

THE NUMBERS IN THE EXODUS FROM EGYPT:
A FURTHER APPRAISAL

by

COLIN J. HUMPHREYS
Cambridge

The purpose of this paper is to respond to the helpful comments of J. Milgrom (*VT* 49 [1999, pp. 131-132]) and M. McEntire (*VT* 49 [1999], pp. 262-264) on my article on the very large numbers in Numbers (*VT* 48 [1998], pp. 196-213).

Milgrom states "Humphreys' article would have been compelling but for one major flaw. The sum of the troops/teams and men do not add up to the given totals. One cannot equate 598 troops and 5550 men with the total 603550 (first census); 596 troops and 5730 men with the total 601730 (second census); and 21 teams and 1000 men with the total 22000 (Levite census)." In fact the numbers do add up, and this can be seen as follows. In my article I pointed out that *'lp* (later vocalised as *'elep*) had different meanings including "thousand" and "group" (family, clan, troop, team, etc.). The first census (Num. i 1-46, or Table 2 in my article) lists the numbers in each tribe. For example, the number in the tribe of Reuben is given as 46 *'elep* and 500 men. This has normally been interpreted as 46 thousand and 500 men (i.e. 46500 men) but an alternative interpretation is 46 troops and 500 men. On this latter interpretation, if we now add up for each tribe the number of troops and the number of men we obtain a total of 598 troops and 5550 men (see Table 2 of my article, p. 212). In my paper I suggested that in the original source document this total was written as 598 *'lp* (meaning troops) and 5 *'lp* (meaning thousands) and 550 men, because this would have been the natural way of writing these numbers. I suggested that the original readers of the source document would have understood that there were 598 troops containing 5550 men. However, at a much later date, when the original meaning was forgotten, a scribe or editor conflated the numbers and ran together the two *'lp* figures (598 + 5) to yield 603 thousand, not realising that two different meanings of *'lp* were intended. Thus the total became 603 thousand and 550 men, i.e. 603 550 men. Similarly at the second census (Num. xxvi or Table 4 of my article, p. 213), the total was

596 *'lp* (troops) and 5 *'lp* (thousands) and 730 men, originally meant to be interpreted as 596 troops and 5730 men. However at a later date the numbers were conflated as (596 + 5) *'lp* (thousands) and 730 men, i.e. 601730 men. Similarly with the Levites (Num. in 21-39 or Table 3 of my article, p. 213), the total was 21 *'lp* (teams) and 1 *'lp* (thousand) men, i.e. 22000 men. Thus in fact the sum of the troops/teams do add up to the given totals in a consistent way for both censuses and for the separate Levite census (see also my article, pp. 206-7).

If the interpretation suggested above is correct then it may be of interest to consider, very tentatively, how the error of interpretation may have occurred which led to the very large numbers in the "final" consonantal text of Numbers. The basic cause of confusion is that when the census numbers are added up, *'lp* (later vocalised as *'elep*) is used in the same sentence with two different meanings. A similar confusion could arise in the English language. For example, if I wrote that "I rowed on the River Cam, caught a crab, and later enjoyed eating a crab sandwich", readers today would understand that I am using the word "crab" in two different ways in the same sentence (to "catch a crab" is a rowing term meaning getting ones oar jammed under water by a faulty stroke). However, in hundreds of years time a reader might interpret the word "crab" in the same way (as a crustacean) both times it is used in the above sentence and hence erroneously conclude that hundreds of years earlier crabs used to live in the River Cam in Cambridge. The interpretation suggested in my article, that *'lp* (*'elep*) means both "thousand" and "troop" in the census figures in Numbers suggests that the original source document was sufficiently early that the numbers of Israelites were still relatively small when the document was written so that there was no possibility of confusion in using *'lp* with different meanings in the same sentence. Hence the writer and the original readers, being guided by common sense, would have clearly understood that there were 598 troops of 5550 men at the first census. In addition, the two different meanings of *'lp* may have been differently vocalised. However, centuries later than the source document, when the number of Israelites had grown, a scribe or an editor misinterpreted the source document and *'lp* (*'elep*) was given the meaning "thousand" in all the census figures. This error of interpretation may have been made for what seemed to be good reasons. First, a scribe or editor may have wished to maximise the number of Israelites at the Exodus so that they were "as numerous as the stars in the

sky and as the sand on the seashore" (Gen. xxii 17), hence given two possible interpretations of 'lp, chose the one which maximised the numbers. Second, on my analysis the average size of a troop was about 10 men (p. 204 of my article). The most probable date of the Exodus (c. 1250 BC) is relatively close to the date of the El-Amarna tablets (c. 1400 BC) which indeed gives a typical troop size as about 10 men (see my article). However many centuries later troop sizes were almost certainly much greater than 10, as they are today. Hence a scribe or editor interpreting the original source document many centuries later, and faced with two possible interpretations of 'lp (*elep*) may deliberately have chosen not to interpret 'lp as troop because troop sizes as small as 10 men made no sense to him. He therefore chose the alternative interpretation of 'lp as "thousand" wherever it occurred in the original census document, thus yielding the very large numbers in the "final" Hebrew consonantal text. The tentative analysis above is consistent with there being a considerable period of time, probably many centuries, between the source document containing the census figures and the "final" consonantal text of Numbers.

McEntire (see above) accepts that my work offers an internally consistent solution to several problems in the book of Numbers, but he raises two important questions. His first question concerns the implication in Numbers that there were about 50 males per family if the total population of males over twenty years of age was 603 550. He questions my claim to have ruled this out mathematically because my claim is based on the assumption that the Levites represented approximately one twelfth of the total population. McEntire is correct to pick me up on this point, and I should have written that mathematically it is improbable that there were 50 men per family. The main argument against 50 men per family is that it is biologically unlikely (p. 197 of my article). McEntire then notes (p. 263 of his article) that this unlikelihood depends on the rejection of a definition of family other than "nuclear family" and the discounting of widespread polygamy. It is reasonable to assume for biological reasons that 3000 years ago, as now, the numbers of males and females born were approximately equal. Wars and other factors could then produce a sexual imbalance in the population, but normally it is unlikely that the female population would exceed twice the male population. Hence on average a man could not have had more than about two wives. The evidence we have is consistent with this. Although wealthy kings (for example, Solomon) are described as having many wives,

this is the exception and even famous patriarchs (Abraham, Isaac, Jacob, etc.) are described as having only a few wives. If the average Israelite family at the time of the Exodus had 50 sons and 50 daughters, then this would imply that each husband had of the order of ten wives. As explained above it is highly unlikely that there were sufficient Israelite women available for this. We also note that Ex. i 15 refers to there being two Hebrew midwives for the Israelites, and since these are both named (Shiphrah and Puah) it seems clear that the writer intended readers to understand that there were indeed only two midwives. Two midwives would have been hopelessly inadequate for a population of over two million Israelites containing very large families, but they are consistent with the numbers suggested in this paper. It therefore seems that for a variety of reasons we have to rule out the interpretation of *'elep* which yields the very large numbers, particularly since the alternative interpretation of *'elep* as troop yields an internally consistent solution.

The second point of McEntire is the question of "why we expect the numbers to be historically accurate in the first place?". Concerning historicity there are of course at least four possible interpretations of the census numbers in Numbers: (i) the story is pure fiction and the census numbers are pure invention; (ii) the story is historical fiction in which both Moses and the censuses are fictional but the writer(s) made a serious attempt to put the story in an historical context and chose census numbers which were consistent with their knowledge of the numbers of Israelites at the time of writing; (iii) the story is a mixture of history and historical fiction in which Moses was historical and a great leader of early Israel, but the censuses are part of a fictional story woven around an historical Moses; (iv) both Moses and the censuses are historical, the census numbers recorded in Numbers preserving the actual numbers counted after an historical Exodus from Egypt. It is suggested that a detailed analysis of the census numbers may enable us to rule out one or more of the above interpretations and hence throw some light on the correct interpretation of this part of the Exodus account. In particular, if the writer(s) really intended that there were 603550 men aged over twenty at the first census, then many would regard this number as impossibly high and hence might favour interpretation (i) above, that the census numbers are pure invention. On the other hand, if it can be shown that the numbers are reasonable and have been written down with considerable care then this might rule out

interpretation (i). I have attempted to show this is the case in my original paper. A further argument that strongly suggests that the census numbers are not pure invention is given below.

Various commentators have noted a curious "statistical peculiarity" in the census numbers. In the first census (Num. i 1-46) if we look at the "hundreds" figures in each tribe, the lowest number is for Manasseh, which has 200 (32200 men in the traditional interpretation) and the highest number is for Dan, which has 700 (62700 in the traditional interpretation). No tribe has a number of men which ends in 000, 100, 800 or 900, but the numbers 200, 300, 400, 500, 600 and 700 are all present. Thus the lowest "hundreds" and the highest "hundreds" are all missing. Similarly at the second census (Num. xxvi), although the numbers in each tribe all change, they do so in such a way that 000, 100, 800 and 900 are again all missing. It is statistically extremely unlikely that a set of fictitious invented numbers would display such curious characteristics, particularly when a second set of fictitious invented numbers (the second census) displays the same characteristics. On the traditional interpretation of very large numbers I can see no explanation for these statistical peculiarities. However, on the alternative interpretation that *'elep* means troop (where appropriate) then I believe all becomes clear. When the twelve tribe system was established one would expect the tribes to have been of approximately equal size. (It is unlikely that one tribe was ten times the size of another, for example.) In the course of time, some tribes would grow more rapidly than others, but one would not expect the numbers in the different tribes to become too divergent over a limited time period such as a few centuries. Interpreting *'elep* as troop, then at the first census the number of men in each tribe ranges from 200 (Manasseh) to 700 (Dan). No tribe is as small as 0 or 100 men, or as large as 800 or 900 men; similarly at the second census, about 40 years later. This is precisely what we would expect of a twelve tribe system developing over time, as explained above. Thus the figures have a rational explanation and are not a statistical peculiarity, provided that an historical fiction or an historical interpretation is given in which *'elep* means troop. Such an interpretation makes much more sense of the numbers than an interpretation in which the numbers are pure invention.

Finally, McEntire states that I am not quite correct in implying that Masoretic pointing may be responsible for the misunderstanding that led to the interpretation of *'lp* as thousand, since the large numbers this reading

creates were also assumed by LXX and Josephus. I did not mean to imply that Masoretic pointing was responsible, and I am grateful to McEntire for pointing out that my paper might be read in this way. (Note the two different meanings of pointing in the same sentence.) I believe the error of interpretation of *'lp* occurred during, or before, the compilation of the "final" consonantal Hebrew text of Numbers which was then pointed by the Masoretes at a much later date.

I am grateful to McEntire and Milgrom for their constructive comments on my original article. I suggest that the points raised in this response further strengthen the case against the numbers in the censuses in Numbers being pure invention.