

THE MOSAIC BUILDING CODE

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The author has come to believe, from long study, that incorporated in the instructions about the Tabernacle and the Ark of the Covenant, in Exodus, is a building code: instructions about the exact way of building them, and of setting up the Tabernacle after each time it was moved. In this article some of his investigations are described.

The Portable Sanctuary

In most books on the history of architecture, nothing is said about the *Mishkan*—the Tabernacle—the portable sanctuary described in Exodus. The famous French modern architect, Le Corbusier, did, it is true, mention it in his book *Future Architecture*.¹ On the other hand, the author-architect Josef Ponten, in his work in two volumes, *Architecture Which Has Never Been Built*, mentioned people as diverse as Alexander the Great, Michael Angelo, and the modern German architect Poelzig; but he did not mention Bezaleel and Aholiab, who worked on the Tabernacle.² To be sure, the Sanctuary was, in a sense, many times rebuilt. It was the first recorded prefabricated construction; for it could readily be taken apart, moved, and set up again, as the Children of Israel moved from place to place in the wilderness on their way to the Promised Land.

In the course of over 30 years of studying the God-given instructions for the Tabernacle, as recorded in Exodus, I have come to believe that in the Hebrew there exists a building code. The Hebrew *we'assista* carries, I believe, the connotation of measuring; and associated letters and words are to be counted in numbers. In most translations the Hebrew word is simply rendered: "thou shalt make". Then follows instructions about the making.

Anyone familiar with architecture, whether according to the oldest or the most modern schools, would agree that the divine command in Exodus contains all the relevant steps: inauguration, planning, foundation, and so on up to occupation and bringing in the furniture.

What I have called the preamble to the building code, in Exodus 25:8-9, contains, in the Hebrew, 19 words, made up of 71 letters. I believe that built into them is a key—a code—giving the shape of the Sanctuary, the court with the Tabernacle. See Figure 1 and Table 1. This key may have served as a mnemonic device, to ensure that the Tabernacle be set up correctly on each of the many occasions after it had been moved.

The Mosaic Law was strictly taught, and meant to be strictly kept. Are we not to believe that the Mosaic building code was intended to be followed just as strictly? Bezaleel and Aholiab were described as being competent and capable in following that code.

It is interesting to note the differences in Solomon's time, at the building of the Temple, as it begins in 1 Kings 6:2 and 2 Chronicles 3:1. For one thing, no native architects seem then to have been available. The construction of the *Mishkan* was quite different from that of the *Mikdash*, the Temple. Again, the temple was not to be disassembled and moved; so there was no need to

number the parts. Whereas some way was necessary of ensuring that the Tabernacle be assembled in the same way each time. There was no modernisation or evolution of it, nor was any wanted. For 40 years this sequence of disassembling, moving, and re-assembling continued, the people being kept in holiness with the holy Ark, within the holy Tabernacle, in their midst.

The Code and the Sanctuary

"Let them make me a Sanctuary, that I may dwell among them. According to all that I shew thee after the pattern of the Tabernacle and the pattern of all the instruments thereof, even so shall ye make it".

To visualise the Sanctuary, audible communication alone is hardly sufficient. Just as today audio-visual methods are common in teaching, so it happened between Moses the teacher and Bezaleel and Aholiab and their assistants, the students of construction and architecture.

I have called my method of investigation here Epigraphic Topology. It is not something particularly new; in principle it goes back to ancient Egypt.

I prepared a strip of paper (likely papyrus would have been used anciently) and wrote on it, letter by letter as a scale, the Scripture of Exodus 25:8-9. This I call the Epigraphic Yardstick of 71 units. I believed in the truth of the existence of a Biblical code; and tried to apply my experience of architecture, art, and even music to understanding it.

The Sanctuary needed first of all a big space, in the middle of which was the Tabernacle. The court around the Tabernacle was 100 cubits long and 50 cubits wide, for a total perimeter of 300 cubits. (Exodus 27:9-19.) A yardstick is not very practical for measuring such long distances. So I decided to try a line—a cord 50 cubits long, something like a surveyor's chain or tape.

The first sentence of the building code appeared to me perfect for beginning the measuring. There are 10 Hebrew letters. This suggests the scale: one letter represents 5 cubits. Now it was a matter of topology to move a finger along the design and to follow the divine message. See Figure 1 and Table 1, to follow the explanation.

1, 2, 3, 4, (as numbered in Figure 1) from north to south; this correlates with a word of four letters (in Hebrew): *we'assu*. So this indicates 20 cubits, as shown. Next 5, 6, a word of two letters: *li*. So there are 10 cubits. Next 7, 8, 9, 10, a word of four letters: *Mikdash*. So here are another 20 cubits. And so on, following the design around. The line from north to south, 1-10, is the partition between the two fifty-cubit squares of the court. The Tabernacle is situated according to the two letters, 5-6 as shown, in the western court. The Tabernacle itself was 30 cubits long and 10 cubits wide. The

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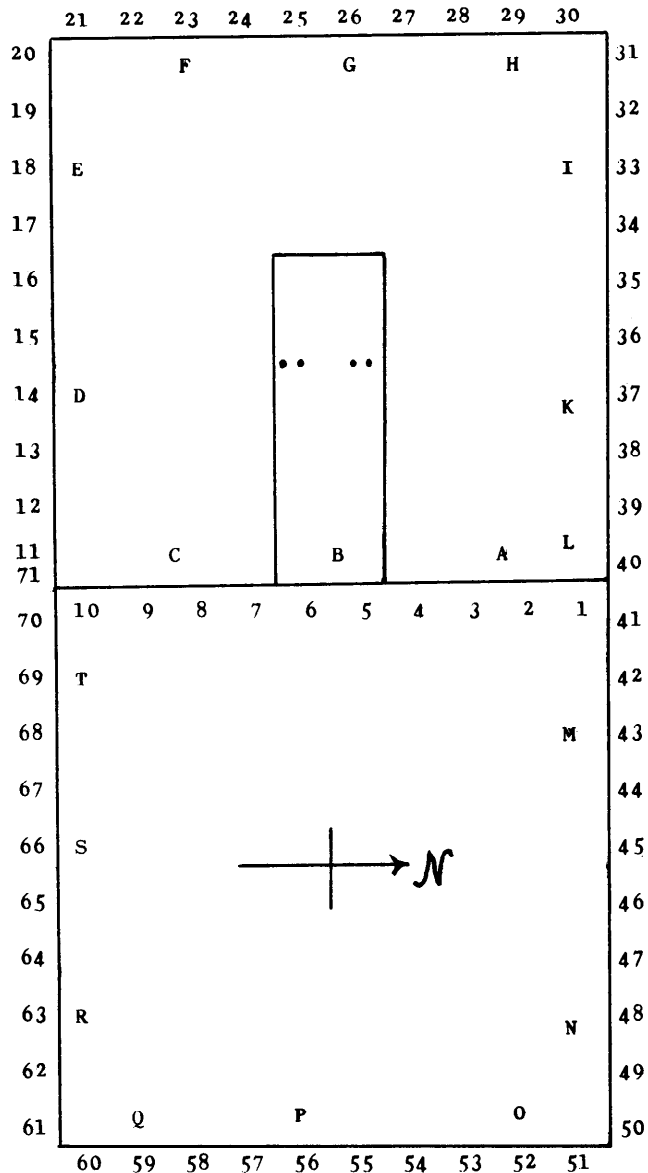


Figure 1. This shows the pattern of the Tabernacle, as given in Exodus 25:8 & 9. The scale is this: the whole enclosure was 50 cubits wide, and 100 cubits long. The numbers around the perimeter show the connections with the letters, as shown in Table 1 and discussed in the text, one letter indicating five Mosaic cubits. The arrow pointing north show the orientation.

Hebrew letters really explain this connection; for in the old Hebrew way of indicating numbers by letters, l indicates 30 and i indicates 10. (I means, of course, the Hebrew letters corresponding to l and to i.)

Here is more evidence that this method of Epigraphic topology really works in showing the pattern. In Figure 1, and referring to Table 1, follow with your finger from letter to letter, and from word to word. It is seen that the 71 units, as tabulated, really give the construction of the Sanctuary as an architectural plan. The number 71 is the Hebrew letter corresponding to w.³ This letter joins the letter number 11, which is also a w in the beginning of the word *we'schachanti*. As said already, this is the preamble to the code.

Table 1. This shows how the measurements around the Tabernacle, as in Exodus 25:8 & 9, and as shown in Figure 1, correspond to the words and letters of the Hebrew text.

A. And let them make	וַעֲשׂוּ 1-4
B. Me	לִי 5-6
C. a sanctuary	מִקְדָּשׁ 7-10
D. that I may dwell	וְשָׁכַנְתִּי 11-16
E. among them	בְּתוֹכָם: 17-21
F. according	כְּכֹל 22-24
G. to all that	אֲשֶׁר 25-27
H. I	אֲנִי 28-30
I. show	מִרְאֵה 31-34
K. thee	אֹתְךָ 35-38
L. the	אֵת 39-40
M. pattern	תְּבִינָה 41-45
N. of the Tabernacle	הַמִּשְׁכָּן 46-50
O. and the	וְאֵת 51-53
P. pattern	תְּבִינָה 54-58
Q. of all the	כָּל- 59-60
R. furniture thereof	כְּלֵיוֹ 61-64
S. even so	וְכֵן 65-67
T. shall ye make it	תַּעֲשׂוּ: 68-71

The Poles of the Ark

A next step in demonstrating the existence of a building code is to show the pattern of the poles (staves) from the holy Ark.⁴ Let us concentrate on only the epigraphics of the pole.

In Exodus 25:13-16 are 30 words in 120 letters, beginning: "*We'assita bade atze schitim*..." The corresponding epigraphic in Exodus 37:4-5, is shorter: only 15 words containing 60 letters, the first word being *waja'as*. The difference between the two passages, I believe, relates to the contrast between something considered as intended to be built and the same thing as completed.

Both poles were to be put into the golden rings of the holy Ark. The rings are described in the epigraphic. They are on the sides of the Ark, at a distance of 1.5 cubits.

The question immediately occurred, why so many letters about the poles of the Ark, far more than about the poles of any of the other items of holy furniture? It was also striking that there are twice as many letters, and words, in the epigraphic of Exodus 25:13-16 as in the other, Exodus 37:4-5. It would seem a strange coin-

vidence, in Hebrew or in any other language. Of course, it is not a coincidence. We are concerned here, not with rhymes or with music, but with construction by divine law. The meaning is, do not try to change anything in letters or in words. This is exemplified in the traditional intonation in the reading of the Torah, which has been kept as a law since the time of Ezra the Scribe (Ezra 7:10) and Nehemiah (Nehemiah 8:1-3).

Incidentally, this is something unique. There is no evidence of any epigraphics, or mnemonic devices, on the Babylonian, Egyptian, and other ancient furniture which the archaeologists have excavated.

Table 2'. This shows how the measurements of the staves correlate with the letters of the Hebrew text of the shorter description: Exodus 37:4 & 5.

1. וַיַּעַשׂ And he made
2. בָּרֵי staves
3. עֲצֵי of wood
4. שִׁטִּים accacia
5. וַיִּצְרֵף and overlaid
6. אֹתָם them with
7. זָהָב gold
8. וַיָּבֵא and he put
9. אֶת־הַבָּרִים the staves
10. בַּטְּבֵּעַת into the rings
11. עַל on the
12. צְלָעֹת sides
13. הָאָרֹן of the Ark
14. לְשֵׂאת to bear
15. אֶת־הָאָרֹן the Ark

The answer to the question, why so much is said about these poles, is to be found in the words: *Betabaot harron jiheju habadim lo jassuru mimenu*. "The poles shall be in the rings of the Ark; they shall not be taken from it."

The poles of the holy Ark, in the Holy of Holies, kept the cubit of Moses as the only unit of length for the construction of everything which was commanded in cubits. Here one cubit was indicated by 8 letters, half a cubit by 4 letters, inscribed on the gold-covered poles of acacia wood. Moses is not only the spiritual authority, he is also, with the size of his arm, from elbow to middle finger, the physical, material, expression of the law which should be obeyed.⁵

The length of the poles of the Ark is 15 times half a cubit. From east to west the poles are in three sections. From the entrance between the two columns to the rings

in the holy Ark is 3.5 cubits; between the two rings for the one pole 1.5 cubits; and on to the end) of the poles to the west 2.5 cubits. This is illustrated in Figure 2. Table 2 gives the longer passage: Exodus 25:13-16. Table 2' gives the shorter passage: Exodus 37:4-5.

There is, I am convinced, much more to be under-

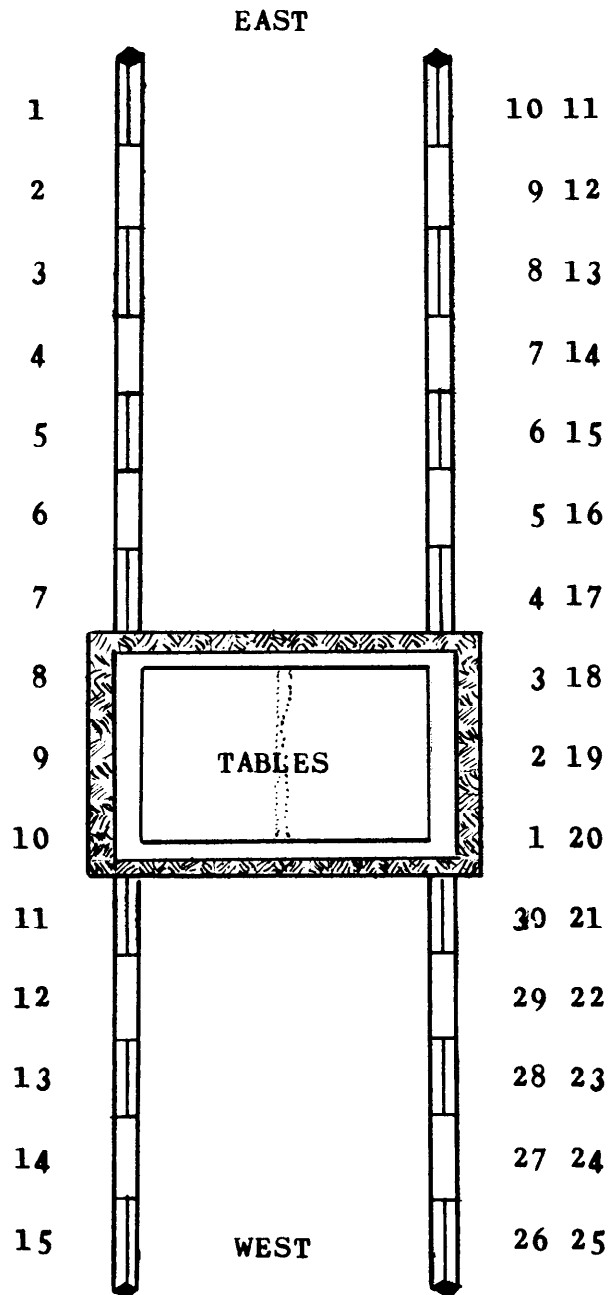


Figure 2. This shows the Ark of the Covenant, with the poles (staves) by which it was carried, as described in Exodus 25:13-16, and 37:4 & 5. The poles were fifteen half-cubits long, as explained in the text; and four letters correspond to a half-cubit. The Ark itself was two and one half cubits long. "East" and "west" show, of course, the orientation when the Tabernacle was set up in one place. The way in which the numbers correspond to the instructions in Exodus is shown in Tables 2 and 2'. The Tables of the Law are shown in the Ark; it is stated in 1 Kings 8:9, that they were still there in Solomon's time.

Table 2. This shows how the measurements of the staves correlate with the letters of the Hebrew text of Exodus 25:13-16.

1.	וְעָשִׂיתָ	And thou shalt make
2.	בָּדֵי	staves
3.	עֲצֵי	of wood
4.	שִׁטִּים	accacia
5.	וְצִפִּיתָ	and overlay
6.	אֹתָם	them with
7.	זָהָב:	gold
8.	וְהִבַּאתָ	and thou shalt put
9.	אֶת־הַבָּדִים	the staves
10.	בְּשִׁבְעַת	into rings
11.	עַל	on the
12.	צְלָעַת	sides
13.	הָאָרֶן	of the Ark
14.	לְשֵׂאת	to bear
15.	אֶת־הָאָרֶן	the Ark
16.	בָּהֶם:	therewith
17.	בְּשִׁבְעַת	In the rings
18.	הָאָרֶן	of the Ark
19.	יִהְיוּ	shall be
20.	הַבָּדִים	the staves
21.	לֹא	they shall not
22.	יִסָּרְוּ	be taken
23.	מִמֶּנּוּ:	from it
24.	וְנָתַתָּ	and thou shalt put
25.	אֶל־הָאָרֶן	into the Ark
26.	אֵת	the
27.	הָעֵדוּת	Testimony
28.	אֲשֶׁר	which
29.	אֶתֶּן	I shall give
30.	אֵלֶיךָ:	thee

stood here. As an architect, I feel that I have only begun to unravel something of the Biblical Building Code.

References

- ¹Le Corbusier, P.J. 1926. *Kommende Baukunst*. Deutsche Verlags-Anstalt, Berlin and Leipzig. See especially p. 54 and thereabouts.
²Poten, Josef. 1925. *Architektur die nicht gebaut wurde*. Deutsche Verlags Anstalt. Stuttgart.
³It may be worth noticing, in this connection, that in Hebrew w is a coupling letter, often meaning "and".
⁴Baker, Hollis, 1966. Furniture in the ancient world, origins and evolution. *The Connoisseur*, page 96, has shown that storage chests, carried on poles, were common in Egypt, being often shown on monuments. Again, anyone who has seen the furnishing from Tutankhamen's tomb must have remarked that the techniques were very similar to those used for the furnishings of the Tabernacle. Of course, this does not make the instructions, as recorded in Exodus, any less inspired; it was the logical thing that the work be done according to techniques and patterns with which the workmen were familiar, so long as those would fill the purpose.
⁵Is it possible that the poles may be served also as the ultimate standards of length for Israel, and maybe other things from the Tabernacle as standards of weight, etc.? Certainly weighing things in the Temple seemed the natural thing to do centuries later. See Ezra 8:33 and 34.

Reality: Real or Conventional?

(Continued from page 35)

most people develop a certain set of views about reality. Unless they have had significant exposure to dissonant views through contact with influential and respected persons, such as teachers, parents, or ministers, or from their own independent reading, most people react negatively when their views are challenged. The more educated persons sometimes are actually more adamant in holding a narrower view of reality, partially because education itself is an indoctrination process and is often one-sided. Thus, many persons, especially highly educated persons, are very resistant to information which contradicts their world view. They typically respond by utilizing many or most of the psychological defense mechanisms discussed by Freud and more extensively by others, including rationalization, denial, compensation, avoidance, and sometimes even anger and the other more neurotic defense reactions.

References

- ¹Berger, Peter, and Thomas Luckmann, 1966. *The social construction of reality*. Doubleday and Co., Garden City, New York.
²Robertson, Ian, 1981. *Sociology*, Second edition. Worth Publishing COI, New York. p. 152
³*Ibid*, p. 118.
⁴*Ibid*, p. 152.