenty-five *shekels* plus fifteen *shekels* equals one *mina*.

It is striking that no one seems to have a good explanation for why Ezekiel uses the cryptic wording "20 *shekels*, 25 *shekels*, 15 *shekels*." Why did he not simply add them up and say "60 *shekels*"? HOTTP gives the above reading a B-rating and indicates, "Factor 1," meaning this is a case where a reading that has little textual support is nevertheless preferred. Thus, the editors of HOTTP seem to discard the LXX reading, "five *shekels* <are> five <*shekels*>, and ten *shekels* <are> ten <*shekels*>, and fifty *shekels* [shall be your *mina*]" as a simplification and/or misunderstanding of historical data (Factors 4 and 9).

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[46] cf. see references below under section 5.2 "Money—New Testament."
[47] cf. see also ABD.

This may be true, but holding up the MT does not explain why the author worded it like this. To read "ten *shekels*, twenty-five *shekels*, and fifteen *shekels*" is, as a conjecture, not taken by HOTTP. Keil and Delitzsch (Reprint 1978) give much more attention to the issue than most modern commentators. In the end, he concludes that there is an irreversible corruption—and this is at least honest; that is, he does not accept LXX's "attempt" at solving the issue. ICC also calls the MT construction "ungrammatical," but does go by LXX.

A question is whether "…MT wrongly accords with the Babylonian sexagesimal system of 60 *shekels* to the *mina*," which is what WBC proposes, or whether this represents "…a devaluation of the shekel to make it accord with Babylonian usage," as TOTC proposes. Neither hypothesis is satisfying to me in that the first claims to "know better than the author," and the second because the measure could have been straightforwardly expressed with "60" instead of "20 + 25 + 15." As for the second theory, NBD explains:

> Thus the new Heb. *mina* at 20 (gerahs) x 60 *(shekels)* kept the value of the *mina* unchanged in relation to the Babylonian, which comprised 24 (giru) x 50 (siqlu) = 1,200 gerahs.

If this is correct, the Hebrew *shekel* kept its value and more *shekels* were included in the *mina*, so that, at least in the point of the *mina*, the systems would match. Thus, this would not be a "devaluation," but rather a matter of conversion.

ISBE's discussion, found in vol. 4 p. 1049 & 53, focuses on the question of whether the *mina* could have been a 50-*shekel-mina*. If the *mina* was not in regular use before the exile, "…Ezekiel may have been defining the *mina*, rather than redefining it." But this is still no answer for the strange wording.

In translating, since there is no real alternative, it would be best to keep to the MT. Now, the question comes to mind: should the translator save an uninitiated reader the enigma and, instead of talking of 20, 25 and 15 *shekels*, simply say "*sixty shekels* will equal one *mina*," or something similar to this, as CEV and others do? The answer: probably not, and the reason is that this text belongs to Ezekiel's vision[48] and this very fact *could* explain the mysterious language! In addition, compare how Daniel in 12:7 speaks of "…a time, two times, and half a time," which occurs in a vision also, as we see in section 6.5. Either way, a footnote ought to address, not only the problem of the 50-*shekel* versus 60-*shekel mina*, but also the cryptic and uncertain text itself. Unfortunately almost no English version does this.

4.3 Additional measures of weight

Regarding פִּים *(pîm) "pim"* this Hebrew term occurs only in I Samuel 13:21 in a verse the text of which is uncertain. *Pim* weights have actually been found, and in average they weigh is 7.8 grams. Now, even if it were accurate to state that this unit was not part of the original Hebrew *shekel* system, and if the text should not be proposed to literally mean "two thirds," still this value matches closely to 2/3 of a shekel, which is the widely accepted rendering. Thus, TH writes about translating the term in I Samuel 13:21 as follows:

> Pim is a transliteration of a Hebrew word that occurs nowhere else in the Old Testament. Archaeologists, however, have discovered ancient weights with the word pim written on them, so the meaning of this Hebrew term is now clear. FRCL states "two-thirds of a silver coin," and NLT states "a quarter of an ounce of silver." NRSV, REB, NAB, and NJB all translate pim according to its value as "two thirds of a shekel" (NIV)... Virtually all versions leave uncertainty in the mind of the reader as to whether the charges of the Philistines were reasonable or exorbitant. This would not have been a question to the original readers and hearers. They would have known that the prices were unreasonably high. For this reason CEV translates the meaning of the text by stating: "the Philistines charged high prices," providing a footnote that gives a more literal rendering of the Hebrew.

[48] Ezekiel's vision is found in chapters 40 to 48; note particularly his introduction in 40:1&2.

Regarding קְשִׂיטָה *(qᵉśîṭâ) "qesitah/kesitah,"* this term occurs only in Genesis 33:19, Joshua 24:32, and Job 42:11. Once more, we do not know precisely what this word denotes; thus, dictionaries are divided. However, HALOT offers: "…an ancient weight, used as money…, origin and size unknown;" while ABD favors the meaning as given in the ancient versions. It states:

> The *kesitah*… is more likely to be a sheep than either a weight or a "piece of money" …, which is a modern anachronism.

ISBE, in its article on "Weights and Measures," supports "lamb" as a gloss, pointing out that, if it were a weight, "…one would expect to find mention of the material weighed." However, in ISBE, under the term: "money," states *kesitah* is "a unit of weight." NIDOTTE sees the LXX's "lamb" as a possibility, but argues that "the context in Job, where '…each one gave him a *qesitah* and a gold ring', argues against that theory. It is also "…possible that the term signified the value of a lamb." Following this proposal, one could translate the term as: "…the equivalent of a sheep in silver." Yet the fact that *kesitah* is only used in very old books, it speaks more to assuming an ancient weight that came out of use, rather than for an animal; that is, for "lamb / sheep" there were other terms available.

Elsewhere, TH on Gen 33:19 advises:

> Pieces of money translate a Hebrew word that occurs elsewhere only in Josh 24.32 and Job 42.11. Its equivalent value in modern terms is unknown. Some of the ancient versions, however, translate it "lambs," and NEB/REB translates "a hundred sheep." In translation it is best to use a general expression, as in both RSV and TEV do.

And RSV translates it as: "a hundred pieces of money;" NRSV as: "one hundred pieces of money;" and TEV as: "a hundred pieces of silver." But, as ABD states, "pieces of money" is really anachronistic; thus, "pieces of silver" seems more fitting here.

Regarding λίτρα *(lítra) "litra,"* : Apart from the adjective ταλαντιαῖος *(talantiáios)*,[49] *"litra"* is the only NT term for a specific weight. It stands for the Roman *pound*; that is, 327 grams, or possibly a *mina* at 340 grams, which differs slightly from the above list for the Old Testament. It is used twice in the Bible. First, it occurs in John 12:3 (NASB) as:

> Mary then took a pound of very costly perfume of pure nard.

With this reference, one faces a mismatch of capacity and weight, but in reverse order than was discussed before[50]: While this Biblical example of perfume was measured by weight, that practice is unusual in today's world. Thus, LN (86.4) states:

> … it may be far better to indicate quantity rather than weight, and therefore one may translate 'then Mary took a pint of perfume.'[51]

And this, in fact, is what NIV does: "Mary took about a pint of pure nard." In the footnote, the authors simply round up and say, "…probably about 0.5 liter." However, this would not work in John 19:39, where the second occurrence appears in the NIV as:

> Nicodemus brought a mixture of myrrh and aloes, about seventy-five pounds.

Once again NIV utilizes a footnote that states: "…Greek: a hundred *litrai* (about 34 kilograms)." I would note that the use of kilograms is perhaps more appropriate here, since an ointment for burial might not typically be considered a liquid.

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[49] cf. See also discussion in section 4.1.
[50] cf. See also discussion in 3.6.
[51] Parenthetically, an American pint holds 473 cc., and a British pint holds 568 cc. Thus, a metric equivalent should be approximately 0.5 liters.

4.4 Daniel 5:25 and the verses that follow: *"Mene mene teqel uparsin"*

Regarding מְנֵא מְנֵא תְּקֵל וּפַרְסִין *(mᵉnē' mᵉnē' tᵉqēl ûparsîn)* the reader will recognize this as the off-quoted wording of "the hand writing on the wall," which was the LORD's verdict of condemnation against King Belshazzar. These words occur in the Aramaic section of Daniel, specifically Daniel 5:25 and the verses that follow, and these most likely contain Aramaic measures; namely, the *mina*, the *shekel* and a *half-unit*. Even though the specific value of each word is not important or particularly relevant here, any translation of the original word-play would be difficult to retain, and as such, the dense composition of the structure should minimally be explained in a footnote. We have examples of this in NIV and CEV. For additional explanations on these verses, I would suggest TH or a commentary such as TOTC.

4.5 The *"sanctuary shekel"* and the *"king's weight"*

Concerning these expressions *"according to the sanctuary shekel"* and *"by the king's weight,"* we find the following in TH on Exodus 30:13:

> (The phrase) "…according to the shekel of the sanctuary" may also be translated "by the holy shekel." This indicates that there may have been more than one standard. REB has "according to the sacred standard." At least this "sanctuary weight" (TAN) of the shekel equaled twenty gerahs. The gerah was the smallest unit of weight, which was less than 0.6 grams. TEV has considered this as unnecessary information and simply states "weighed according to the official standard." (CEV is almost identical.) But this was probably not the same as the "royal standard" (TEV) mentioned in 2 Sam 14.26 (RSV "the king's weight"). One may also say "weighed according to what is considered the correct weight" or "that you weigh according to what they consider the correct weight."

These latter options exclude—at least for the uninformed reader—the idea that the sanctuary had its own standard, and hence are better avoided. An alternative wording might be: "weighed with the scale of the sanctuary" or: "weighed with the weight stones used in the sanctuary."

Thus, a possible translation for Numbers 7:13 might be: "His offering was one silver dish, which weight was 1.5 kg ...according to the sanctuary weight / measure." Yet care needs to be taken to ensure that the words "according to the sanctuary weight / measure" are not mistaken as referring to the *amount*, but rather to the calibrated weight (stones).

Regarding the expression "the king's weight", the following is what TH states for II Samuel 14:26:

> By the king's weight: wherever there are weights and measures used by a large group of people, there must be a standard. Genesis 23:16 speaks of "four hundred shekels of silver, according to the weights current among the merchants." Similarly the expression "shekel of the sanctuary" is common in the Pentateuch (see Exodus 30:12; Lev 5:15; 27:3, 25; and Numbers 7). The expression used here is not found elsewhere in the Old Testament but indicates that the standard for weights and measures at this point in the history of Israel must have been set by the king. The very presence of this phrase seems to indicate that the readers may have been familiar with other standards. Some possible translations include "by the royal standard" (NIV), "by the official weight of the king" (ITCL), and "using the measures approved by the king."

Present-day scholars discuss whether these standards were heavier than the usual shekel, so as to ensure that the full amount that was required was given. This is possible, but we do not have sufficiently reliable data to be sure that this was indeed the case. The sanctuary shekel is repeatedly defined as consisting of 20 *gerah*, as in Exodus 30:13, Leviticus 27:25, and Numbers 3:47. In addition, there is no evidence that in other transactions the shekel was defined by fewer *gerahs*.

Thus, for translation purposes, the two phrases discussed above will need to be defined, but the calculation of the weights in these places should not differ from one place to the other. It would be too arbitrary, for instance, to calculate a shekel at 11.5 grams in Exodus 21:32, but at 12.5 grams in II Samuel 14:26, and then convert these values accordingly into a host language.

In addition, a phrase like "by the official weight of the king" may very well leave some ambiguity, whether it is simply the "correct weight" or a different standard. Such ambiguity is permissible in this case. However, one way or the other, the *holy shekel* and the *royal shekel* need to be distinguished in any translation.

Lastly, for sake of completeness, one should mention the phrase "current according to the merchant" in Genesis 23:16. Thus, NASB has:

> Abraham weighed out ... four hundred *shekels* of silver, *commercial standard*.

And TEV states: "…according to the standard weights used by the merchants." Likewise, TH makes similar comments.

5 Money

5.1 Old Testament

For weights used as money, I refer the reader back to section 4.0 on "Weight." Here, I simply discuss coins—and there are only one or two kinds that were used in Old Testament times. As such, there are two similar Hebrew words that warrant our attention:

First, there is the אֲדַרְכּוֹן *(ʿadarkôn) "daric"* as found in the following verses: I Chronicles 29:7 and Ezra 8:27.

Secondly, the דַּרְכְּמוֹן *(darkᵉmôn) "drachma"* as found in the following verses: Ezra 2:69 and Nehemiah 7:70, 71, 72 [MT69/70/71].[52]

Scholars largely agree that the first term must mean the known Persian coin called *daric*, weighing approximately 8.4 grams. HALOT, for instance, states: "trad. < δαρεικῶν *[dareikōn]* Pers. gold coin *daric*," but goes on to mention that others interpret it as a corrupted form of דַּרְכְּמֹנִים *[darkᵉmōnîm]*, meaning *"drachmae."*

Regarding the etymology of "daric," Wikipedia states:

> "Some, such as the Ancient Greeks, believed that this coin's name is derived from the name Darius, but in reality it appears to be derived from a Persian word meaning "gold"; in Middle Persian it is called *zarig*."

And, there seems to be some confusion as to the exact weight of this coin. One resource talks of 130 grams instead of 8.4 grams. This most likely originates in a misunderstanding. In order to ensure certain weight standards, coins used to be weighed in grains (of wheat, for instance), and 8.4 *grams* happen to equal 130 *grains*. Thus, the abbreviation *gr(s)*. is to be read as "grains," not as "grams."

The identity of the second coin is also debated. The question is whether it also refers to the Persian *"daric,"* or to the Greek *"drachma."* An argument for equating the *darkᵉmôn* and the drachma *(drachmή)* would be their phonetic proximity. Here is what various resources say:

HALOT, listing it as: דַּרְכְּמֹ(ו)נִים *[darkᵉmō(ô)nim]*, notes that it is a Greek loan-word, usually derived from the genitive plural δραχμῶν *(drachmōn)*. And, while other hypotheses for the derivation exist, the gloss is simply given as *"drachma."*

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[52] Note that these texts in Ezra and Nehemiah are parallel passages.

ABD, under the term: "coinage," mentions both the *drachma* and *daric* in two distinct sections; namely, B.4, and C, respectively. However, it fails to discuss either reference in any depth, as well as the particular problems related to their usage in Biblical texts.

SDBH has no entry for the second term.

NIDOTTE remains indecisive. It states under # 3971a: "…a Persian gold or silver coin of approximately eight and a half grams, or perhaps drachma, a Greek coin."

NICOT on Ezra 2:69 states: "*Gold drachmas* ...are either the Persian daric or the Greek drachma. At this time the Greek drachma was in general use and it is quite probably meant here."

DGB on page 431 makes no distinction between the two coins; that is, דַּרְכְּמוֹן *(dark*[e]*môn)* is identified with the *daric*.

RH states: "According to some scholars, the <adarkon> and the <darkmon> are not the same coin, the former coin corresponding to the Persian daric and the latter one to the Greek drachma. In all of the passages listed above, however, it is possible that the reference is to a weight of gold and not to coins."

TH is of limited help; there is no TH comment for I Chronicles. For Ezra 8:27, on the other hand, TH points to the explanation under 2:69. That is, it makes no distinction between the two Hebrew terms. TH comments on NIV's version of Ezra 2:69, viz.: "…they gave to the treasury for this work 61,000 drachmas of gold, 5,000 minas of silver and 100 priestly garments," with the following comment:

> Darics of gold were gold coins that weighed 8.424 grams each (about 0.3 ounces). They were named after the Persian king Darius I. These coins are mentioned only in Ezra-Nehemiah and I Ch 29.7. Some translations use the better known word of Greek origin, which is "drachma," in place of the Persian daric. …Instead of referring to coins that will not be known to readers today, it may be preferable to specify the equivalent amount of gold …in weights that will be understood by the reader as GNT has done. The British edition of GNT gives the weight in kilograms: 500 kilos of gold and 2800 kilos of silver.

I would point out that TH's comment above, "Some translations use the better known word of Greek origin, which is *drachma*, in place of the Persian *daric*," is somewhat confusing. It sounds as if the Biblical text speaks of Persian *darics*, and the translations simply choose different terms. The real choice is this: If one holds that the text speaks of Persian *darics*, he/she has no choice other than to translate it as that. However, if one holds that the word דַּרְכְּמוֹן means the Greek coin *drachma*, then the opposite, of course, is true.

Even though the average reader will not know the true value of either of these coins, it would be a pity to lose these few references to coinage in the Old Testament by simply ignoring the differences between them. Thus, in this situation, using the names of the coins and indicating the weight of each in a footnote seems preferable.

The fact is the term דַּרְכְּמוֹן *(dark*[e]*môn)* only occurs in combination with the word for "gold." This seems a quite strong argument in favor of the Persian *daric*, which was a gold coin, and against the Greek *drachma*, which was a silver coin. Only after the Achaemenid period were silver *drachmas* introduced in Persia. The web site "Iransaga"[53] states:

> "In 330 B.C., Darius III was captured by Alexander the Great, and the great days of the Persian Empire ended. Alexander's campaigns drew Persia into the Hellenistic world of silver-based coinage and a system was founded on the silver *drachm* and *tetradrachm*."

[53] http://www.art-arena.com/pcoins.htm (accessed 05 February 2013).

As for the actual weight, if one sees the word referring to the Persian *daric*, then the 1,000 *dark*[e]*môn* in Nehemiah 7:70 would be about 8.4 kilograms.[54] If one sees the words as a reference to the Greek *drachma*, then, according to NP, this *coin* lies between 2.9 and 6.2 grams, and the Attic one by 4.4 grams, while the Greek *weight "drachma"* lies by 4.4 grams and the Roman one by 3.4 grams. These weights are referenced in the following Tables 6 & 7 in paragraph 5.2.

5.2 New Testament—table and remarks

The Roman *denarius* and the Greek *drachma* are both silver coins of approximately the same value, namely the day's wage of a common laborer.

Table 6

NT terms	*lepton*	*quadrans*	*assarion*	*denarius*
	λεπτόν	κοδράντης	ἀσσάριον	δηνάριον
origin	Jewish	Roman	Roman	Roman
material	copper	copper	copper	silver
ratio to denarius	1/128	1/64	1/16	1

denarius ≈ *drachma*

Table 7

NT terms	*drachma*	two-*drachma*	stater *(tetra-drachmon)*	*mina*	*talent*
	δραχμή	δίδραχμον	στατήρ	μνᾶ	τάλαντον
origin	Greek	Greek	Greek	Greek	Greek
material	silver	silver	silver	silver	silver
ratio to drachma	1	2	4	100	6000

The *lepton*, *quadrans* and *assarion* were all copper coins similar to today's "pennies." The λεπτόν *(leptón) "lepton"* is found only Mark 12:42 and Luke 21:2 regarding the widow's offering, and in Luke 12:59 with regard to paying a debt: "until you have paid the last penny." However, one also finds this same phrase using the monetary term κοδράντης *(kodrántēs)* or *"quadrans"* in Matthew 5:26.

Also worthy of note is that the *quadrans* was the smallest Roman coin, while Luke utilizes the term *"lepton,"* the smallest Jewish coin. However, NIV makes no distinction in either verse. The only other occurrence of *quadrans* is in Mark 12:42, where NASB translates it as: "A poor widow came and put in two small copper coins *[lepta]*, which amount to a cent *[quadrans]*" (brackets mine).

Regarding ἀσσάριον *(assárion) "assarion,"* this unit of money occurs in Matthew 10:29 and in Luke 12:6 in reference to the price for two, or five sparrows respectively. If one uses a phrase like "very little money," then he/she loses the difference between the two gospels.

[54] For a discussion on the textual difficulty in Nehemiah 7:70 [MT69], see TH and what follows.

Regarding δίδραχμον *(dídrachmon) "didrachma,"* this unit of money occurs in two places, both of which occur in Matthew 17:24 and refer to the Temple tax. These are discussed in the "5.4 On translating monetary values" paragraph below.

Regarding στατήρ *(státēr) "stater,"* this unit of money occurs only in Matthew 17:27—in the same passage as the *didrachma*—of the coin in the fish's mouth used to pay the Temple tax.

Regarding δηνάριον *(dēnárion) "denarius,"* this unit of money occurs in the New Testament in various contexts including parables.

Regarding δραχμή *(drachmē) "drachma,"* this unit of money occurs only in Luke 15; actually, three times in the *Parable of the Lost Coin*.

Regarding μνᾶ *(mnā) "mina,"* this unit of money occurs several times, but only in the *Parable of the Ten Minas* in Luke 19:11–27.[55] The Greek *mina* in New Testament times equaled 100 *drachmas* and was used as a monetary unit, not as a weight. As the footnote in NIV explains, the sum "was about three months' wages." The amount apparently indicates trust in a servant's abilities, but was not extraordinary high for a "man of noble birth"—certainly not so exceedingly high as the amount in Matthew 25.

Regarding τάλαντον *(tálanton) "talent,"* this unit was used simply in calculating significant wealth, but no coin with this name was ever created. It occurs only in two parables in the New Testament, the first of which in Matthew 18:24 in the *Parable of the Unmerciful Servant* where: "…one man owes his master 10,000 talents... and another man owes the first a hundred *denarii*." The second time *talent* appears it occurs in Matthew 25:15 in the *Parable of the Talents* where both monetary terms (*talent* and *denarii*) occur several times.

We should note that the *talent* used here is not to be mistaken as the *weight* of the item, for which it was also used in the Greco-Roman world. For that, NP gives equivalents changing over time from 27.506 to 39.294 kilograms. And ISBE on Matthew 25:15 is not very clear in keeping this apart from the monetary unit; as a monetary unit, the value has to be deducted from the smaller units. According to LN, 1 silver talent was the equivalents of approximately 6,000 *denarii*, and 1 gold talent at least 30 times that much. NP gives a figure of 26.196 kilograms for the talent as money. However, whether or not this applied in New Testament Palestine is not completely certain (ISBE).

5.3 Additional measures of money

Regarding the term χαλκός *(chalkós)*, which translates as "copper coins, bronze money," it occurs only in the sense of money in Matthew 10:9 and Mark 6:8. NIV renders it as: "Do not take along any gold or silver or *copper / no money*," and in Mark 12:41 it is used in reference to people putting their money into the Temple treasury.

Regarding ἀργύριον *(argúrion)* / ἄργυρος *(árguros)*, both terms can denote silver, or pieces of silver; that is, coins, and thus money. The following occurrences occur in the New Testament. ISBE states that the "thirty silver coins" for Judas found in Matthew 26:15 "…were probably Tyrian *shekels* or tetra-drachmas," and TH states:

> "Only Matthew mentions thirty pieces of silver (TEV "thirty silver coins") as the price of betrayal. The amount is not significant, and it was probably determined by Zechariah 11.12 ("So they paid thirty pieces of silver as my wages")... The amount of money given to Judas, thirty pieces of silver, was not in itself important, as we pointed out above, but there is some value in retaining the form, since it does tie this amount in with the Zechariah reference. Translators should not try to convert

[55] cf. the *Parable of the Talents* in Matthew 25.

> this to modern currencies such as pounds or francs, but if a literal translation is unacceptable, they can say "thirty pieces of money made from silver."

Acts 19:19 (NASB) state:

> And many of those who practiced magic brought their books together and began burning them in the sight of everyone; and they counted up the price of them and found it *fifty thousand pieces of silver*.

And in commenting on Acts 19:19, TH states:

> "Fifty thousand dollars is literally "fifty thousand (pieces) of silver." The reference is to some silver coin, though the commentators are not in agreement as to which one Luke had in mind. The point is that the amount of money was very large, and so the TEV has rendered this as fifty thousand dollars, probably the closest dynamic equivalent.
>
> In translating fifty thousand dollars into some other language there are a number of possibilities. One may, for example, use a somewhat general term: "fifty thousand valuable silver coins." This would carefully represent the Greek text, and since the particular size of coin is not stipulated, devaluations would not render the text meaningless, as has so often happened in various parts of the world where strictly local currencies were stipulated. It is perfectly legitimate to introduce the term "valuable" since any silver coin in ancient time had considerable more buying power than equivalent sized coin would have today. One can also translate the fifty thousand dollars into some local currency (provided it is relatively stable); but in making all such adjustments in quantities, it is important to use rounded-off figures rather than attempt some precise or detailed calculations."

5.4 On translating monetary values

Money values—in terms of buying power—change all the time, so that amounts converted into modern currencies are likely to soon become outdated estimates. Nevertheless Fry (1978) argues that estimates of equivalents should be given, so as to better help the reader—even in the Old Testament. But this is a problematic approach, not only because of ongoing devaluation of today's currency, but also because one faces difficulties in coming up with appropriate "equivalents," since today's incomes and prices are in no way uniform. On top of that, one needs to take into consideration the fact that the value of a coin is usually higher than the value of the metal it contains.

For monetary values in the Old Testament, I refer the reader to my previous discussion under "Weight." Here I state no more than—even if weights were functioning as "money"—still rendering the weight measurements in modern weight equivalents is good enough to convey an idea of proportionality. Minimally, this is a method to remain consistent.

In the New Testament, one might wonder how to come up with enough terms for eight different units. However, there may not be a need to find a term for each of them. If one goes with LN (6.79), for example, then—regarding *lepton*, *quadrans* and *assarion*—"in practically all instances, references may be made in terms of 'a very small coin' or 'a coin with very little value'..."

And in Mark 12:42, where two coins are compared, one can follow TEV, where it says, "A poor widow came along and dropped in two little copper coins, worth about a penny." This rendering talks without specificity of "two little copper coins," and then gives the value in terms of a "penny." Many other languages should have a similarly small unit that can be used for comparison.

The highest units, the *mina* and the *talent*, as well as the *drachma*, only occur in parables, where it is not difficult to avoid a specific equivalent.

Then, there is the *denarius*. For this monetary unit, the following examples show creative solutions: TEV in Matthew 20:2 states, "He agreed to pay them the regular wage, a silver coin a day."—which is close to the text *and* gives an idea of how much that was. In Matthew 22:19, where Jesus is tested in regard to

paying taxes, TEV states, "'Show me the coin for paying the tax!' They brought him *the* coin..." This solution avoids having to give details, and for the flow of the argument, it works perfectly well. In John 6:7, instead of "200 denarii," NIV has "eight months' wages."

The only remaining units to be considered are the *two-drachma* and the *tetradrachma* (stater) mentioned in Matthew 17:24–27. Regarding the Greek term "Collectors of the *double drachma*," NET explains in the footnote:

> This is a case of metonymy, where the coin formerly used to pay the tax (the double drachma coin, or δίδραχμον *(dídrachmon)*) was put for the tax itself.[g] Even though this coin was no longer in circulation in NT times and other coins were used to pay the tax, the name for the coin was still used to refer to the tax itself.
>
> cf. [g]: BDAG 241 s.v.

Several English translations simply say "temple tax," which is elegant and more meaningful than a *"two-drachma tax."* If one uses "silver coin" for the *denarius*, and a "large silver coin" for the *stater*, it would be difficult to come up with yet another qualifier for the *didrachma* in the middle. Thus, it appears all the more helpful to call it simply the "temple tax."

The *stater* fits exactly the needs of Jesus and Peter. English translations suggest different ways of dealing with this. NIV uses the paraphrasing term *"four-drachma coin,"* NLT expresses the difference to the *denarius* by stating: "a *large* silver coin." TEV makes explicit the value by adding "a coin *worth enough for my Temple tax and yours*."

One needs to be cautious with the term "silver coin." Fry (1978) points out that nowadays, with banknotes being used in abundance, "silver coins" can be misunderstood as "small change" rather than being a substantial amount of money. The reverse is true too: A "silver coin" can be associated with "gold and silver"; that is, riches. However, if one wants to use it for the *denarius*, it is supposed to denote a normal coin of the every-day currency. Testing, of course, is needed to find out whether or not "silver coin" conveys the right idea.

6 Time

6.1 *"Hours"* and *"night watches"*

Regarding the Old Testament, HALOT and ISBE appear to agree that in Old Testament times the night must have been divided into three watches. The clearest hint is the expression "the middle watch" in Judges 7:19. No further evidence is quoted in dictionaries.

One of the two Hebrew words utilized for "nightwatch" is: אַשְׁמוּרָה *('ašmûrâ)*. And it occurs four times in the Old Testament, either as a time of meditation and prayer as in Psalms 63:7, 119:148, and in Lamentations 2:19, or in parallel to "day," as a short period of time in Psalms 90:4. However, only in Psalms 90:4 does it occur together with the word "night." Also worthy of note is that in the poetic texts no exact point of time seems to be in focus. Thus, the translator should be free to express the idea as it fits the immediate context. Psalms 63:7 may serve as an example:

> NASB: When I remember You on my bed, I meditate on You in the night watches.
>
> NET: I remember you on my bed, and think about you during the nighttime hours.
>
> TEV: As I lie in bed, I remember you; all night long I think of you.

A closely related word is אַשְׁמֹרֶת *('ašmōret)*. It occurs in Exodus 14:24, as well as in I Samuel 11:11, both times together with the word for "morning," meaning "morning watch." That is, it apparently refers to the last of the three night-watches. Thus, the translation ought to be fairly easy to render in a receptor language.

New Testament: ISBE, under "hour," states:

> Since these were inaccurate chronometers that varied from one solstice to another, "hour" designated simply one twelfth of either day or night...[h] Accordingly, "the third hour" was approximately 9:00 A.M., "the sixth hour" about noon, "the ninth hour" about 3:00 P.M.
>
> fn.[h]: That is, depending on the time of the year an "hour" could be shorter or longer. *(PS)*

Ortiz writes in TBT 4/1996:

> References to hours can and must be converted into the system used by the reader, even though the equivalent time may not be absolutely exact. We know that Jews in the time of Jesus counted the hours of the day from the rising of the sun; and even though this hour changes according to the season of the year, there is no great difficulty in converting it into our system. It is much clearer to say that when Jesus met the Samaritan woman (John 4:6) "it was around noon" than to say that "it was the sixth hour." Otherwise, a reader may think that it was six o'clock in the morning or six o'clock in the afternoon.
>
> For the hours of the night, there are two somewhat different systems in the Bible. In ancient times the night was divided in three "watches." In the Roman period the Jews were following the ancient system, but the Romans divided the night into four parts. Since the references are much more vague, translators may use terms which are equally vague ("the beginning of the night," "midnight," "early morning"). See Luke 12:38 for the Jewish system ("if he comes in the second watch") and Mark 6:48 ("about the fourth watch of the night") for the Roman system.[56]

6.2 Other times of the day

Regarding בֵּין הָעַרְבָּיִם *(bên hā'arbāyim) "between the evenings."* This phrase occurs in Exodus 12:6, 16:12, 29:39 & 41, 30:8; Leviticus 23:5; Numbers 9:3, 5 & 11; and 28:4 & 8. These references are complete. Regarding Exodus 12:6 TOTC states:

> Some understood the meaning as being between the time in the afternoon when the heat of the sun lessens (say 3 or 4 p.m.) and sunset. Other groups preferred the time between sunset and dark...

NICOT on Numbers 9:3 and what follows explains:

> This phrase is usually translated as: "in the evening" (RSV), "between dusk and dark" (NEB), or "at twilight" (NIV, NASB, NJPS). ...Ibn Ezra argued for approximately 1 1/3 hours between sunset and darkness. And Deut. 16:6 places the Passover "in the evening, at the going down of the sun...," which seems to favor the explanation of Ibn Ezra.

From my point of view TEV's rendering of: "in/on the evening / at sunset" sounds somewhat colorless. On the other hand, it avoids being specific where we are not sure. Thus, whatever the translator ultimately decides, the phrase used in different books and contexts should be consistent throughout.

Regarding: *"the time of the offering,"* there is one special use of the word מִנְחָה *(minḥâ)* "*grain offering*" about which the translator should take note: Since the grain offering was to be brought regularly every morning and every evening, as we see in Exodus 29:38–45 and Numbers 28:3–8, the word for the offering itself came to be used to describe those times during the day. This is demonstrated below, where each reference is given with a literal translation:

---

[56] cf. Note LN 67.196 on φυλακή *(phulakḗ)* "watch," 67.198 on ἀλεκτοροφωνία *(alektorophōnía)* "when the cock crows" and 67.199 on ὥρα *(hṓra)* "hour."

I Kings 18:29 & 36	...until the going up of the [evening] offering
Ezra 9:4 & 5	...until the evening offering
Daniel 9:21	...at about the time of the evening offering
2 Kings 3:20	...in the morning as was going up the [smoke of the] grain offering

Although we do not know the time of the offerings in precise hours of the day, English translations keep the reference to the offering. In Ezra 9:4, for example, it is translated as follows:

in NASB:	... and I sat appalled until the evening offering.
in TEV:	... I sat there grieving until the time for the evening sacrifice to be offered...

6.3 *"Days"* in the sense of *"a long-time"*

The plural of the Hebrew word יוֹם *(yôm)* "day" can be used to express an indefinite time or a year. Most relevant passages are mentioned in the two quotes below, which refer to Numbers 9:22. NET, in their footnote, explains:

> The MT has <'o-yamim>. Most translators use "or a year" to interpret this expression in view of the sequence of words leading up to it, as well as in comparison with passages like Judg 17:10 and I Sam 1:3 and 27:7. See also the uses in Gen 40:4 and I Kgs 17:15.

NICOT is more cautious and translates the word as: "any number of days," explaining:

> The translation of <yamim>, lit., "days," here is a problem. One would expect it to be a period of longer than one month. Most modern English translations render the term "one year" (AV, RV, NASB, NEB, NIV, NKJV, NJPS, JB). Gray (p. 87) denied the possibility of such a translation, despite Lev. 25:29, which is usually used to support the contention. In the Leviticus passage, the term "days" parallels the term year, and the derived meaning comes from that parallelism, nothing else. BDB, p. 399b, gives examples of the term <yamim> being used for an indefinite period of time (e.g., Gen. 40:4; I K. 17:15; Nehemiah 1:4). The phrase is probably equivalent to an indefinite time period; hence something like RSV "a longer time" is preferable.

Thus, unless the context clearly demands a rendering with "year," as for instance in I Samuel 27:7, translating with a more vague expression is advisable. In Genesis 40:4 and I Kings 17:15, common English translations use "…for (quite) some time / for a long time" and "…for many days / for a long time," respectively.

The expression "these days" or "these years" only occurs in I Samuel 29:3. See the TH and the solutions below:[57]

NASB	…who has been with me these days, or *rather* these years.
NIV	…He has already been with me for over a year.
TEV	…He has been with me for quite some time now.

6.4 Years and Months—table and remarks

Years in the Old Testament are equated to a person's lifetime, a king's reign, or a certain event as we see in the following examples:

[57] For a discussion of how the Hebrew words for *dawn*, *morning*, *midday*, *evening*, *night*, etc. are used, see NIDOTTE, under # 1332 (Vol. 1, p. 710-720).

> Genesis 7:11 (NIV): *In the six hundredth year of Noah's life, on the seventeenth day of the second month*—on that day all the springs of the great deep burst forth, and the floodgates of the heavens were opened.
>
> I Kings 15:1 (NIV): *In the eighteenth year of the reign of Jeroboam* son of Nebat, Abijah became king of Judah.
>
> Numbers 1:1 (NIV): The LORD spoke to Moses in the Tent of Meeting in the Desert of Sinai *on the first day of the second month of the second year after the Israelites came out of Egypt....*

A question that could be asked is: When does the year begin? And the generally accepted answer—from what we deduce from certain Old Testament passages—is the year's cycle always stayed the same. That is, the beginning of the year does not start with the birthday of a named individual or with a king's accession to the throne. For instance, we see this happening in Esther 3:7, where it states:

> In the first month, *which is the month of Nisan*, in the twelfth year of King Ahasuerus...

Furthermore, in both the Jewish and the Babylonian system it is the first month of the year that is given. And there is no indication of a mismatch in the beginning of the Jewish and the Babylonian year. So, while it is called "the twelfth year of King Ahasuerus," this year starts at the usual time, not with Ahasuerus's accession to the throne. There is also a telling passage in Jeremiah. When reporting how he dictated to Baruch God's words and how Baruch read them out publicly, Jeremiah gives us the year of the event. Thus, (NIV) renders Jeremiah 36:9 as:

> In the ninth month of the fifth year of Jehoiakim son of Josiah king of Judah...

A few verses later the circumstances are described in Jeremiah 36:22 (NIV):

> It was the ninth month and the king was sitting in the winter apartment, with a fire burning in the firepot in front of him.

The ninth month of the Hebrew calendar is the beginning of the cold season. So again, the year's cycle stayed the same, even when the year was counted by a king's reign.

Having said that, the translator should also note that in the chronologies of the kings of Israel and Judah the accession year is sometimes counted as a full year, even though in reality the enthronement took place sometime during the year.

Translation: in a case like the above quote from Genesis 7:11, where determining an exact date is not possible, the wise course of action for the translator would be to simply follow the original, as Ortiz proposes in TBT 4/1996:

> In the ancient world years were usually indicated by referring to the beginning of the reign of a particular ruler (for example, "in the fourteenth year of King Hezekiah": 2Kgs. 18:13; Isa. 36:1). Such references cannot be converted into a different calendar. But it is very helpful to put the equivalent in our calendar into a note, even if the date is only approximate.... To make the conversion in the text to a fixed year "before Christ" would be an unacceptable anachronism.

Regarding months of the year, the names of none of them are mentioned in the New Testament. In the Old Testament, three systems are used: the numerical; the Canaanite one, where the only months mentioned are Abib, Ziv, Ethanim and Bul; and the Babylonian one, where the only months mentioned are Nisan, Sivan, Elul, Chislev, Tebeth, Shebat and Adar. The year begins with Abib / Nisan / "the first month;" that is, with early spring. In certain contexts though, Ethanim / Tishri / "the seventh month" in the fall is considered to be the beginning of the year.[58]

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[58] cf. Exodus 23:16

More difficult to translate, however, are those places where the Jewish year is assumed, and reference is made to a date within the Jewish year, as the NIV renders in Lev 23:24:

> *On the first day of the seventh month* you are to have a day of rest, a sacred assembly commemorated with trumpet blasts.

The Jewish year does not match the modern calendar year, and thus "the first day of the seventh month" could be misinterpreted as the 1st day of July. Thus, in some way it would be good that the reader be informed of the differing Jewish system. The Bible itself gives some explanation in Exodus 12:2, which relates the New Year to the event of the exodus of the Jews from Egypt, as we see in NIV: "This month is to be for you the first month, the first month of your year." However, even this rendering does not provide a comparative modern calendar date.

NLT, in its introduction to the first edition, explains the problem and the solution they adopted, which appears to be an adequate model:

> Since the Hebrew lunar calendar fluctuates from year to year in relation to the solar calendar used today, we have translated Hebrew dates in a way that communicates with our modern readership. It was clear that we could not use the names of the Hebrew months, such as *Abib*, which are meaningless to the modern reader. Nor could we use a simple designation such as "first month," because the months of the Hebrew lunar calendar do not correspond with the months of our calendar. Thus, we have often used seasonal references to communicate the time of year when something happened. For example, "the first month" (which occurs in March and April) might be translated "early spring." Where it is possible to define a specific ancient date in terms of our modern calendar, we use modern dates in the text. Textual footnotes then give the literal Hebrew date and state the rationale for our rendering. For example, Ezra 7:9 pinpoints the date when Ezra arrived in Jerusalem: "the first day of the fifth month." This was during the seventh year of King Artaxerxes' reign (Ezra 7:7). We translate that lunar date as August 4, with a footnote giving the Hebrew and identifying the year as 458 B.C.

One may object that speaking of seasons like "early spring"—while at the same time giving a chronological orientation—can be misleading in that in a given host culture, it evokes wrong associations as to the year's climatic or agricultural cycle. This reaction simply demonstrates that a translation can only go so far in removing obstacles to understanding. Thus, even the most dynamic translations cannot replace every accompanying teaching about the world of the Ancient Near East to present day equivalents.

In places like I Kings 6:1, the first edition of NLT simply utilizes a season, namely, "in mid-spring." In their second edition, however, they retain the month's name *and* make the implicit seasonal information explicit: "in mid-spring, in the month of *Ziv*." In addition, they consistently footnote the rendering of the months in order to relate the Hebrew expression to modern months.

Similarly, CEV renders the same verse: "Ziv, the second month of the year," and only in a footnote does it clarify what the "second month" actually is. However, NIV does not provide a footnote, which means the reader will lack some orientation.

Table 8

Numerical (pre-/ post-exilic)	**Canaanite (preexilic Hebrew)**	**Babylon. (postexilic Hebrew) ***	**Modern**	**NLT (Examples)**
1.	Abib	Nisan	March/ April	Nu 9:1 In the first month of that year he said...** Ex 13:4 On this day *in early spring, in the month of Abib*, you have been set free. Neh 2:1 *Early the following spring, in the month of Nisan*, during the twentieth year of King Artaxerxes' reign...
2.	Ziv	(Iyyar)	April/ May	IKi 6:1 It was in mid-spring, in the month of Ziv, during the fourth year of Solomon's reign...
3.		Sivan	May/ June	Est 8:9 on June 25 the king's secretaries were summoned
4.		(Tammuz)	June/ July	
5.		(Ab)	July/ August	Nu 33:38... in midsummer, on the first day of the fifth month
6.		Elul	August/ September	Neh 6:15 So on October 2 the wall was finished—just fifty-two days after we had begun.
7.	Ethanim	(Tishri)	September/ October	IKi 8:2 at the annual Festival of Shelters, which is held in early autumn in the month of Ethanim.
8.	Bul	(Marheshvan)	October/ November	IKi 6:38 ... by midautumn, in the month of Bul
9.		Kislev	November/ December	Neh 1:1 In late autumn, in the month of Kislev
10.		Tebeth	December/ January	Est 2:16 Esther was taken to King Xerxes ...in early winter of the seventh year of his reign.
11.		Shebat	January/ February	Zec 1:7 Three months later, on February 15
12.		Adar	February/ March	Ezr 6:15 [Aramaic] The Temple was completed on March 12

* Note that the name of months in parentheses ( ) do not occur in the Bible.
**Note that the first month of the ancient Hebrew lunar calendar usually occurs within the months of March and April.

At this point I add three caveats to Table 8. First, the mismatches extend to the days as well; for example, as they do in the reference for the third month given above, where the Hebrew has "on the 23rd day," while the modern date is actually the 25th. Secondly, the Aramaic sections of the Old Testament contain only one month's name; namely, the month of *Adar*, as found in Ezra 6:15. Here it is spelt the same way as in the Hebrew sections, such as we see in Esther 3:7. And thirdly, in the book of Esther, both the Jewish calendar with numbered months and the Persian (Babylonia) calendar with its months'

names are used. Actually, the author of each book often takes care of relating both systems to one other, as we see in Esther 3:7. In the ESV he states:

> In the first month, *which is the month of Nisan*, in the twelfth year of King Ahasuerus...

Also worthy of note is that Esther 3:12 is the only place that provides us solely with a numbered month, while Esther 9:15–21 provides only the names of certain Babylonian months. For side-by-side usage of both systems I refer the reader to section 7.2.

6.5 *"Seven times"* and *"time, times, and half a time"* in Daniel and Revelation

The expressions: *"seven times"* and *"time, times, and half a time"* have both generated significant debate as to their exact meaning. First of all the question arises whether the word "time" in each expression refers to a "year." And in the second expression an additional question arises to the plural form "years." Does that mean "two times," that is, a dual? Furthermore, if one understands the text to actually refer to years, the translator still has to decide whether or not to make these expressions explicit.

All verses that contain this expression are mentioned below. First note that the verses from Daniel chapters 4 and 7 belong to the Aramaic sections of the Old Testament. Note, too, that the Hebrew word rendered "time" is מוֹעֵד *(mô'ēd)*, the Aramaic one עִדָּן *('idan)*, and the Greek one καιρός *(kairós)* for the New Testament verse.

Daniel 4:16 [MT13] in the NRSV reads:

> Let his mind be changed from that of a human,
> and let the mind of an animal be given to him.
> And let seven times pass over him.

Note, too, that the same phrase "seven times" also occurs in verses 23, 25, & 32 [MT20, 22, 29] in the same context.

Daniel 7:25 in the NASB reads:

> …they will be given into his hand for a time, times, and half a time.

Daniel 12:7 also in the NRSV reads:

> And I heard him swear by the one who lives forever that it would be for a time, two times, and half a time,[i] ....
>
> fn.[i]: Hebrew: *a time, times, and a half*.

Revelation 12:14 in the NASB reads:

> But the two wings of the great eagle were given to the woman, so that she could fly into the wilderness to her place, where she was nourished for a time and times and half a time, from the presence of the serpent.

In addition, because this reference plays a role in the comments below, we list Daniel 12:11 & 12 in NASB as follows:

> From the time that the regular sacrifice is abolished and the abomination of desolation is set up, there will be 1,290 days. How blessed is he who keeps waiting and attains to the 1,335 days!

In TWOT under the word: עִדָּן *('idan)* the author explains:

> ... the LXX, Josephus, and traditional Jewish commentators have understood this phrase to mean "seven years."… Still, it is not necessary to view *'iddan* as a specific period in these verses, and the NASB translation, "seven periods of time" is probably preferable to anything more specific both in Daniel chapter 4, and in Daniel 7:12.

And continuing on in Daniel 7:25, TWOT explains:

> In this key verse, several factors must be taken into consideration. First, MT *'iddanin* may not be translated "two times" (i.e. "two years"), but must be simply "times," i.e., plural rather than dual. If one chooses to interpret the second word as "two times" ..., one must repoint the consonants (i.e., *'iddanayin*). Second, the phrase as a whole may simply be a conventional, apocalyptic way to indicate an indefinite period of time. Third, because of the difficulties involved in arriving at an interpretation of this phrase which is satisfying to a wide range of scholars, the translation of the phrase is better left as indefinite as the Aramaic original itself appears. Clearly, *'iddan* may mean either "time" or "year." But to press beyond this to a specific interpretation demanding the phrase "three and one-half years" is unwarranted." [Then the editor remarks:] "Some may wish to add, however, that the similar Hebrew term is found in Dan 12:7 which may perhaps be elucidated by the reference to the periods of 1290 and 1335 days in Dan. 12:12-13 [should be vv. 11-12]. See also Revelation 11:2; 13:5 and 12:6. ["42 months"! PS.]

In ISBE under the word: "Time, (Two) Times, and Half a Time" the author states:

> "In both the Aramaic and the Hebrew the second word ..., as pointed in the MT, is plural rather than dual. Most interpreters, however, understand it as a dual ("two times"). One reason for this judgment is that the dual form of nouns became obsolete in later Aramaic, so that the Masoretes would have pointed the word as a plural even if it was originally a dual. The consonantal text of this word in both the Aramaic and the Hebrew could be read either as a dual or as a plural. ... ["two times"], therefore, is probably correct.
>
> The expression is commonly understood as meaning ... three and a half years. The author of Daniel, however, does not use the word "year" but the word "time." It is therefore probably better to understand the expression as meaning a period of time somewhat analogous to a year, followed by a period that is twice as long, followed by a period that is half as long..."

Thus, scholars are divided about how to punctuate the MT. But at the same time, they prefer speaking of a certain period of time rather than of years. WSB on 7:25, referring to Baldwin and others, states:

> It is also to be noticed that the sequence 'one ... two ... half' has been chosen deliberately. It indicates that the end of the Antichrist will come quicker than people think. Because, more often than not, one would expect the sequence: 'one ... two ... three'. [And regarding "3½ times":] usually they are taken to mean 3½ years. Supporting this position is the fact that the Revelation of John speaks instead of 42 months. In addition, the Jewish expositor Josephus in the first century AD reckons with 3½ years as well. However, even though this interpretation is likely correct, a degree of caution is in place, because the angel could readily have spoken of 'years' in Daniel 7:25. The fact that he did not is perhaps a hint which admonishes us to exercise caution and which indicates that 'times' different from 'years' could be meant here. (translation mine, PS.)

Noteworthy, the numbers of days given in Daniel 12:11 and what follows do not exactly match half a year. Thus, WSB states:

> The fact that the larger number follows the smaller one must mean that the believer, during his suffering, will have to go a certain bit farther than he had thought. Perhaps there is even the case in view that, in human opinion, the prophecy should have been fulfilled long ago, but nothing yet can be observed. (translation mine, PS.)

In translating this period of time, given the fact that commentators exercise caution in the interpretation, and because the verses in Daniel 7:25 and 12:7 are so crucial for ones eschatological point of view, I think it advisable not to state definitively something that is not certain. That is, the translation might simply speak of "times," and an accompanying footnote may state "Many understand this to refer to *years*"—rather than the other way around. This approach also has the advantage of retaining John's somewhat cryptic apocalyptic language, and it seems appropriate to keep some of this to avoid flattening all genres into the same simple language. After all one must bear in mind that these revelations were given in dreams and visions. On the one side of the argument we understand that Daniel did understand the message, as indicated in: 10:1; but on the other hand, he did not understand everything, as indicated in: 12:8. In fact, TOTC comments on the period of seven times in 4:16 by saying: "[He exchanges his human mind for that of a beast], but for a limited period, seven times… The word *'iddanin* is not

specifically ‘years’ but can signify ‘seasons’ … Its duration is uncertain, and this is intentional.” – And, if the translator feels that the reader will really be lost, he can still speak of “years” in the text and “times / seasons” in a footnote.

TEV apparently goes to some lengths in defining a precise time, when they translate Daniel 7:25 by adding up the years and stating: “…three and a half years.” However, GCL offers what appears to be a compromise: It defines the number of years, but keeps the *1-2-½-pattern*; namely: *“…ein Jahr und zwei Jahre und ein halbes Jahr.”* Still a footnote, I believe, would be in order.[59]

In concluding this section I refer the reader to a similar problem in the rendering of "weeks" for Daniel 9:24 and succeeding verses. Renderings have included "sevens / weeks / seven years / seven time periods, units of seven, sets of seven."

7 Translating measurements—a few additional considerations

7.1 Original measurements versus modern equivalents

Practically all biblical measurement terms in the original languages are unknowns and thus meaningless to today's readers. Thus, for the sake of general comprehension among the members of a host language community, it would seem best to use measures that are natural to each.

However, the issue of using modern measurements *without* giving the original wording in either a footnote or parenthesis is that one loses a certain amount of cultural context in the process; or, to put it somewhat stronger, one blurs historical facts. And if footnotes are perceived to be more a hindrance than a help, and thus one decides to do without them, the policy for translating measurements needs to be explained somewhere else in the publication.

That being said, there are at least three ways of dealing with measurements:

1. Using transliterated Hebrew and Greek terms and explaining them outside the core text, as for instance the NIV does.
2. Using modern equivalents, either metric or other, and giving the literal rendering outside the core text, as for instance the NLT does.

A sample for these two ways from Numbers 28:9 reads like this:

> NIV: “…together with ... a grain offering of two-tenths of an *ephah* [j] of fine flour.
> fn.[j]: That is, probably about 4 quarts (about 4.5 liters).
>
> NLT: “They must be accompanied by a grain offering of four quarts[k] of choice flour.
> fn.[k]: Hebrew *2/10 of an ephah* [4.4 liters].

However, it would be wise to be kept in mind that footnotes will likely be dropped in public reading, and thus communication will fail, should they contain essential information.

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[59] This peculiar pattern “1-2-½” instead of “3½” reminds us of Ezekiel 45:12 with its “20 shekels, 25 shekels, 15 shekels” instead of “60”; that phrase also occurs in a vision! See section 4.2. One could also try and hypothesize about whether this is a special form of the numerical sequence formula (x, x + 1), as it occurs in Proverbs 6:16 and elsewhere.

GCL has come up with an attractive way of dealing with this dilemma. In it, original terms are used and equivalents provided in contiguous parentheses. This saves the reader from jumping back and forth between the text and the footnotes. Numbers 28:14, for instance, reads:

> Als Trankopfer gehören zu jedem Stier 1/2 Hin (knapp 2 Liter) Wein, zu dem Schafbock 1/3 Hin (gut 1 Liter) und zu jedem Schaf 1/4 Hin (knapp 1 Liter).

However, even though this strategy might work well for a German-speaking audience, such a strategy may not, in the end, be appropriate for every host audience, but it is well worth being tested. One personal caveat: this strategy does not recommend itself for parables, for instance, where measures frequently occur, but are not critical for adequate understanding of the text. And parenthetically GCL does not use it everywhere either, but solely for certain types of texts, especially those in the Old Testament.

3. Indigenous terms from the target language could be used, with biblical and international standards given outside the text. The condition for this would be that those indigenous terms are still universally known in the community. In addition, it would be advantageous if these measures form a complete system, since using indigenous terms for some units and afterward using international ones for other units is not desirable, unless they are indeed used in such a mixed way in the community.

For example, if there is a common traditional way for referring to a “mile,” but there are not enough terms for giving detailed weight measures, then it is preferable to use the vernacular word for “mile,” while using modern terms of weight, rather than categorically excluding traditional measurements for the sake of consistency in method. Parenthetically, I am not aware of a translation that has exclusively used indigenous measurements.

Regarding the question: is replacing biblical measures with modern ones justifiable? Beekman and Callow (1974:206), in “Translating the Word of God,” address the issue of cultural substitutions. Without talking about measurements in particular, they state:

> In any case, the substitution will introduce at least some degree of anachronism [i.e. introduce an element not fitting the time], with a consequent lowering of historical fidelity; but, on the other hand, the absence of cultural substitutes will lower dynamic fidelity, with the result that parts of the original message will probably be misunderstood. This is a tension between principles which every translator faces.

Consequently, they suggest a few questions to be asked before cultural substitutions are used, and these are in part:

> How similar are the original and the proposed substitution? ... Were items similar to the proposed substitution known in the Middle East in the first century [here focusing on the New Testament] ... Was the proposed substitution unknown only in the Middle East, or was it unknown everywhere in the world at that time?

It must be admitted that metric measures, like centimeters and kilograms, are units that belong to a modern system that has been defined with high technical precision, and as such, foreign to a Biblical world perspective—as some technically disadvantaged readers will realize. In fact, it has been pointed out that there are modern-day texts that have unfortunately become comical when, for example they speak of God commanding Moses to use “three quarts of choice flour,” or to make a high priests' breastpiece “formed of a pouch nine inches square.” Thus, where acceptability demands it, the translator should explore other ways of expressing measures. But what matters most to the reader, especially in those passages that are full of measurements, is that he/she can read through easily without any undue impediments to understanding. Equally important—as many readers will testify—is that it is particularly disruptive to the point of annoyance, when one has to consult an abundance of footnotes to get to the basic meaning of the text. Thus, the *function* of measurements be they old or new is to indicate amounts clearly. And since the texts usually do not focus on measurements themselves as an object of interest, it seems justified to replace one “measuring code” with another for the sake of the ultimate reader.

An example that illustrates this tension fairly well is the use of the phrase: “a Sabbath day's walk” that occurs in Acts 1:12. This expression carries cultural and even theological aspects more than most measures do. But the TH states: “In later times the phrase was often used merely as an expression of distance, and that is how Luke has used it in this passage.” Therefore, stating: “(about) half a mile”—as for instance CEV, TEV, and NLT do—seems to adequately translate this temporal expression in this context. The result is some “feeling” for the Jewish culture is lost taking this position, and in all practicality this at times will be inevitable. However, a contrary position is that of NASB, NIV and NET, where they have chosen to retain the Jewish aspect by referring to: “a Sabbath day's journey/walk.” While this solution shifts the focus away from the distance traveled to a Jewish cultural element, it may very well prove confusing to the uninitiated reader; and on top of that, not particularly relevant to the passage! One point of redemption is that the NASB, NIV and NET translators explain the distance in a footnote, and only NET explains the concept also. Another suggestion would be a wording like this: “They returned to Jerusalem from the Mount of Olives, which is only half a mile from the city—as far as one is permitted to walk on a Sabbath day.” If both the author and his original audience were Jewish, this would sound unnaturally heavy; but in the case of Acts, it might work once again for the uninitiated in Jewish culture.

Having said this, there is, interestingly enough, a biblical precedent for replacing an unknown measure with one that is current, without any further explanation. Under the term *“daric,”* ISBE states—and parenthetically other commentators seem to see it the same way:

> Since coinage had not been invented in David's time, the reference in I Ch 29:7 is to an equivalent in use at the time the Chronicler was compiling his work.

Apart from the problem of symbolic numbers mentioned under section 1.6, another disadvantage with replacing measures needs to be mentioned: Replacing *“cubits”* with “meters,” for instance, sounds simple. But round numbers are consequently lost: Whereas God’s instruction to Noah in Genesis 6:15 to build the ark 300 *cubits* long, 50 wide and 30 high, sounds straightforward, the numbers in meters; namely 135 / 22.5 / 13.5, sound odd.

Sometimes measures are used metaphorically and thus their actual value is not crucial to understanding. In the *Parable of the Unmerciful Servant*, for example, it states in Matthew 18:24 (NIV): “As he began the settlement, a man who owed him *ten thousand talents* was brought to him.” The point is that the servant owed a sum that he would never have had the chance to pay back. It seems, in fact, to be an exaggerated amount. Thus, the easy solution is that the translator could indicate this value in a footnote, as NASB does: “A talent was worth more than fifteen years' wages of a laborer,” or one may as well render it freely as TEV does, “…who owed him *millions of dollars*.” This seems to communicate the point well.

What is important in any translation is to help the reader to visualize the amount, not to distract him/her by presenting overly precise numbers. Thus, at times a paraphrase will serve better than a strict translation of the Hebrew term, as NIV does in Genesis 18:6: “...get *three seahs of fine flour* and knead it and bake some bread,” and then explains the precise amount in a footnote. The footnote for NET states:

> Three measures (Heb “three *seahs*”) was equivalent to about twenty quarts (twenty-two liters) of flour, which would make a lot of bread. The animal prepared for the meal was far more than the three visitors needed. This was a banquet for royalty. Either it had been a lonely time for Abraham and the presence of visitors made him very happy, or he sensed this was a momentous visit.

CEV brings this out with the simple wording: “Hurry! Get *a large sack of flour* and make some bread. ”

7.2 On translating "inner-biblical footnotes"

Another peculiar problem arises for the translator, where Biblical verses occur in those contexts where two measurements are compared, but only one of them seems to be familiar to the original reader. This phenomenon also occurs with various types of measures. A few examples are found in:

Exodus 16:36 (NIV):	An *omer* is one tenth of an *ephah*.
Exodus 30:13 (NIV):	Each one who crosses over to those already counted is to give a half shekel, according to the sanctuary shekel, *which weighs twenty gerahs*.
Esther 2:16 (ESV)	... in the tenth month, which is the month of Tebeth, ...
Mark 12:42 (NIV):	But a poor widow came and put in two very small copper coins [lepta], worth only a fraction of a penny [kodrantes].[60]

There are several ways of dealing with these kinds of writers' remarks, five of which I illustrate below using Exodus 16:36:

1. A translation that uses the original measures in the wider context will also render such sentences "as they stand." NIV, for instance, using *"omer"* beginning in verse 16 and what follows, has for verse 36:

   (An omer is one tenth of an ephah.)

Note that many English translations enclose these helpful remarks in parentheses ( ). This way it is still part of the main text, but marked as some extra information. The advantage of such a translation is that it raises awareness about the fact that even in historic times measures changed, and that the author had a keen interest in making the old text understandable to his readers. The disadvantage is that *both "omer" and* the term that is used to explain it, *"ephah,"* are unknown to the reader today.

2. If *"omer"* is used in the preceding section, another way of dealing with this sentence is this: Since the text offers the opportunity, it seems logical to use the inner-biblical comment and apply it to today. One could write:

   (The *omer* equaled two quarts / two liters.)

The reason why no English translation has done this is probably that it neither fully meets the expectations of a formal translation, nor those of a dynamic one. But the parentheses signal that this piece of information is different from the rest of the text.

Curiously enough, the LXX has dealt with this very verse in this way. Ziegert observes in *Das Buch Ruth in der Septuaginta*, 22:

> Of interest is the instruction for conversion in Exodus 16:36, in which an עמר *['ōmer]* is defined in the Hebrew as one tenth of an איפה *['êpâ]*, yet where the Septuagint translates: τὸ δὲ γόμορ τὸ δέκατον τῶν τριῶν μέτρων ἦν, [The *omer* was a tenth of three measures.] the translator does not explain a transcribed measure with another unit, which also originates from a transcription, but rather he first converts the latter into the dimensions of the target culture. (translation as well as the bracketed comment mine, PS.)

Note that the word μέτρον *(métron)* "measure" is not the name of a certain defined unit; it simply means "measure" in general. The actual amount in view must have been well-known and commonly used.[61]

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[60] for more comment on this verse, see above under "Money."
[61] cf. section 3.3 on "measure" in Ruth 3:15.

Thus, we have here a *mixture* of keeping the original text and using contemporary measures. The solution used here seems attractive; however, it could only be used in these few instances of "inner-biblical footnotes."

Now, if the original measures, such as *"omer"* in this case, are not used in the translation at all, the explanations about them in the original text naturally become redundant. One will be quick to observe, however, that the English translations quoted below all use "two quarts" with or without footnotes in verse 16 and what follows. However, they each have chosen different ways of dealing with the extra information found in verse 36.

3. Transfer the original writer's remark into a real footnote in the translation, as CEV does for Exodus 16:36. Their footnote explains:

> The Hebrew text adds, "An *omer* is one tenth of an *ephah*." In the CEV *"omer"* is usually translated "two quarts."

As is the case in this example, this method can result in a whole verse being dropped from the main text. Thus, its verse number would, as a consequence, need be combined with the previous one. This model appears to be unnecessarily roundabout, since, it does not avoid a footnote, but rather includes a footnote within the footnote, so to speak.

4. Adding the modern measurement on top of the original one within the text, as NLT does:

> The container used to measure the manna was an *omer*, which was one tenth of an *ephah*; it held about two quarts.

This solution relates the ancient measure to the contemporary, but is a somewhat unsatisfying compromise, in that the uninitiated reader will likely not be sure what part of the verse is text and what is comment!

5. Replacing the "inner-biblical footnote" with a modern equivalent, as TEV does:

> (The standard dry measure *then in use* equaled twenty quarts.)

This wording explains the standard, which was the *"ephah,"* but that is not the main point. The writer was determined to let the reader know how the ancient measure *"omer"* was to be understood in contemporary equivalents. However, NCV looks somewhat more elegant, at least as it relates modern measures to the old:

> The measure they used for the manna was two quarts, or one-tenth of an *ephah*.[k]
>
> fn.[k]: An *ephah* was a measure that equaled twenty quarts.

An alternative wording would be:

> Two quarts were a tenth of the standard dry measure *ephah*.

Following this course, the reader actually learns something about how the term, which has been used in the whole chapter—"two quarts"—relates to the Hebrew system of measures.[62]

Another example for an "inner-biblical footnote" is found in Deuteronomy 3:11 (KJV):

> …his bedstead ... nine *cubits* [was] the length thereof, and four *cubits* the breadth of it, *after the cubit of a man.*

Modern translations render the last phrase "by ordinary *cubit*" or "according to standard measure" or some other similar expression. Some other translations, such as NIV, NLT, GCL and HFA, simply drop

[62] Note also that in section 3.1 the *"omer"* has been equated to approximating *one* quart/liter though!

this bit of information, but I consider this inappropriate. As was shown in section 1.4, it would actually point to the existence of more than one standard.

Lastly, regarding dates, Esther 3:7 (ESV) includes this time reference:

> …in the first month, which is the month of Nisan, in the twelfth year of King Ahasuerus…

NLT states:

> …in the month of April, during the twelfth year of King Xerxes' reign [with a footnote].

On one side, one can argue *against* using modern months' names by saying that the original comparison of two calendars, which gives historical background, gets lost unless the translator puts the original wording in a footnote. On the other hand, one can argue *for* using modern dates, or both ancient and modern ones, in the text itself, because this is exactly what the original author did.

One other factor for the translator to consider is that a combination of modern months' names with the ancient way of counting years is awkward. Thus, the final alternative is to add the modern equivalent in brackets as we see below:

> …in the first month, which is the month of Nisan [April], in the twelfth year of King Ahasuerus.

Lastly, I end this paper with a word of encouragement taken from the Gospel of Luke with the hope that what I have presented here will help translators in their quest to accurately and effectively communicate all those measures found in the Old and New Testaments into the languages in which they work.

> "Give, and it will be given to you. A good measure, pressed down,
> shaken together and running over, will be poured into your lap.
> For with the measure you use, it will be measured to you."

Jesus in Luke 6:38

Appendix A: Annotated References

1 Lexicons and dictionaries

For lexicons, the pertinent information is principally found in those sections dealing with "Calendar," "Money" and "Weights and Measures."

ABD *Anchor Bible Dictionary*. Ed. D. N. Freedman. 6 vols. 1992. New York.
Relating the Biblical measures to other Ancient-Near-Eastern measure systems; scholarly and informative; not easy to read; not translation-oriented.

BDB Brown, F., S. R. Driver, and C. A. Briggs. *Hebrew and English Lexicon of the Old Testament*. 1906; repr. Boston.

DCH *Dictionary of Classical Hebrew*. Ed. D. J. A. Clines. 1993ff. Sheffield.

EWNT *Exegetisches Wörterbuch zum Neuen Testament*. Ed. H. Balz and G.Schneider. 3 vols. 1992[2]. Stuttgart.

GBL *Das Grosse Bibellexikon*. Ed. H. Burkhardt et al. 1987. Wuppertal / Giessen.

HALAT *Hebräisches und aramäisches Lexikon zum Alten Testament*. Ed. L. Koehler, W. Baumgartner, and J. J. Stamm. 5 vols. 1967–1995[3]. Leiden.

HALOT *The Hebrew and Aramaic Lexicon of the Old Testament.* (English Translation of *HALAT*). Tr./Ed. M. E. J. Richardson. 1994–2000. Leiden.

ISBE *International Standard Bible Encyclopedia.* Ed. G. W. Bromiley. 4 vols. 1979–1988[2]. Grand Rapids.
Full of pertinent information in most cases, and written in an easily comprehensible way.

LN *Greek-English Lexicon of the New Testament Based on Semantic Domains.* Ed. J. P. Louw and E. A. Nida. 2 vols. 1989[2]. New York.
Helpful suggestions on translating; not reliable for precise equivalents. See 6.68ff. on money, 67.163ff. on time units, 81.20ff on measures and 86.4f. on weight.

LSJ *Greek-English Lexicon*. Ed. H. G. Liddell, R. Scott, and H. S. Jones. 1940[9]. Oxford.

NBD *New Bible Dictionary*. Ed. J. D. Douglas. 1982[2]. London.
Concise without being superficial; most useful for quick reference.

NIDOTTE *The New International Dictionary of Old Testament Theology and Exegesis.* ed. W. A. VanGemeren. 5 vols. 1997. Grand Rapids. Vol. 1. 421ff. *on cubit and other measures of length; suggesting where to assume postexilic cubit;* 382ff. *on ephah and other measures of capacity;* Vol. 4. 235ff. *on shekel and other weights;* Vol. 2. 637f. *on money*.

NP *Der Neue Pauly: Enzyklopädie der Antike.* Ed. H. Cancik, H. Schneider et al. 16 vols. 1996ff. Stuttgart and Weimar.
Standard reference work, but not elaborate on Weights and Measures except for tables in appendix.

RH *The Works of Their Hands: Man-made Things in the Bible. (RealiaHandbook)*. Ed. R. Pritz. 2009. New York.
Includes recommendations for translators. Presents an original idea for rounding off numbers to "significant figures," p. 399f.

SDBH *Semantic Dictionary of Biblical Hebrew*. Integrated in: UBS Translation Software Paratext 7.0ff. 2012.

Wikipedia Wikipedia: The Free Encyclopedia. Persian daric. http://en.wikipedia.org/wiki/Persian_daric, accessed Nov 11, 2011.

2. Translation-specific works

Barnwell, Katherine. 1992[3]. *Bible Translation: An Introductory Course in Translation Principles*. Dallas: SIL. (Ch. 7, appendix 2: "How to Translate Measurements, Weights, and Amounts of Money.")

Beekman, John and John C. Cowan. 1974. *Translating the Word of God*. Zondervan. Grand Rapids, Michigan.

Bratcher, Robert G. 1959. Weights, Money, Measures and Time. *The Bible Translator (TBT)* Vol. 10, No. 4. *Good treatment of the matter, but outdated.*

Fry, E. 1978. Translating Biblical Measurements. *The Bible Translator (TBT)* Vol. 29, No. 2. *Concerned with the way of translating measurements, arguing that present day equivalents should be used, but also cautioning that not more precision or emphasis should be given to a measurement than it had in the original. No equivalents given.*

Ortiz, Pedro. 1996. Translating Terms of Measurement. *The Bible Translator (TBT)*. Vol. 47, No. 4. *Alerting to various problems in translating measurements. No equivalents given.*

UBS Handbook Series ("Translator's Handbooks," TH). 1961ff. *Most useful in dealing with certain verses, yet without presentation of an overall system that can be followed throughout the Bible.*

3 Source texts, commentaries and articles etc.

Ant. Flavius Josephus: Translation and Commentary. Vol. 3–5. *Judean Antiquities*. Ed. St. Mason. 2000ff. Leiden.

BART *Biblical Analysis Research Tool* 5.3. 1998–2008. Dallas. SIL International.

BASOR *Bulletin of the American Schools of Oriental Research*: 31 (Oct. 1928), 10.

BHQ *Biblia Hebraica Quinta*. Fascicle 13: The Twelve Minor Prophets. ed. A. Schenker et al. 2010. Stuttgart.

BHS *Biblia Hebraica Stuttgartensia*. ed. Karl Elliger, Wilhelm Rudolph et al. 4. improved ed. 1990. Stuttgart.

Cook, G. A. A. 1939. A Critical and Exegetical Commentary of the Book of Ezekiel. International Critical Commentary series. ed. Samuel Rolles Driver et. al. Reprint 2000. T. & T. Clark Publishers. Edinburgh.

Daehn, William E. 1991. Contradictory Theories: Making Sense of Greek Coin Weight Standards. Originally published in: *The Celator*. Vol. 5. No. 8:28–33. http://www.sfagn.info/information/daehn.html, accessed Nov. 11, 2011.

Gute Nachricht Bibel, Die, Deutsche Bibelgesellschaft. 1997. Stuttgart. *Equivalent of TEV*.

Hoffnung für alle: Die Bibel. International Bible Society. Rev. 2003. Basel.

HOTTP *Preliminary and Interim Report on the Hebrew Old Testament Text Project*.

Josephus with an English Translation. Vol 6. ed. David Noel Freedman. 1926ff. Reprint 1976ff. The Loeb Classical Library. New York.

Keil, C. F. and F. Delitzsch. Commentary on the Old Testament in Ten Volumes. Reprint 1978. Hendrickson Publishers. Grand Rapids, MI.

Lovett, T. 2005. *A More Likely Cubit for Noah's Ark?* http://www.worldwideflood.com/ark/noahs_cubit/cubit_paper.htm, accessed Jan. 23, 2008

NICOT *New International Commentary on the Old Testament*. 1990ff. Grand Rapids.

Payne, J. Barton. 1978. The Validity of Numbers in Chronicles. *Near East Archeological Society Bulletin*. No. 11:5–58.

TOTC *Tyndale Old Testament Commentaries*. ed. D. J. Wiseman. 1967ff. Leicester.

WBC *Word Biblical Commentary*. ed. D. A. Hubbard, Gl. W. Barker et al. 1987ff. Waco.

WSB *Wuppertaler Studienbibel AT in neun Bänden*. ed. G. Maier and A. Pohl. 2005. Witten.

Ziegert, Carsten. 2007. *Das Buch Ruth in der Septuaginta: Eine Bewertung auf der Grundlage einer funktionalen Translationstheorie*. Unpublished MA Thesis. Gloucestershire/Giessen.

Appendix B: Correlation of modern measures[63]

1 Length:

Metric	Anglo-american
centimeter	inch
1	0.39

Anglo-american	Metric
inch	centimeter
1	2.54

meter	feet
1	3.28

foot	centimeter
1	30.48

kilometer	mile
1	0.62

mile	kilometer
1	1.61

2 Capacity/volume:

Anglo-american Ratios			
bushel	gallon	quart	pint
1/8	1	4	8

Metric	Anglo-american	
liter	bushel [UK]	bushel [US]
1	0.0275	0.0284

Anglo-american	Metric
bushel [UK]	liter
1	36.37

Anglo-american	Metric
bushel [US dry]	liter
1	35.24

Metric	Anglo-american			
liter	gallon	quart	pint	
1	0.22	0.88	1.76	[UK]
1	0.23	0.91	1.82	[US, dry]
1	0.26	1.06	2.11	[US, liquid]

Anglo-american	Metric
quart	liter
1 [UK]	1.14
1 [US, dry]	1.10
1 [US, liquid]	0.95

[63] Source: http://www.onlineconversion.com.

3 Weight:

Anglo-american ratios	
pound	ounce
1	16

Metric	Anglo-american
kilogram	pound
1	2.2

Metric	Anglo-american
gram	ounce
1	0.04

Anglo-american	Metric
pound	kilogram
1	0.45

Anglo-american	Metric
ounce	gram
1	28.35

Kilogram	Metric ton	Anglo-american tons	
	metric ton	long ton [UK]	short ton [US]
kilogram	1,000	1,016.05	907.18

Appendix C: Indices

1 Index of Bible references:

2 Index of English and Transliterated words:

3 Index of Hebrew and Aramaic words:

4 Index of Greek words: