

**PARASHAT HASHAVUA
PARASHAT NASO**

**The Census of the Leviim and the Number of Firstborn
(Bamidbar 3-4)**

By Rav Elchanan Samet

A. THE DOUBLE CENSUS OF THE LEVIIM AND THE REASON FOR IT

The tribes of Israel are counted twice (in chapters 1 and 2 of parashat Bamidbar), and the Leviim are likewise counted twice (chapters 3 and 4 of parashot Bamidbar-Naso). What is the reason for each of these "double censuses"? Let us first address this question in terms of the Leviim.

The conclusion of parashat Bamidbar (3:1-4:20) and the opening of parashat Naso (4:21-49) are devoted to a description of the two different censuses of the Leviim, which have two separate purposes: in chapter 3 (verses 1-51) the purpose of the census is the sanctification of the entire tribe of Levi, from the age of one month upwards, for their mission of Divine service as assistants to Aharon and his sons in the mishkan. For this purpose the main requirement is the total number of all the Leviim, for the sanctification of the whole tribe in fact replaces the sanctification of all the firstborn of Israel (who were the original group chosen to be sanctified to God, at the time when God killed all the Egyptian firstborn). Hence the total number of Leviim needs to be computed in relation to the total number of the firstborn of Israel, and therefore at the conclusion of the Levite census and the arrival at their total number (3:39), God commands Moshe to count all the firstborn of Israel. The number of firstborn is slightly greater than the number of Leviim, and God commands that each of these "extra" firstborn – 273 in number – must be redeemed with five shekalim to be given to Aharon and his sons.

The censuses described in chapter 3 – that of all the Leviim and that of the Israelite firstborn – are therefore designed to turn the tribe of Levi into a group sanctified for service in the mishkan, and thereby also to remove this status from the firstborn.

The census of chapter 4 (verses 1-49) is a numbering of "all those who join the host to perform work in the Ohel Mo'ed." Here the significance of the census lies in the categorization of the three separate families of the Leviim – Gershon, Kehat and Merari – in order to define the task of each family in dismantling the mishkan and carrying it during the desert journeys. Only as a consequence is it also important to count those who "join the host to perform work in the Ohel Mo'ed," in other words, those between the ages of 30 and 50, in each of the Levite families.

The census in chapter 4 is therefore a preparation for the desert journey which will begin in a few days (while the significance of the census in chapter 3, in contrast, remains for all generations).

This difference between the two censuses leads to several differences between them (aside from the central difference of who it is that is counted - Leviim aged from one month upwards or those aged between 30 and 50):

a. In chapter 3 the command to count the Leviim is very concise (verses 14-15), and is followed immediately by the results of the census of each household up until the grand total in verse 39.

In chapter 4, in contrast, God's command regarding the counting of the three Levite families extends through a series of commands that stretch over 33 verses (1-33). This unusual length for a command arises from the fact that it includes not only an instruction to count the members of each family but, more importantly, the definition of the function of each in dismantling and carrying the mishkan. Only at the end of the command do we find a brief description of its results: a short list of the numbers, followed by a summary of the census.

b. While the order of the census in chapter 3 follows the order of the ages of the sons of Levi who are being counted (Gershon, then Kehat, then Merari), the order in chapter 4 – both in God's command and in the description of its execution – is Kehat, Gershon, Merari. This order arises from the order of actions that need to be performed in dismantling the mishkan when the camp moves. The family of Kehat is first to take up their burden – the Aron and the vessels of the mishkan, followed by Gershon, who carry the curtains of the mishkan, and finally Merari carry the boards of the mishkan and the rest of its accessories. (It should be noted that this does not reflect their order of movement during the actual journey; this is described in chapter 10.)

c. In chapter 3 there is a need for a census of the firstborn of Israel, for they form the basis for the sanctification of the Leviim for their task. In chapter 4 there is no such need, and the firstborn are not mentioned at all.

Thus the relationship between chapters 3 and 4 resembles the relationship between chapters 1 and 2 at the beginning of parashat Bamidbar: chapter 1 was a census of the tribes, whose aim was mainly achieved with a total number of Bnei Yisrael, as provided also in Sefer Shemot in the description of the construction of the mishkan (38:26). It was this number that each contributed a half-shekel from which the sockets of the mishkan were made, and several of the commentators explain that this number defines the population that built the mishkan, the nation upon whom God would rest His Shekhina via the mishkan, as He had promised: "They shall make Me a mishkan and I will dwell amongst THEM." This census of Bnei Yisrael corresponds to the census of the Leviim in chapter 3: in chapter 1 there is a counting of the nation that built the mishkan, and in chapter 3 there is a counting of the tribe sanctified for service in the mishkan.

Chapter 2 is devoted to a census of the flags, and it serves as a preparation for the desert journey. Here there is less importance attached to the total number (although it is given, again, at the end of the chapter), and what is more important is the division of the tribes into groups of three tribes who encamp together with a single flag on one of the sides of the camp. This division of the tribes into four flags has significance for the order of the journey: "They shall set off first," "they will lead off second," "they will lead off third," "they will go last with their flags." In the context of these traffic instructions the numbers of each flag are given – i.e., the number of each set of three tribes that are grouped together. This chapter therefore corresponds to chapter 4, which also involves regulations for the journey and preparations for it in terms of dismantling and carrying the mishkan. The census of the Levite families here anticipates their functioning during the journey.

In chapter 10 we find a description of the first journey itself, in which the movements of the flags (whose source is in chapter 2) are combined with the movements of the Levite families (as described in chapter 4).

B. "WHAT HAPPENED TO THE THREE HUNDRED?"

In our study of parashat Bamidbar we presented three questions concerning the three censuses described in chapters 3-4, and we left these for attention in our study of parashat Naso. Indeed, there exists some connection between these questions, as we shall see.

The census of the Leviim aged from one month upward provides us with the following data:

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|---------------------|-------|
| Children of Gershon | 7,500 |
| Children of Kehat | 8,600 |
| Children of Merari | 6,200 |

The text summarizes these numbers in verse 39 as follows:

"All those counted of the Leviim, whom Moshe and Aharon counted by God's command by their families, all the males from one month upwards, were twenty-two thousand."

But if we actually add the numbers we reach a total of 22,300.

It is clear from the parasha that the total of 22,000 is accurate, for it causes a problem with relation to the 273 "extra" firstborn, who exceed the number of Leviim and need to be redeemed with the sum of five shekalim each. If there had been another 300 Leviim, as we conclude by adding their numbers, the problem would be the opposite: how could the extra 27 Leviim be sanctified in place of the firstborn, if there were no more firstborn for them to replace?

This is an ancient question. We learn in a beraita (Bekhorot 5a):

"Minister Kontrokus asked Rabbi Yohanan ben Zakkai: In the listing of the Leviim one arrives at a total of 22,300. As a total, it says 22,000. What happened to the three hundred?"

He replied: Those three hundred [Leviim] were firstborn, and one firstborn cannot replace another."

The Gemara explains further: "Why not? Abaye said, It is sufficient that a firstborn cancel his own sanctified status." In other words, those three hundred firstborn Leviim were exempt from the need for redemption and thus assumed the sanctity of the Leviim by virtue of themselves being firstborn. Rashi and the Ibn Ezra adopt this explanation of Chazal and use it in their commentaries.

C. THE DEMOGRAPHIC PROBLEM

In order to take the Leviim in place of "all the male firstborn of Bnei Yisrael from the age of one month upwards" God commands Moshe to count the firstborn. The result of this census is given in 3:43:

"And all the firstborn males by the number of their names, from the age of one month upwards by their counting, were 22,273."

Does this number accord with the size of the general population of Bnei Yisrael? Let us compare. The number of Israelite adults aged 20 or more was about 1,200,000 males and females. The firstborn, though, are counted from the age of one month, and in order to obtain the true ratio between the number of firstborn and the general population we need to add in an estimated number of Israelites up to the age of 20. Demographically it is reasonable to assume that they would number more than those aged 20 and above (as we can see from a comparison with the numbers of Leviim). At the very least let us assume that their number was equal to those aged 20 and above, such that the total number of the general population was at least 2,400,000. And in such a population we find only about 44,000 firstborn girls and boys – leading us to conclude that each firstborn would have had an average of about 55 younger siblings! (And obviously, since some families were relatively younger and had ONLY a firstborn, or only a few children, some older families would have had to have 100 children or more!)

Our previous paragraph allows us to compare this astounding result with the numeric relationship between the firstborn and the general population of the tribe of Levi, but there our basis is more accurate: the total population of 22,300 males includes 300 male firstborn. This being the case, the average number of children in a Levite family would have been 74!

The number of firstborn is therefore impossibly small, and this shows that there is a mistake somewhere in our understanding. The commentators do not raise this question, but we are not exempt for that reason from seeking some answer.

D. FIRSTBORN AFTER THE EXODUS OR BEFORE?

"And God spoke to Moshe saying, Sanctify to Me every firstborn, that opens every womb of Bnei Yisrael, of both man and beast, they are Mine." (Shemot 13:1-2)

To which firstborn does this command refer – all the firstborn who were currently alive, i.e. those who had been born in Egypt, or only those who would be born from now onwards, starting at the time of the exodus? The literal text would seem to refer to those who would be born in the future, as R. Yochanan learned from this verse

(Bekhorot 4b), "They sanctified the firstborn in the desert." But in a beraita (Zevachim 114b) we learn, "Until the mishkan was erected ... the sacrificial service was performed by the firstborn, but once the mishkan was erected ... the service was performed by the kohanim." This beraita obviously refers to the firstborn who had been born in Egypt, not in the desert, but there is no way of reconciling this with the literal understanding of the text. Even if we accept that it was the firstborn who performed the sacrificial service until the mishkan was erected, this would not prove that they possessed the sanctity which derived from the mitzva of "Sanctify to Me every firstborn" and which stemmed from the slaying of the firstborn in Egypt; it merely shows that their service was in accordance with well-established, ancient custom.

If we are correct in saying that the command to sanctify the firstborn because of the plague of the firstborn in Egypt takes effect only in relation to those born from the time of the exodus onwards, then the firstborn who were replaced by the Leviim are likewise those born in the desert and sanctified in the wake of the plague, as we learn:

"And behold, I have chosen the Leviim from amongst Bnei Yisrael in place of all the firstborn who open the wombs among Israel. And the Leviim will be Mine, for the firstborn are Mine; on the day I smote all the firstborn in the land of Egypt I sanctified to Myself all the firstborn of Israel..." (Bamidbar 3:12-13)

If this is so, then we were mistaken in our previous calculation of the firstborn in relation to the general population: the 22,273 firstborn of Israel and the 300 firstborn Leviim reflect only the numbers of those born during the last year, from the exodus until the month of Nissan in the second year.

This idea is introduced by the Ramban (Shemot 33:45), but he rejects it immediately. What prevents the Ramban from proposing this interpretation is his claim that "The nation did not multiply [in the first year in the desert] to that extent." But he provides no proof to substantiate this, seeming to rely on statistical improbability.

E. AN UNSUCCESSFUL ATTEMPT TO SUBSTANTIATE THIS HYPOTHESIS

The approach suggested above, that the figures of 22,273 Israelite firstborn and 300 Levite firstborn refer to those born during the year after the exodus, is adopted by Professor Eliyahu Beller of the mathematics department of Bar-Ilan University, in his article "The Problem of the Firstborn" (Higgayon, vol. 2, 5753, pp. 103-117). His article is a professional, scientific one not meant for the likes of laymen such as the present author. We shall suffice with an examination of the basic Biblical assumptions underlying his mathematical model; but as to the model itself and the calculations based upon it, we shall rely on the professional abilities of its author.

In choosing the principles according to which his model should operate, Beller uses some of the data given explicitly in the Torah (or such data as may easily be deduced on the basis of that which is stated explicitly) and some which are not found in the Torah but rather brought in midrashim or by the early commentators. In the Hebrew version of this article (available through the Virtual Beit Midrash), I offer a detailed critique of Prof. Beller's choice of data upon which to base his mathematical model. Here, let us suffice with a critique of the "cornerstone argument" of his article.

In our study of parashat Bamidbar we raised a question concerning the small number of Leviim in comparison with the numbers of the other tribes. Although we do not have an exact number of Leviim aged from 20 upwards to compare with those of the other tribes, all of which were counted only from the age of 20, we may estimate the number: the number of Leviim aged from one month upwards in the first census is 22,000, and the number of those aged between 30 and 50, in the second census, is 8,580. Thus the number of those aged 20 and more lies somewhere between these two figures, closer to the lower one. The smallest tribe in the census of chapter 1 is the tribe of Menasheh, numbering 32,000. The tribe of Levi, then, was less than half the size of the smallest tribe of Israel, and very far from the average of 50,000. The Ramban addresses this question (Shemot 33:15):

"This [small number of Levites] is surprising: how could the servants and of God not be blessed by Him like all the rest of the nation? I believe that this substantiates what Chazal taught, namely, that the tribe of Levi were not enslaved in Egypt. Israel, whose lives were embittered with hard labor with the intention of limiting their number, were increased by God in response to the Egyptian decrees, as we learn (Shemot 1:12), 'And the more they oppressed them, the more they increased and the more they multiplied...' For the Holy One said [of the Egyptians], 'Let us see whose word prevails, Mine or theirs.' But the tribe of Levi increased in a natural way and did not multiply like the other tribes."

In his article, Beller quotes the above comment of the Ramban and writes:

"This comment by the Ramban serves as a cornerstone for my article. In other words, I shall assume that the birthrate for Bnei Yisrael and for the Leviim were identical until the enslavement. After the enslavement I shall assume that the birthrate among the Leviim continued as before, while the birthrate among Bnei Yisrael rose."

The adoption of the Ramban's interpretation (and making it "a cornerstone of the article") is problematic for several reasons. First, it is true that the diminutive size of the tribe of Levi in relation to the other tribes is an obvious fact that is clear from the literal text, but the Ramban's explanation for it is ultimately no more than an exegetical hypothesis (as he himself writes, "I believe that this substantiates what Chazal taught"). This hypothesis relies on a midrash that has no basis in the literal text, and the Ramban attempts to strengthen this midrash using the fact of the small number of Leviim.

Furthermore, the Ramban himself suggests another reason for the small number of Leviim:

"Perhaps this was because of the anger of the elder (Yaakov) against them. The tribe of Shimon, which now had a substantial population (59,300), was diminished before entering the land (in the census in the plains of Moav, Bamidbar 26) to 22,000 (plus 200), and Levi, the tribe of His followers, was not diminished in the plague."

Thus the Ramban with a single stroke answers questions 7 and 8 from our study of parashat Bamidbar. We noted there that the size of the tribe of Shimon in the second census is similar to that of the tribe of Levi in the first census. These two brothers were in conflict with their elderly father, who was angry with them for their actions at Shekhem, and they were harshly rebuked by him just prior to his death. Was it not perhaps his continued anger at them that lies behind their small size in relation to the other tribes?

It is true that this is not a rational demographic explanation, but neither was the Ramban's previous explanation. And this second explanation is better than the other for two reasons. Firstly, it has an explicit basis in the text. Secondly, this explanation solves two similar problems related to the censuses of Bnei Yisrael by means of a single solution that points to their common denominator. At the end of his words, the Ramban hints at a difference in the manner of the realization of Yaakov's curse that caused the diminution of both of these tribes: the tribe of Levi, "the tribe of His followers," suffered from a chronic low natural growth rate in relation to the other tribes. But the tribe of Shimon, one of the largest tribes in the first census, was diminished in a plague, and the Ramban is surely hinting here at the plague that followed the sin of Ba'al Pe'or (Bamidbar 25:9). It seems that the tribe of Shimon was particularly affected by this plague, since Zimri ben Salu, the prince of a family of the tribe of Shimon, was one of the protagonists of this grave sin. Immediately following this plague, the census was carried out in the plains of Moav and the drastic diminution of the tribe of Shimon was made apparent.

If we accept this explanation by the Ramban for the diminution of the tribe of Levi, then it becomes clear that the demographic considerations pertaining to the tribe of Levi cannot be applied to the rest of the tribes during any period. The "cornerstone" of Beller's study thus falls, and together with it the entire structure.

Prof. Beller's selection of the principles for the application of the model suffers from a blurring of explicit figures provided by the Torah and midrashic numbers. It mixes known data with some whose source is mere exegetical hypothesis. In order to examine the question that lies at the basis of his article, we need a new formulation of the principles that serve as basic assumptions. We should concentrate on the demographic data given explicitly in the Torah in relation to Bnei Yisrael (without connection to Levi), and seek the fixed birthrate throughout the entire Egyptian exile (whose length seems unavoidably to be 210 years), with no distinction between different periods.

I do not know how this would affect the final result as pertaining to the question of the firstborn, and whether it would still be possible to adapt the mathematical model to the birth of 22,273 Israelite firstborn in a single year. But even if not, it is preferable to be left with the question, and to hope that the answer proposed here will be given a different basis in the future, or that a different and enlightening solution will someday be found for this particularly puzzling problem.

(Translated by Kaeren Fish)

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