A wall wide five טפחים - ארבע אמות גובה אפותיא דה' קאי טפי לא ארבע אמות גובה אפותיא דה' ארבע אמות but not more

OVERVIEW

The גמרא infers from our משנה that a stone wall of גמרא four אמות high requires a width of 'י טפּחים in order to be structurally sound. In fact a width of will only support a wall of ד' אמות (ד' אמות אמות הוספות ד' אמות will argue that both our משנה and life experience contradict this assumption.

asks: תוספות

וקשיא לרבינו תם הא לבינין דגריעי קאי בשלשה טפחים –

The ר"ת has a difficulty with this statement; for bricks which are inferior to גזית, and nevertheless they stand on a width of even three טפחים for a height of four אמות for a height of four טפחים.² Why therefore does the גמרא assume that גזית which is stronger³ than לבינין require a full ה' width in order to be able to remain standing upright?

חוספות has an additional question:

ועוד הא קא חזינן דקאי בגזית טפי אפורתא –

And furthermore we do actually see that even a גזית wall can stand more than 'ז wall can stand more than 'ז wall can stand more than 'ז high even on a width that is less than five טפּחים wide. Why does the גזית say that זית (and even then only for אמות 'ז high).

תוספות answers:

ותירץ דהכי קאמר טפי לא קאי כמשפט גזית –

And the ר"ת answered that this is what the גמרא is saying; more than ד' אמות high it will not remain standing for a sufficient time as is appropriate for גזית -

שרוצים בני אדם לבנותו שיעמוד ימים רבים כשבונים בגזית:

For people want to build גזית, provided that it should last for many years when they build with גזית. It is true that גזית walls can be supported for more than הי high even on widths of less than ה' טפחים. However the longevity of these walls will be shortened. People building with expensive גזית material want their walls to last much longer. Therefore the increase in width is required to assure maximum longevity. לבינין walls that are not that expensive; a width of three טפחים is sufficient to assure the limited longevity, commensurate with its cost.

¹ An אמה is usually considered approximately 18 inches; a טפח 3 inches.

 $^{^2}$ The משנה clearly states that for בינין a total of only ג' טפחים is required for a כותל ד' אמות.

³ One would naturally assume that the stronger the building material the less width is required to attain the same height. In our משנה we see the opposite. לבינין which are inferior to גזית, which is a stronger material.

SUMMARY

To assure the maximum longevity for the expensive גזית wall a minimum of 'ה' width is required to attain a height of ד' אמות.

THINKING IT OVER

What is the difference between the הוה אמינא and מסקנא of תוספות as to the reason for the various thicknesses of the walls?