**Preamble:**

*Kinnim*, a tractate consisting of three *perakim*, which discusses bird sacrifices that become intermingled, completes *seder kodshim*. The *mishnayot* specify which birds in the intermingled sacrifices may still be sacrificed after prior consultation and which are determined to be valid if the sacrifices were performed without prior consultation. A variety of cases in which birds are intermingled are considered in this tractate. Many complications concern how many offerings may still be brought, and how many may not, as well as how many are valid if already brought and how many are not.

Several modern works, including *Mishnayot Mevuarot* by R. Pinḥas Kehati,[[1]](#footnote-1) a commentary and accompanying illustrations by Yisrael Yitzchak Bankier,[[2]](#footnote-2) and a meticulous mathematical treatment by Dr. Moshe Koppel,[[3]](#footnote-3) make another comprehensive review of the entire tractate of *Kinnim* unnecessary.[[4]](#footnote-4) Instead, this monograph focuses only on the four topics listed below where a mathematical perspective is particularly helpful:[[5]](#footnote-5)

1. Rambam’s suggestions concerning specific cases in the first chapter of *Kinnim* that result in a greater number of valid sacrifices than given in the Mishnah.
2. Rambam’s and Raavad’s approach to the first three *mishnayot* of the second chapter.
3. A precise, generalized definition of the term – *merubah* – and a simple proof of the correctness of Mishnah (3:2).
4. The Raavad and R. Zeraḥyah ha-Levi, the *Ba’al Ha-Maor*, on how to define the phrase *ve-hi misḥaleket beinaihem* (and it is divided between them) occurs at the end of the fourth Mishnah in the third chapter. The *maḥloket* concerns how the obligation for additional bird sacrifices is divided between the two women.[[6]](#footnote-6) The commentary of R. Yehoshua Heller who, lived in the 19th century, is then analyzed. He introduces modern probability theory and particularly combinatorics in his approach to that phrase.

All but the third topic focus on approaches to the tractate of *Kinnim* different from those normally provided. The first two topics focus on Rambam’s and Raavad’s interpretations, and relate, primarily, to the first two chapters; those two topics will be considered concurrently. In those two chapters, interpretations rooted in the approach of R. Ovadiah and earlier *rishonim* particularly R. Zeraḥyah Ha’Leviand *Rosh*, have been widely followed by *aḥronim,* although *rishonim* and *aḥronim* differ on specific details. Despite (minor) differences among these authorities, their collective approach is referred to as the **standard interpretation**, disregarding those minor differences. Raavad’s approach, while agreeing on the fundamental principles of the standard approach, still differs from the standard approach regarding the assumptions that need to be made in studying the second chapter. Rambam, however, differs fundamentally from this standard interpretation.

In Rambam’s case resulting ruling (the “what”), as well as the principles and the potential rationale behind the ruling (the “why”) are addressed. Otherwise, we avoid delving into rationale, concentrating only on the circumstances, principles, and *halakhic* rulings.

Acknowledging the mathematical gifts, I inherited from my mother A’H, this monograph is dedicated to both my mother as well to my late father R. Yonah ben R. Yehudah A’H; I started to study *Kinnim* during the year following his death. I said *kaddish* that year in over 20 cities worldwide. My son gave me Prof. Koppel’s treatise on *Kinnim*, which I studied the few times I could not attend a *minyan*.

**Introduction**

***Kinnim:* Differences in sacrifice of *olot* and *ḥatta’ot,* definition of a *ḥovah***

*Kinnim* discusses bird sacrifices that have become intermingled. Bird sacrifices are either *olot* or *ḥatta’ot,* each following a different sacrificial procedure*.[[7]](#footnote-7)* While there are instances of an obligation to bring only one or more *olot* to fulfill a *neder* or a *nedavah* or even to sacrifice one or more *ḥatta’ot,[[8]](#footnote-8)* more commonly bird sacrifices are brought in pairs*.*  A *ḥovah*, an obligation, refers to a *ken* (a nest of birds) that consists of an **even** number of birds, half of whom must be sacrificed as *ḥatta’ot* and half as *olot.* Since the procedures for *ḥatta’ot* and *olot* are different, adherence to their respective rules is critical to fulfill the requirements of a proper sacrifice.[[9]](#footnote-9) Not only does an improper sacrifice fail to fulfill one’s obligation, under most or perhaps even all circumstances, the sacrifice is also disqualified.[[10]](#footnote-10)

**The designated or specified *ken* (nest), the undesignated *ken* and implicit designation**

If a woman were to obligate herself to bring a *ken* of say 8 birds, she may designate 4 of the birds as *ḥatta’ot* and 4 of the birds as *olot* forming what is called a *ken mefureshet*, a designated nest. The *Kohen* would then sacrifice the birds as designated. Alternatively, she might give all eight birds to the *Kohen*, in what is called a *ken stumah*, an undesignated nest, and the *Kohen* can sacrifice each bird as he chooses, provided that 4 are sacrificed as *olot* and the other 4 as *ḥatta’ot*. In this case, sacrificing a fifth *olah* or a fifth *ḥattat* is not just ineffective, it also disqualifies the sacrifice. The standard interpretation assumes that once 4 of the birds have been sacrificed as say *olot*, the remaining birds are treated as having been **implicitly designated** as *ḥatta’ot*. Precisely how this principle of implicit designation is to be defined in detail is disputed in a limited sense by many interpreters who follow the approach of R. Zeraḥyah Ha’Leviand *Rosh*. As we will see, the extent to which this principle of implicit designation exists at all is the central issue of contention between Rambam and other commentators.

**Intermingled nests and the *Kohen* who consults (the consulted case) and one who sacrifices without consulting (the non-consulted case)**

The *mishnayot* in *Kinnim* deal with an arbitrary number of nests of birds, *stumot* or *mefurashot*, that become intermingled. The *mishnayot* contain two sets of rules that apply to *kinnim* that have become intermingled. The rules differ depending on whether the *Kohen* consulted prior to performing the sacrifice. The language of the Mishnahat the beginning of the third chapter begins with “*ba-meh devarim amurim, be-Kohen nimlaḥ.”* As normally assumed, this introductory phrase states that while thefirst two chapters covered cases with prior consultation, this third chapter covers cases where there was no prior consultation. According to most commentators, throughout the first two chapters we deal with cases where the *Kohen* consulted, and **only the third chapter** addresses cases where he did not consult. It is this assumption that Raavad disputes. For the first three *mishnayot* in the second chapter, Raavad also assumes that we are dealing with cases where the *Kohen* acted without consultation.[[11]](#footnote-11) The precise parameters involved in a consultation, both exactly with whom and to what extent, are not covered in the monograph.

**Consulted and non-consulted cases - principles, analysis, and examples**

Thus, the laws of *masekhet Kinnim* cover two quite different types of intermingled nests:

1. the *Kohen* is aware that the birds in the nest are intermingled and properly consults to determine how to proceed with prior to sacrificing the birds in the co-mingled nest. Henceforth, this will be termed the “consulted case.”

The guiding principle in the consulted case is to disallow any potentially incorrect or ineffective sacrifice.

1. The *Kohen* sacrifices all the birds as if it were a standard nest without prior consultation, regardless of whether he is aware or unaware of the intermingling. Henceforth this is termed as the “non-consultedcase”.

The guiding principle in thenon-consulted case is to construct the worst-case, invalidating as many birds as possible, with the remaining birds considered to have been sacrificed correctly.[[12]](#footnote-12) Although simple to state, computing this rule correctly can on occasion prove to be difficult.

Note that in the non-consulted case, we do not penalize a sacrifice performed without consultation, by only allowing only the same number of valid birds that can be sacrificed under the consulted case. Rather, in the non-consulted case, a greater number of birds are very often credited as having been sacrificed effectively.

Throughout all *masekhet Kinnim* two different types of analysis are required for determining the number valid sacrifices when nests are intermingled, depending on whether the *Kohen* consulted or did not consult prior to sacrifice. In the consulted case the ruling must avoid any possibility of improper sacrifices no matter how remote that possibility may be. For the non-consulted case a “worst-case scenario” must be determined, from which the number of valid sacrifices can be calculated. These scenarios result in a discrepancy between the number of valid sacrifices in the consulted and non-consulted cases, but only when the two intermingled nests contain different numbers of birds, as explicitly stated in the first Mishnah of the third *perek.*

A few simple examples help illustrate the above principles.

First, let us demonstrate that this disparity between consulted and non- consulted does **not** apply to equal size nests that are intermingled.

Where both nests are of equal size, say each with 4 birds, then 4 of the 8 birds could be sacrificed, 2 birds as *olot* and 2 birds as *ḥatta’ot.* Regardless of whose birds are chosen, 2 birds may always be sacrificed as *olot* and 2 birds as *ḥatta’ot.* No bird is sacrificed incorrectly. In general, ½ of the intermingled nest can be sacrificed, ¼ as *olot* and ¼ as *ḥatta’ot*. Interestingly, as pointed out in the first Mishnah in the third chapter, in a case of equal sized nests that were intermingled, even proceeding without consultation does not result in a greater number of valid sacrifices. If all the birds in two equal sized nests that were intermingled are sacrificed, it is possible that all the birds in each of the two original nests are sacrificed identically, invalidating half of birds (a “worst-case scenario”.) Thus, in the case of equal sized nests, with or without consultation, only half of the combined nest will always be valid.

Now, let’s analyze the same situation as it applies to unequal nests that are intermingled beginning first with the consulted case. Assume that one *ken stumah* of 2 birds and another *ken stumah* of4 birds are intermingled, creating a combined nest of 6 birds. With prior consultation only 2 birds (the number in the smaller nest) may be sacrificed, one as an *olah* and one as *ḥattat*. If we were to sacrifice more than those 2 birds, then the 3rd bird sacrificed is problematic. That 3rd bird is the 2nd bird sacrificed either as an *olah* or as a *ḥattat.* Both the 3rd bird and one of the 2 sacrificed in the same manner as the 3rd birdmight both have come from the same smaller nest resulting in both of its 2 birds being sacrificed identically and hence disqualifying one of the two identically sacrificed birds. To avoid this possibility of an improper sacrifice, the sacrifice of a 3rd bird is disallowed.

However, without consultation the *Kohen* sacrifices all 6 birds. As will be shown below, 4 of the six birds will be valid, versus only 2 birds that were valid in the consulted case**.**

In the case of two nests with 2 and 4 birds respectively, the *Kohen*, assuming that he is dealing with a normal *ken stumah* of6 birds, would proceed to sacrifice 3 birds as *ḥatta’ot* and 3 birds as *olot.* Based on the *halakhic* principle above where the *Kohen* proceeds without consultation,the worst-case must be determined. The worst-case occurs if both birds of the smaller nest are sacrificed identically, for example both are sacrificed as *olot*.[[13]](#footnote-13) In that case, 3 of the birds from the larger nest are sacrificed, as *ḥatta’ot* and one is sacrificed as an *olah*.[[14]](#footnote-14) Now let us compute what was correctly sacrificed. From the smaller nest, 1 bird was sacrificed correctly as an *olah* (while the other bird, which was also sacrificed as an *olah* is invalid.) What remains now in the larger nest are three *ḥatta’ot* and one *olah*. The maximum number of sacrifices that can be valid from the larger nest are two *ḥatta’ot* and two *olot*. Therefore, two (of the three) *ḥatta’ot* and the one remaining *olah* are valid, disqualifying only one *ḥattat* from the larger nest. In total 4 bird sacrifices are valid in this case without consultation compared to two in the consulted case.[[15]](#footnote-15)

**Chapter one: Expanded outline of the issues to be addressed in the monograph**

The preamble listed the 4 areas which will be the focus of this monograph. Following the order of the areas listed in the preamble, this chapter will expand on these areas as a general guide for what will be addressed in the upcoming chapters.

1. Rambam’s approach to the number of valid birds in several cases from the first chapter of *Kinnim,* ***which discusses consulted cases****,* has troubled commentators from Raavad onwards. In the first chapter, covering the **complete intermingling** of incompatible types of nests, **twice** Rambam provides a practical suggestion that produces a significant number of additional valid sacrifices, by proposing an option that is not suggested by the Mishnah.[[16]](#footnote-16) Raavad and almost all commentators consider Rambam’s[[17]](#footnote-17) alternative option invalid. Prefaced by the phrase “*ve-yiraheh li,”* it would appear to me,” Rambam provides an option that evokes sharp criticism by Raavad: “a major error...how could one who consulted be allowed to bring invalid sacrifices to the altar?”

This issue has never been satisfactorily addressed. It would be presumptuous to claim this paper provides a definitive rationale for Rambam’s position. R. Moshe Reich succinctly comments[[18]](#footnote-18) that Rambam’s unique rulings in the first chapter of *Kinnim* have never been completely explained.[[19]](#footnote-19) Nonetheless, the approach developed in this monograph provides a comprehensive basis and plausible rationale to address Rambam’s interpretation addressing the major challenges raised. This will be fully addressed in chapter 2.

1. The first three *mishnayot* of the second *perek* deal with undesignated *Kinnin* of diverse sizes, which are only **partially intermingled**. This set of *mishnayot* culminates in a challenging Mishnah, *Kinnim* (2:3), where birds fly multiple times between adjacent nests in a precise sequence. All who follow the standard interpretation struggle with *Kinnin* (2:3.) **In one way or another, all conclude that the Mishnahis stating a general *halakhic* conclusion, which while slightly imprecise, provides a simplified, more easily remembered *halakhic* rule.[[20]](#footnote-20)**

Rambam’s approach[[21]](#footnote-21) and one of Raavad’s two suggested approaches to the first 3 *mishnayot* of the second *pere*k while avoiding the imprecision of the standard interpretation, require attention. Raavad’s second approach assumes that there was no consultation prior to the *Kohen*’s sacrifice. Both Rambam’s approach and Raavad’s alternative approach avoids the well-known challenges to the standard interpretation of the third Mishnah of the second chapter, something which will be explained in detail in chapter 2. For expository reason, the above aspects of Rambam and Raavad’s approaches to the first two *perakim* are considered simultaneously in chapter 2.

Unlike the standard interpretation, we demonstrate that both the approaches of Rambam and Raavad to the 3rd Mishnah of the second chapter, while differing from each other relative to the principles each maintained and the assumed circumstance, are provably precise.[[22]](#footnote-22) The constructive proof provided in chapter 2 will demonstrate that the *halakhic* rulings of *Kinnim* (2:3) follow precisely from both Raavad’s and Rambam’s principles. As well, using mathematical induction, a generalization of Rambam’s formulation of these *mishnayot* is formally proven based on his principles.[[23]](#footnote-23)

1. The term *merubah* in *Kinnim* (3:2), was precisely defined and formally proven in its most general form by Dr. Phillip Riess;[[24]](#footnote-24) I commented suggesting an alternative approach to conceptualize the term *merubah* and prove the correctness of *Kinnim* (3:2).[[25]](#footnote-25) This monograph includes an elaboration on that comment that further clarifies the term *merubah* in a more intuitive, but still rigorous approach, as well as updated proofs of its correctness.
2. First addresses the *maḥloket* between Raavad and R. Zeraḥyah Ha’Levi specifying what the term “*ve-hi misḥaleket beinaihem”[[26]](#footnote-26)* that appears in *Kinnim* (3:4) represents in financial terms. The second area of in-depth focus examines the novel 19th century mathematical approach of R. Heller. R. Heller’s innovative and revolutionary use of combinatorics raises both logical and halachic issues, however it also contains a subtle mathematical error. Unlike the other *mishnayot* in *Kinnim*, which specify the number of additional *korbanot* that must be brought by affected owners, only *Kinnim* (3:4) addresses financial liability between the owners of the intermingled nests.

**Chapter 2**

**The standard interpretation, Rambam’s, and Raavad’s approaches to the first 2 *perakim* of *Kinnim***

This chapter is organized into 5 sub-sections; an initial and subsequent analysis of each of the two ***perakim*** of *Kinnim*, followed by a 5th sub-section which contains observations and conclusions regarding each of the various opinions.

**Sub-section 1: Initial examination of the first *perek* of *Kinnim***

The first *perek* of *Kinnin* discusses cases where an arbitrary number of undesignated nests are combined; or a set of designated birds fly into an undesignated nest. In the first chapter, the Mishnah discusses cases where there is prior consultation, whereas in the third chapter similar cases are discussed without consultation. Rambam in the 8th chapter of *Pesulei Ha-Mikdashim* deals with the first and third chapter of *masekhet Kinnim* covering cases both with and without consultation in the same chapter. This has left open to interpretation whether a recommended sacrifice, occurred after prior consultation or whether it was sacrificed without prior consultation and the resulting ruling is only an after the fact occurrence.

Focusing first only on the first chapter of the Mishnah, four of the cases mentioned in the Mishna are examined below, which suffice for our initial examination.

1) One or more *olot* fly into a nest of N *ḥatta’ot* or alternatively one or more *ḥatta’ot* fly into a nest of N *olot*. In this case no sacrifice is permitted; all the birds are lost. Clearly, any bird, regardless of how it is sacrificed stands a chance of being sacrificed incorrectly.[[27]](#footnote-27) This Mishnahgenerates no disagreement.

2) A designated set of birds, either all *olot* or *ḥatta’ot*, fly into an undesignated nest. Assume, without loss of generality, 4 *olot* enter an undesignated nestof 10 birds. The Mishnah rules that while no *ḥatta’ot* may be brought, the women can bring half of the number of birds that were in the undesignated nest as *olot.* In our example, 5 *olot,* half of the 10 birds that were in the undesignated nest are sacrificed,losing 9 of the 14 birds that are now in the intermingled nest. Were one to sacrifice a 6th bird from the intermingled nest as an *olah*, then all 6 birds might have come from the originally undesignated nest from which only 5 (half of the 10 birds) may be brought as *olot*. Nine new birds must then be brought as sacrifices:

* the two women must jointly offer 4 additional *olot*,
* while the woman owning the original nestof 10 birds must also bring 5 *ḥatta’ot*.

Notably, in this case, Rambam[[28]](#footnote-28) adds a suggestion, which never appears in the Mishnah: all 14 birds may be brought as *olot*. Nine *olot* are valid, leaving the woman with the original undesignated nest with an obligation to bring 5 *ḥatta’ot.* Rambam’s approach differs sharply allowing not 5 (or even 9 birds,) but all 14 birds to be sacrificed as *olot*, thereby increasing the number of valid sacrifices from 5 to 9.

Rambam repeats this suggestion in a parallel case where *olot* are replaced by *ḥatta’ot*, and in that parallel case the phrase “*ve-yiraheh li,”* again appears. Clearly Rambam’s suggestions apply even with consultation, where the *Kohen* is fully aware of the situation for two reasons given below.

* First, and fundamentally, the phrase “*ve-yiraheh li,”* would make little sense if the sacrifices took place without consultation. By the principles of the 3rd chapter, were the sacrifices performed without consultation, Rambam’s ruling is not an intuitive leap but an entirely reasonable and expected conclusion. Since 9 birds were meant to be sacrificed as *olot* and 14 birds were sacrificed as *olot*, (all) 9 *olot* were sacrificed correctly. This is not just an extrapolation by Rambam without a clear derivation, but the explicit rule given in the third *perek*.
* Rambam[[29]](#footnote-29) parallels the *mishnayot* in both the first and third *perakim* of *masekhet Kinnim* where similar *mishnayot* occur in both *perakim.* However, this case of 4 *olot,* from a designated nest,which enter an undesignated nest of ten birds, 5 to be sacrificed as *olot* and 5 as *ḥatta’ot,* is only discussed in the first chapter. Therefore, this case should be assumed to involve prior consultation as are all other cases discussed in the first *perek*.

3) Two women have undesignated nests of equal size, say 6 birds that are accidently combined to form a single nest of 12 birds. The Mishnah in the first *perek* states that after consultations one is permitted to sacrifice 6 birds, 3 as *olot* and 3 as *ḥatta’ot,* while 6 birds are lost. The logic of only 3 but not 4 is again straightforward. If all 3 *olot* sacrificed happen to belong to the same woman, it is possible that the 4th *olah* that would be sacrificed belongs to her as well. That sacrifice is certainly disqualified and according to most interpretations not even permitted. As noted in the introduction, by sacrificing only 3 birds as *olot* and only 3 birds as *ḥatta’ot*, we guarantee that regardless of their ownership, there would be no possible violation. The two women must then bring another 6 birds, in partnership, to fulfill their obligations.

Where there is no consultation and all 12 birds are sacrificed, nothing is gained; only 6 birds are valid since the worst-case assumes that all the birds sacrificed as *olot* are from one woman and all the birds sacrificed as *ḥatta’ot* are from the other woman, disqualifying half of birds sacrificed.

Rambam’s formulation in *Pesulai Ha-Mikdashim* 8:5 does not mention consultation explicitly. Rambam stresses only that if each of the intermingled nests are of equal size, each of the following four alternatives results in the same outcome – 6 birds are valid and 6 additional birds must be sacrificed:

1. sacrificing all the birds as *olot,*
2. sacrificing all the birds as *ḥatta’ot,*
3. sacrificing half of the birds, ¼ as *ḥatta’ot* and *¼ as* *olot*,
4. sacrificing all the birds, ½ as *ḥatta’ot* and ½ as *olot*

In contrast to case 4 to be described below, the number of valid birds in all the 4 alternatives above, does not change.

While the 3rd and 4th alternatives are presented in the *mishnayot* in the first and third chapter of *masekhet Kinnim* (with and without consultation, respectively,) the 1st and 2nd alternatives are unique to Rambam’s formulation and are not mentioned in *masekhet Kinnim*. As noted, in the case of intermingling of two equal size nests, the 1st and 2nd alternatives, although unique to Rambam, do not increase the number of valid sacrifices. More fundamentally, the two alternatives are stated without the phrase “*ve-yiraheh li,”* implying that they can be inferred from the *mishnayot*. What Rambam thought might (possibly) be gained by this suggestion since it doesn’t alter the number of birds that are deemed correctly offered, is addressed later.

In each alternative when two nests of equal size are intermingled, another sacrifice consisting of half the number of birds in the two nests will be required. This case differs from the next case where unequal sized nests are intermingled.

4) If two undesignated nests of different sizes, say 6 and 14 birds, are intermingled, the law is more complex.[[30]](#footnote-30) In the first *perek* of *Kinnim* where we assume that the *Kohen* consults before sacrificing, only the number of birds in the smaller nest may be sacrificed, 6 birds in this case; 3 birds are sacrificed as *olot* and 3 birds as *ḥatta’ot*. The larger nest of 14 birds is lost and 14 new birds must be brought jointly by the two women. The logic is exactly as in the case of two women who each had a 6-bird nest, which were intermingled. A 4th bird if offered as an *olah* could also have come from the same nest from which 3 *olot* were already offered resulting in 4 *olot* sacrificed from that nest, which is not permitted.

As he had in the case where equal-sized *kinnim* are intermingled*,* Rambam again raises the option of sacrificing all the birds either as *ḥatta’ot* or *olot*. As already noted, in the case of equal sized nests, Rambam’s suggestion had no apparent **practical**[[31]](#footnote-31) benefit since under every option half of the nest is valid and the other half of the nest must be purchased anew and sacrificed jointly; this is no different than the standard interpretation. However, in the case of nests of unequal size as in the above example of 6 and 14 bird nests, Rambam’s suggestion reduces the number of lost birds from 14 to 10. When all the birds are offered as either *ḥatta’ot* or *olot* this approach allows half of the 20 birds in the intermingled nest to be valid either as *olot* or *ḥatta’ot*.

It is important to differentiate between the cases of a designated nest intermingling with an unspecified nest, from the intermingling of two unspecified nests. Remember that Rambam in the 8th *perek* of *Pesulai Ha-Mikdashim* covers both cases with and without consultation. As a result, it is critical to determine whether in any given case Rambam is referring to a case of prior consultation or not.

In the cases of designated *olot* or *ḥatta’ot* intermingled with an undesignated nest, Rambam introduces his suggestion of offering all the birds as either *ḥatta’ot* or *olot,* with the phrase “*ve-yiraheh li.”[[32]](#footnote-32)* On the other hand, regarding two undesignated nests of unequal size that are intermingled, Rambam does not use the phrase “*ve-yiraheh li,”* suggesting that the result is directly derivable. Also, in the case of unequal, undesignated nests, Rambam, when describing the sacrifice uses the verb *“asah”,* in the past tense.[[33]](#footnote-33) These two inferences[[34]](#footnote-34) suggest that the sacrifice of all the birds occurs without consultation. Rambam suggests that if all 20 birds were sacrificed without consultation as say *olot*, 10 birds are valid, and thereby both women dispense with their obligation to bring *olot.* The two women then bring 10 birds as *ḥatta’ot*.[[35]](#footnote-35) Note that when the *Kohen* offers the birds uniformly as all *olot* or *ḥatta’ot* this would result in fewer valid offerings than what the Mishnah in *Kinnim* (3:2) suggests. The Mishnah states that if the blood of half the birds is sprinkled above and half below without consultation than the number in the larger nest are valid. This translates into 14 valid birds of the 20 instead of only 10 with Rambam’s scenario.

However, in the cases where birds designated as either *ḥatta’ot* or *olot* are intermingled with an undesignated nest, Rambam suggests that even with consultation that permission can be given to allow all birds to be offered as either *ḥatta’ot* or *olot*.If all were offered without consultation, then Rambam’s use of the phrase “*ve-yiraheh li,”* would make little sense. If the sacrifices occurred without prior consultation, the conclusion is not a conjecture but clearly consistent with accepted halakhic principle.[[36]](#footnote-36) On the other hand, when two undesignated nests are intermingled, the sacrifice of all the birds as *ḥatta’ot* or *olot* would not be suggested if there was prior consultation. Consequently, this case could only be referring to an instance where the *Kohen* offered the birds as all *ḥatta’ot* or *olot* without consultation*.* This may suggest the following principle that Rambam will apply throughout his treatment of *masekhet* *Kinnim*, *one suggested by R. Yehoshua Heller:[[37]](#footnote-37)* ***Where possible Rambam prefers that women receive credit for sacrifices for which they have clear ownership.[[38]](#footnote-38)*** *Note that in both cases by sacrificing all the birds either as olot or ḥatta’ot,* each woman is certain that every bird for which she receives credit belonged to her originally*.*

It is noteworthy, that the option of sacrificing all the birds as *ḥatta’ot* or *olot* in a consulted case where there is intermingling of two unequal sized undesignated nests, is not considered by Rambam. Perhaps Rambam’s reasoning is that where there is not a nest with designated birds of only one type, a ruling contrary to both women’s intentions cannot be made.[[39]](#footnote-39)

Regardless of Rambam’s motivation in these cases, a second issue generates the primary objection to Rambam allowing intermingled nests to be sacrificed completely as *ḥatta’ot* or *olot.* Consider a simple case with a nestof 4 birds. The standard interpretation assumes that one can designate 2 as *ḥatta’ot* and 2 as *olot,* or if originally undesignated, the sacrifice of 2 as *ḥatta’ot* implicitly designates the other 2 as *olot.* Even the sacrifice of one olah designates another bird in the nest as a *ḥattat.* There is an assumed pairing: a bird sacrificed designates some remaining bird as its mate; that bird must be differently sacrificed. Rambam apparently rejects this principle, at least to some extent. The standard interpretation assumes that one can designate 2 as *ḥatta’ot* and 2 as *olot,* or if originally undesignated, the sacrifice of 2 as *ḥatta’ot* implicitly designates the other 2 as *olot*. Rambam explicitly says designation can only occur initially, when the owner brings the *ken* and indicates at that time if a specific bird is a *ḥatta’ot* or an *olah;* or when a specific bird is offered as either a *ḥatta’ot* or an *olah* then the offered bird become designated as it was offered*.* However, no other bird becomes designated by default due to another bird’s sacrifice.[[40]](#footnote-40) Rambam undoubtedly admits that once you have brought 2 of the 4 birds as say *olot*, and you are sacrificing to fulfill your requirement to bring a *ḥovah* you must obviously sacrifice the other 2 birds as *ḥatta’ot.* He also clearly states that if you were to bring a third *olah*, not only do you receive no credit for that offering, but that sacrifice is invalid.

Nonetheless, Rambam apparently excludes, at the very least in certain cases, an implicit form of designation that occurs at an intermediate point after some of the other birds are sacrificed. Consider a case when an individual is bringing a *ḥovah*, which then gets intermingled with a designated nest of a single type, for example with *olot.* When the *Kohen* consults, the standard interpretation would not permit all the birds to be sacrificed as *olot.* As soon as the individual sacrifices one of his birdsas an *olah* that would implicitly designate one of his other birds as a *ḥattat*,which then would not be permitted to be offered as an *olah.* Rambam on the other hand, since he doesn’t subscribe to this form of implicit designation (and perhaps others), permits all the birds to be sacrificed as *olot.*

Before considering further what other principles and potential rationale may be helpful in clarifying Rambam’s position on if and when implicit designation is to be applied, it will be helpful to analyze the opening *mishnayot* of the second chapter.

**Sub-section 2: Initial examination of the second *perek* of *Kinnim***

Despite the added computational complexity of the third Mishnah in the second chapter, once the principles implicit in the first two *mishnayot* in the chapter are clarified, the third Mishnah follows logically.[[41]](#footnote-41) We will therefore restrict attention to a simple case of two women, Rachel, and Leah, each with an undesignated nestof 4 birds. Following the case of the second Mishnah, assume one bird flew from Rachel’s nest to Leah’s nest, leaving Rachel’s nest with 3 birds and Leah’s nest with 5 birds. Assume no more birds escape and we must decide the *halakha* in this simple case.

After analyzing this simple case, we will need to examine one further situation covered in the first two *mishnayot*, where 1 of the 5 birds currently in Leah’s nest flies back to Rachel’s nest leaving both nests with 4 birds.

**The standard interpretation**: First, we assume that we are dealing with a case of consultation that will specify how we are to proceed. The *halakha* would then be as follows. Rachel loses not just the bird who escaped to Leah, but she must put aside one additional bird as well. Leah sacrifices 4 (of the 5) birds currently in her nest and fulfills her obligation; Leah loses no birds. Rachel, from whom one bird flew away and had to put another bird aside, loses 2 birds and must add 2 new birds. In total, only 2 birds are added, both by Rachel. Rachel sacrifices 4 birds; 2 of the 3 birds from her original nest are sacrificed as an *olah* and *ḥattat*, and separately 2 new birds are sacrificed, one as an *olah* and one as a *ḥattat.*[[42]](#footnote-42)

Two separate explanations support using this procedure. First, if Rachel’s third bird is sacrificed before Leah begins her sacrifice, its mate, who is now a part of Leah’s nest, is implicitly designated. However, when only 2 of the 3 birds now in Rachel’s nest are sacrificed one as an *olah* and one as a *ḥattat*, then the bird that flew into Leah’s nest remains undesignated. Assume alternatively that Rachel sacrificed all three birds, with the third bird sacrificed as an *olah.* Were that allowed*,* then Leah has an undesignated nest into which a bird implicitly designated as a *ḥattat* has flown. By the principles of the first chapter Leah cannot bring any *olot* since any bird that she sacrifices may have been the *ḥattat* that flew into her nest from Rachels nest. Leah can then only bring 2 of her birds as *ḥatta’ot*. Were Leah to bring 3 *ḥatta’ot* crediting one to Rachel, the possibility that all 3 birds are from Leah’s original nest disallows that option as well.[[43]](#footnote-43) In this case if Rachel was advised to sacrifice 3 birds, then of the original eight birds, only 5 are permitted to be sacrificed, 3 by Rachel and only 2 by Leah; 3 new birds must be added. Ostensibly, to maximize the result and limit the loss to only 2 birds, we penalize Rachel by forcing her to set aside the third bird in her nest to avoid the implicit designation (by Rachel’s third bird) of a bird that is now a part of Leah’s nest.[[44]](#footnote-44)

Second, beyond minimizing the number of lost birds, there is a more fundamental reason Rachel’s third bird must be disqualified. If Leah first sacrifices her four birds, one of Rachel’s is possibly included among the four, and we cannot know whether it has been brought as an *olah* or as a *ḥattat.* That bird, potentially from Rachel nest and sacrificed as either an *olah or hatta’ot,* implicitly designates a bird in Rachel’s nest, but we cannot know as what it was designated. It would then be possible that 3 birds from Rachel’s original nest, 2 birds currently in her nest and her original bird now in Leah’s nest, are being identically sacrificed, a possibility that must be avoided.

For either reason, both losses accrue to Rachel, who owned the nest from which the bird escaped. It is highly likely that Leah receives credit for a bird (originally) owned by Rachel. [[45]](#footnote-45) [[46]](#footnote-46)

Note that since we cannot identify which of the 5 birds in Leah’s nest came from Rachel’s nest, no penalty on Leah to set aside a bird is even effective. Leah has no way of knowing which of the 5 birds in her nest came from Rachel’s nest; thus, having Leah set aside a bird accomplishes nothing. Slight variants of the two rationales are given in support of the standard interpretation.[[47]](#footnote-47)

Summary of the standard interpretation of the first two *mishnayot* in the second *perek*:

* The **cases** discussed assume there was prior consultation.
* The **principle** that supports the ruling is the concept of implicit designation.
* The ***halakhic* ruling** is a loss of 2 birds by Rachel.

**Raavad’s interpretations**: Raavad’s first interpretation closely mirrors the standard interpretation which was discussed above. His second interpretation of the first 3 *mishnayot* in the second *perek*, and the one that will be studied, assumes that the birds were sacrificed without consultation, thus applying the principles of the third chapter.[[48]](#footnote-48) The principle articulated in the third chapter where the sacrifices are made without consultation, is to determine the worst-case scenario. Having established that scenario, the women receive credit for all sacrifices that nonetheless have been sacrificed correctly.

Raavad’s approach is as follows. After one bird flew from Rachel’s to Leah’s nest, each woman now has an odd number of birds in their nest. Each woman adds one bird to her nest and then each separately present their entire nests to the *Kohen* to be sacrificed. All the original 8 birds and 2 additional birds are sacrificed. Rachel adds a bird and sacrifices all her 4 birds; Leah adds a bird and sacrifices all her 6 birds. Each woman then receives credit for 4 birds.

Let us examine the case according to Raavad’s approach in detail.[[49]](#footnote-49) After one bird has flown from Rachel’s to Leah’s nest, each woman has an odd number of birds in their nest, 3 in Rachel’s and 5 in Leah’s. Let us presume a bird is added by each of the women to each of their nests to create a *ḥovah* of 6 birds in Leah’s nest, which includes one bird from Rachel’s nest, and one a new bird, and 4 birds in Rachel’s nest, one of which is a new bird. These are then given to a *Kohen* who is not informed of either *ken’s* history. The *Kohen* proceeds to sacrifice both *kinnim “*correctly,” half as *olot* and half as *ḥatta’ot.* Given Raavad’s approach, we can assume that Rachel’s sacrifices on their own, if Leah has not yet sacrificed, present no issue since she sacrificed 4 birds owned by her. It is Leah’s sacrifice that creates problems of two types. The first problem results from the presence of a bird from Rachel’s nest in Leah’s nest, potentially impacting both nests. The second problem, Leah sacrificing 3 *olot* or *ḥatta’ot* from her original nest, is a problem that is restricted to Leah’s nest alone.

First, when Leah sacrifices her nest, a problem may be created by the unidentified bird that entered from Rachel nest. Two of Rachel’s original 3 birds that remain in her nest are always sacrificed identically as either *olot* or *ḥatta’ot*. If Rachel’s bird that now resides in Leah’s nest and two of the original birds in Rachel’s nest are all sacrificed identically, then three birds from Rachel’s original nest are being sacrificed the same manner. Since each original nest can contribute only 2 birds as *olot* or *ḥatta’ot;* 3 birds sacrificed identicallyis disallowed with or without consultation. To address this possibility, one bird originally from Rachel’s nest must be disqualified, either one still in her nest or the escapee.[[50]](#footnote-50)

Looking carefully at Leah’s nest, a second issue emerges. Since 6 birds in her current nest are sacrificed, 3 as *olot* and 3 as *hatta’ot,* it is entirely possible that all 3 *olot* or all 3 *ḥatta’ot* came from Leah’s original nest of 4 birds. As before, this leads to the disqualification of 1 bird from Leah’s original nest.[[51]](#footnote-51)

If the escapee was sacrificed as an *olah*, and if 3 of the birds in Leah’s nest sacrificed the same way, they must have been sacrificed as *hatta’ot.* On the other hand, if the escapee was sacrificed as a *hattat*, and if 3 of the birds in Leah’s nest sacrificed the same way, they must have been sacrificed as *olot. In either case,* the situation has an inherent dependency that reduces the number of invalid sacrifices to only one *olah* and one *hattat.* After the fact, when we disqualify the escapee and one of the 3 birds sacrificed identically*,* we have disqualified a pair of birds sacrificed differently and the remaining 4 birds from both Leah’s nest and the 4 birds in Rachel’s nest are all valid. We do not know which scenario occurred but the identical solution, eliminating the escapee and 1 of the 3 identically sacrificed birds gives a solution that is applicable in either worst-case.

Unlike the standard interpretation where Rachel must add 2 additional birds, according to Raavad each woman adds one additional bird; Leah sacrifices 6 birds, Rachel sacrifices 4 birds, and each fulfills their obligation getting credit for 4 valid sacrifices.[[52]](#footnote-52)

It is important to note that unlike the examples of worst-case-based disqualification covered in the third chapter, in this Mishnah **two parallel worst-cases both result in disqualifying one *ḥattat* and one *olah.* Since the cases cannot occur simultaneously, only a single disqualification of one *ḥattat* and one *olah* is required.** In the more typical cases, the worst-case specifies how many pairs of birds are disqualified as opposed to an individual *ḥattat* or *olah*.

Summary of Raavad’s interpretation of the first two *mishnayot* in the second *perek*:

* The **cases** discussed assume there was no prior consultation.
* The **principle** that supports the ruling is from the third chapter that assumes that in a case of no prior consultation, you construct the most disadvantageous scenario and give credit for all sacrifices that are still not able to be disqualified.
* The ***halakhic* ruling** is a loss of one bird by Leah and one bird by Rachel.

Raavad differs from the standard interpretation in his explanation on all three parameters: case, principle, and *halakhic*ruling. However, despite Raavad’s disagreement on all three parameters, the nature of his disagreement is textual as opposed to conceptual. Based on Raavad’s statements[[53]](#footnote-53) when he voices his disagreement with Rambam’s suggestions introduced by the phrase “*ve-yiraeh li*,” which increase the number of valid sacrifices, Raavad is clearly not disputing[[54]](#footnote-54) the principle of implicit designation. Instead, his disagreement with the standard interpretation is based on his understanding of the implication of the wording of the second Mishnah: one bird lost by Rachel and one bird by Leah, versus 2 birds lost by Rachel.[[55]](#footnote-55) He was therefore forced to a different interpretation of the case assuming sacrifice without consultation. His disagreement with the standard interpretations is thus more technical than conceptual.[[56]](#footnote-56) Raavad would agree with the analysis and the halachic conclusion of the standard interpretation presuming prior consultation. He would, however, have difficulty reconciling it with the current text of the Mishnah. He would presumably change the text of the Mishnah to state more explicitly that Rachel must supply two birds and Leah none.

**Rambam’s Interpretation**: Rambam’s *halakhic* conclusion is identical to Raavad’s – each woman adds one bird. Leah sacrifices 6 birds and Rachel sacrifices 4 birds, with each receiving credit for their original *ḥovah* of 4 birds. There is almost no commentary on Rambam’s position. That Rambam and Raavad agree on the *halakhic* result has not, to my knowledge, even been noted, though a careful reading allows for no other conclusion. Unlike Raavad, although not explicitly stated, we assume[[57]](#footnote-57) that according to Rambam the cases involve prior consultation. While there is an attempt to explain Rambam as assuming no prior consultation in this case, the text particularly in *Peirush Ha-Mishnayot* on the second *perek* of *Kinnim*, that parallels his commentary in the 9th chapter of *Pesulei Ha-Mikdashim*, makes such an assumption less likely. While Raavad when writing on the second chapter states explicitly that he is assuming a case of no consultation, Rambam in his commentary in *Peirush Ha-Mishnayot* makes no such statement. Consequently, when discussing the 9th chapter in Mishnah Torah, which deals with the second chapter in *masekhet Kinnim,* we begin the analysis of Rambam’s interpretation assuming Rambam is dealing with a case of prior consultation.

**But if there is prior consultation, then Rambam must reject the notion of implicit designation, at least as it applies in this case.** Were Rambam to agree with the concept of implicit designation, then consider the 3 birds left in Rachel’s nest. If 2 of the 3 birds remaining in Rachel’s nest are sacrificed as say *olot*, then *both* the 3rd bird remaining in the nest and the escapee are implicitly *ḥatta’ot*. In that case the laws of the first chapter, where a *ḥattat* flies into Leah’s nest, which is a *ken stumah*, would apply. Then only 2 *ḥatta’ot* could be brought from Leah’s nest which would invalidate 3 of the 5 birds in the nest, not two.[[58]](#footnote-58)

In *Pesulai Ha-Mikdashim* chapter 9 Rambam discusses a case where a bird from an undesignated nest flew into a nest of 10 birds resulting in 11 birds in that nest. The exact text is quoted in the footnote below.[[59]](#footnote-59) Note the ruling stated by Rambam depends **only on how the escapee was potentially sacrificed** and makes no mention of the nest from which the bird escaped.

This easily extrapolates to this case where if Leah’s birds were similarly sacrificed, 3 above and 2 below that Leah would have to add one bird. Thus, were Leah to sacrifice 5 birds, 3 in one manner and 2 in the other manner, the escapee could be 1 of the 2 rather than 1 of the 3. In that case 3 sacrifices are valid, 2 of the 3 and 1 of the 2, and Leah would have to add one bird. Since Rambam would allow 3 birds to be sacrificed this clearly indicates that he does not subscribe to the rule of implicit designation. If he did, then the maximum Leah could sacrifice would be two birds, presuming we knew exactly which 2 birds from Rachel’s original nest were sacrificed either as *olot* oras *hatta’ot*. Absent this information, Leah could not sacrifice any birds, as noted in footnote 58.[[60]](#footnote-60)

A further indication that Rambam doesn’t subscribe to implicit designation is that he is never concerned with the nest from which the bird originated, only the nest into which it flew. For those who subscribe to implicit designation, what occurred in the nest from which the bird originated and whether that nest was sacrificed first would provide critical information. Rambam must therefore reject the rule of implicit designation, in at least this instance.

However, presuming that Rambam rejects the principle of implicit designation, then on what basis does **Rambam disqualify any of Leah’s 5 birds?**

To explain why any of the birds now in Leah’s nest are disqualified according to Rambam, let us carefully examine the case and examine an additional potential complication caused by the escaped bird, beyond implicit designation. Consider Rachel’s nest with 3 original birds to which one bird was added. The *Kohen* then sacrifices two birds as *olot a*nd two as *hatta’ot.* If the new bird was sacrificed as an *olah*, then two birds from Rachel’s original nest were sacrificed as *hatta’ot*; if the new bird was sacrificed as a *hattat* then two birds from Rachel’s original nest were sacrificed as *olot*.[[61]](#footnote-61) The escapee could well have been sacrificed the same as 2 identically sacrificed birds from Rachel’s original nest, resulting in 3 birds from Rachel’s original nest being sacrificed identically. We cannot determine whether the two birds sacrificed identically in Rachel’s nest were *olot* or *hatta’ot,* or whether the escapee was sacrificed as an *oloh* or *ḥattat*. Since the escapee may have been either an *olah* or *hattat,* we therefore disqualify one *olah* and one *hattat* in Leah’s nest. This removes the possibility of receiving credit from the identical sacrifice of 3 birds from Rachel’s original nest.

This potential explanation for Rambam’s ruling, assumes that Rambam agrees with the principle that at most half the birds in any *hovah* can be sacrificed as *olot* and half as *ḥatta’ot.* However, Rambam’s agreement with this principle is challenged in 3 areas:

It is not consistent with the assumption of prior consultation. If there was no consultation, as Raavad previously postulated then the outcome Rambam described would be correct as was explained in the paragraph following footnote 51.[[62]](#footnote-62) If there were prior consultation, Leah would not be permitted to make any sacrifice for fear that any bird she sacrifices could be the escapee. This would mean that 3 birds might be sacrificed identically from Rachel’s original nest.[[63]](#footnote-63)

The explanation does not comport with Rambam’s text in Mishnah Torah. Rambam makes no mention of Rachel’s nest and if or how it was sacrificed. Rambam’s language in *Pesulei Ha-Mikdashim* 9:2 seems to attribute the disqualification only to the presence of the escapee in Leah’s nest and not without any mention of anything to do with its former nest.

Just as Rambam rejects the concept of implicit designation, Rambam may also reject the notion that no more than half of a nest can be valid *olot* or *hatta’ot*. Such a ruling limiting valid sacrifices to only half of a *ḥovah* does not appear anywhere in *Pesulei Ha-Mikdashim.*

An alternative to explain Rambam’s position is needed and will be proposed below. It will help explain not only this case, but other issues in the Rambam related to his rulings in in other cases as well.

Let us unpack Rambam’s approach systematically. Two issues need to be addressed:

1. What circumstances determine when Rambam applies or does not apply the principle of implicit designation.?
2. What basis does Rambam employ to disqualify the bird sacrifices, which can give the precise *halakhic* result that Rambam specifies in this case. This must apply as well in the in the more complex cases in the third Mishnah of the second *perek*?

**Question 1: When does or does not Rambam apply implicit designation?**

Rambam does not necessarily deny implicit designation *in toto,* despite his formulation in *Pesulei Ha-Mikdashim* 8:8 and 5:11 [[64]](#footnote-64) [[65]](#footnote-65) The implication from these statements of Rambam and the Talmudic source from which he derives his *halakhic* decision would appear to limit designation of the birds as a *hatta’ot* or *olot*, to the time a woman either designates birds of her own, purchases and designates birds to give to the *Kohen*; or when the birds themselves are sacrificed by the *Kohen.* No other birds still present in the nest would become designated by the *Kohen’s* sacrifice.

According to Rambam there are specific instances where implicit designation is not operative. It is clearly not operative in the cases addressed at the beginning of the second *perek* of *Kinnim* when a bird flew from one nest to the next as was discussed previously in this section. It is also not operative, as in some cases in the first *perek* where Rambam allows the entire combined nest to be sacrificed as *ḥatta’ot* when a nest of *ḥatta’ot is* combined with a *ḥovah.[[66]](#footnote-66)*

There is clearly a need to establish Rambam’s parameters that form his basis for when he does or does not apply implicit designation. In the second *perek*, a potential rationale for Rambam limiting the application of implicit designation is that Rambam might require that birds to become implicitly designated must still belong to the same nest. If a bird is no longer part of its original nest*,* sacrifice of birds in the originalnest doesnot impact its undesignated status and therefore does not render the bird as either a *ḥattat* or an *olah*. R. Heller makes this point, arguing strongly in his introduction to the second *perek*, that by sacrificing a bird in nest A, no bird currently in nest B becomes designated. According to Rambam, in this and perhaps other cases, implicit designation does not apply. However, this rationale is not applicable to the cases discussed by Rambam in *Pesulei Ha-Mikdashim* 8:3,4 where only one nest is involved, consequently there must be other factors to more completely define when Rambam applies or does not apply implicit designation.

**Question 2: Why according to Rambam are any birds in Leah’s nest disqualified?**

The more complex issue is establishing Rambam’s basis for disqualification of any birds in a nest into which a foreign bird flew. Rambam in both the ninth chapter of *Pesulei Ha-Mikdashim* as well as *Peirush Ha-Mishnayot* states that two birds are disqualified from the nest into which the foreign bird flew. Rambam provides no details beyond the number of birds from Leah’s nest that remain valid, making no reference whatsoever to Rachel’s nest. The explanations of both the standard interpretation and Raavad provide a more elaborate rationale explaining why certain birds are valid and certain disqualified, referencing the role of the birds in Rachel’s nest in detail. According to Rambam, disqualification apparently results entirely from the number of birds sacrificed on behalf of Leah from the birds currently in her nest. Though not provable, it is entirely plausible that disqualification of the birds, simply results from Leah’s inability to benefit from a contribution from another nest, unless the owner of that nest receives a reciprocal benefit as well. In this case, Rachel receives no benefit from Leah’s sacrifice of her bird. **Since Rachel receives no benefit, neither can Leah**.[[67]](#footnote-67) This simple principle, may explain an element of Rambam’s approach. If your bird enters my nest, unless our sacrifices are joint, in which case they are completely linked, I am not allowed any benefit from your bird. In fact, Leah must also add a bird to become paired to the bird for which she receives no credit. Were Leah to sacrifice only 5 birds 3 as say *olot* and 2 as *ḥatta’ot*, we must consider the possibility that it was Rachel’s bird that was sacrificed as 1 of the 2 *ḥatta’ot*. If that were the case, since she is not able to receive benefit from Rachel’s bird, Leah would have sacrificed only one *ḥattat*. By adding a bird and sacrificing 3 birds as *ḥatta’ot* and 3 birds as *olot*, despite the presence of Rachel’s bird, we guarantee that at least 2 of the *olot* and 2 of the *ḥatta’ot* came from Leah’s 5 birds, the 4 original birds and 1 new bird that she added.[[68]](#footnote-68)

**Summary of Rambam’s interpretation of the first two *mishnayot* in the second *perek*:**

* The case of Rachel’s bird flying into Leah’s nestinvolves prior consultation.[[69]](#footnote-69)
* The **principles** that support the ruling are
	+ Implicit designation is not applicable when birds are in different nests.
	+ Some formulation of the concept that without any shared or reciprocal benefit with the owner of a bird that I sacrificed, I cannot use another person’s donation to *hekdesh* to fulfill my obligation
* The ***halakhic* ruling** is a loss of one bird by each of the women.

Note all three views, the standard interpretation, Raavad’s interpretation and Rambam’s interpretation, differ on the principles involved. Rambam agrees with Raavad on the *halakhic* decision that each woman loses one bird; and with the standard interpretation that the case involves prior consultation.[[70]](#footnote-70) A simple reading of the opening to the third chapter, which states that this chapter is about cases without prior consultation, would imply that prior chapters, including the second *Mishnah* in the second *perek* would assume the case involves prior consultation. Similarly, the terminology of the Mishnah: פָּרַח מִזּוֹ לָזוֹ, פּוֹסֵל אֶחָד בַּהֲלִיכָתוֹwould seems to imply a ***halakhic* ruling** that either one bird is lost from one of the two women, or that each woman loses one bird. **Only Rambam’s approach comports with this as a case of prior consultation and a ruling of only one bird lost from each of the two women.** However, to abandon at least part of the principle of implicit designation, as Rambam apparently does, may have been easier for Rambam not having the “benefit” of 800 years of commentary to the contrary.[[71]](#footnote-71)

To complete these two *mishnayot*, we must also consider the consequences according to each of the three opinions of one of the five birds in Leah’s nest flying into Rachel’s nest, restoring 4 birds in each nest. If the same bird happened to have returned, the sacrifice of all four birds would be valid. Of course, we do not know that the same bird that originally left Rachel’s nest is the one that returned. Therefore, we must decide based on the assumption that each nest possibly contains one bird from the other nest.

According to the **standard interpretation**, the returning bird causes 2 of Leah’s birds to be disqualified. The principle is identical; one must prevent the implicit designation of a bird in Rachel’s nest that would occur if more than 2 birds in Leah’s nest are sacrificed, thereby disallowing any sacrifice by Rachel. As a result, each woman sacrifices

* 2 birds from their current nest, one each as an *olah* and *ḥattat*, and
* then separately sacrifices an additional *ken* of two birds.

According to **Raavad**, who considers this case non-consulted, we must construct the worst-case. Like before, we assume Rachel’s bird in Leah’s nest and Leah’s bird in Rachel’s nest are sacrificed identically to the way 2 birds in their original nest are sacrificed. That can occur in two ways, with the 3 birds all sacrificed as either *ḥatta’ot or olot.* For example, Rachel sacrifices Leah’s bird and 1 of her 3 original birds as *olot*, and the other 2 birds originally in her nest as *ḥatta’ot.* Leah sacrifices Rachel’s bird and 1 of her 3 original birds as *ḥatta’ot*, and her other 2 original birds as *olot*. Alternately, one can construct a parallel worst-case with *ḥatta’ot* and *olot* reversed. Thus, 3 of the 4 birds from both original nests could have been identically sacrificed as either *ḥatta’ot or olot*, invalidating 1 of the 3. Therefore, each woman must sacrifice 2 additional birds, one *ḥattat* and one *olah,* as she is unable to determine whether the potentially invalidated bird was a *ḥattat* or an *olah*.

For **Rambam**, matters are more complex. Rambam discusses the **specific** **case** of 4 birds in each *ḥovah*, with a bird flying from one *ḥovah* to the other and then a bird returning in the opposite direction. Rambam then discusses the **general** **case** of a bird successively flying between the two equal sized nests multiple times, where the Mishnah (and Rambam) limits the disqualification to half of the birds in the two nests. The text of both the Mishnah and Rambam are given below.[[72]](#footnote-72) The Mishnah presents a single combined text in presenting both cases. This contrasts with Ramban who presents the Mishnah in two separate and longer *halakhot.*

The Mishnah states if the birds continue to fly between the two nests, ½ of the birds would be allowed to be sacrificed, ¼ as olot and ¼ as ḥatta’ot. This despite that in this case of two nests, each with 4 birds, after 8 flights, all the birds in each of the nests may have originally belonged to the other nest. Despite our contention that Rambam disallows receiving credit from another person’s bird, in this case even Rambam would allow credit since the credit received is completely reciprocal. In this instance, even were the two nests combined, permission would be given to sacrifice 1/2 of the combined nest. The benefit both Leah and Rachel derive from each other is completely reciprocal; both women receive **exactly equal** benefit. As a result, Rambam’s assumed approach disallowing benefit in cases where the benefit is not reciprocal, would not apply.

This, however, does not address why Rambam divides this Mishnah into two separate *halakhic* statements. Rambam in Mishnah Torah deals differently with the first half and second half of the Mishnah. Rambam’s first *halakhic* statement deals with the beginning of the case where only 2 flights occurred; one bird flew from Rachel’s to Leah’s nest and one back from Leah’s to Rachel’s. Rambam’s second *halakhic* statement deals with (totally intermingled) nests after birds repeatedly flying between the nests.

Rambam’s wording seems to imply a difference between the two parts of the Mishnah.[[73]](#footnote-73) In the first case of just 2 flights, Rambam seems to suggest each woman would be instructed to sacrifice her entire nest, receiving credit only for two birds, one *hattat* and one *olah*. Each woman then brings a second *ken* to fulfill her obligation for two *ḥatta’ot* and 2 *olot*. Next, Rambam explains the *halakha* related to multiple flights, where the birds are sacrificed, and each woman receives credit for ½ of her nest. As before, each woman then brings a second *ken*.I would propose this formulation of the Rambam splitting the Mishnah into two separate *halakhot* indicates his preference for clear ownership.

 In the first part of the Mishnah which discusses the situation after only two flights between nests of four birds, Rambam does not suggest combining the nests and then sacrificing. Instead, the nests are kept separate as Rambam prefers each women receive credit for a bird that is provably hers. **All 4 birds in each of those two nests are sacrificed separately by Leah and Rachel**; each sacrifice is associated with only one woman. Of the 4 birds sacrificed on behalf of both Rachel and Leah separately, each receives credit for the provably valid pair of birds that unquestionably are still resident in her nest.[[74]](#footnote-74) Now, let us consider what would occur after many flights in the **general** case. The two nests are now combined;[[75]](#footnote-75) the *Kohen* is permitted to take the birds from the combined nest,[[76]](#footnote-76) and sacrifice those birds jointly. If they are on the other hand sacrificed separately without combing the nests, no method exists to identify whether each woman is sacrificing birds from her original nest. In addition, each woman individually must bring an additional *ken* to fully satisfy her obligation for sacrificing 4 birds. Rambam’s dealing separately with the first and second part of the Mishnah seems to indicate Rambam’s preference for explicit ownership, wherever possible, a point we return to in the next sub-section.

**Sub-section 3: Second examination of the first *perek* of *Kinnim***

It would have been fortuitous if Rambam’s unique interpretation of the second chapter would explain his strongly disputed position in the first chapter. In any case, Rambam’s approach to the second chapter of *Kinnim* does offer some insight into his approach to the first chapter. The following case based on *Kinnim* 1:2and Rambam *Pesulei Ha-Mikdashim* 8:4 will illustrate Rambam’s methodology.

* A group of 4 *olot* becomes intermingled with an undesignated *hovah* of 6 birds. The standard ruling is that 3 birds are sacrificedas *olot*, and 7 birds are lost. Rambam suggest that all 10 birds be sacrificed as *olot*, with the two owners receiving credit for 7 *olot*.

The standard ruling limits sacrifice to 3 *olot* because either because implicit designation creates 3 *ḥatta’ot*, which could not be sacrificed above; or because of the “rule” that half of a *ḥovah* must be sacrificed as *olot* and half as *ḥatta’ot*,no more and no less*.* The primary question that must be addressed is why Rambam seems to reject both reasons for limiting sacrifice to three *olot*.[[77]](#footnote-77) To explain this using the rationale proposed in the previous section would not suffice. In that section it was proposed that Rambam’s interpretation of the second *perek* in *Kinnim* was based on a limitation that implicit designation or the number of *olot* or *ḥatta’ot* from a single nest does not apply to birds now present in different nests.[[78]](#footnote-78) We could perhaps assume that both reasons for limiting sacrifice to 3 *olot* only apply if one is attempting to sacrifice *olot* and *ḥatta’ot* in an undesignated nest or in a group of intermingled undesignated nests as mated pairs. If one is sacrificing *olot* or *ḥatta’ot* alone, without the intent to sacrifice specific pairs at that time, then implicit designation or the necessity to sacrifice an equal number of *olot* and *ḥatta’ot* does not apply. Since no birds have been designated, sacrificing all as either *ḥatta’ot* or *olot* is allowed by Rambam. Although this doesn’t completely fulfill the obligation of the owner of the *ḥovah* to sacrifice mated pairs of *ḥatta’ot* and *olot,* half of his obligation is met, requiring him only to bring 3 more birds as *ḥatta’ot*.

Let us now address the reasoning behind Rambam’s restriction without reliance on implicit designation or other limitations on how birds in a *ḥovah* are sacrificed. Rambam clearly maintained a restricted view of implicit designation. In fact, he may have gone even further: Rambam’s language clearly specifies that only **the bird that was sacrificed is designated, but a bird not sacrificed cannot become designated by implication.**  Assuming that Rambam is to be taken literally, he seems to completely deny the principle of implicit designation. One can then turn the question in the other direction and ask what principle Rambam might use in place of implicit designation to explain the Mishnah’s view that sacrifice is limited to 3 *olot*? As previously noted, Rambam probably still agrees that when sacrificing mated pairs from a *ḥovah* of size 2\*N one cannot derive more than N valid *olot* or *ḥatta’ot*. Rambam may then argue that sacrificing more than half of an undesignated nest as say *olot* has no value; Rambam might simply **disallow any sacrifice that has no value**. Thus, sacrificing more than half of an undesignated nest in a *ḥovah* as say *olot* is not allowed. Again, consider the simplest case of an undesignated nest of 2 birds, where one bird has already been sacrificed as an *olah*. The standard interpretation would declare the second bird a *ḥattat* by implicit designation, and thereby restrict its sacrifice to only a *ḥattat*. Rambam might well disagree and maintain that the bird is **not** already declared a *ḥattat*; nonetheless, its sacrifice as an *olah* is disallowed because such a sacrifice would have no value. **Independent of the notion of implicit designation, a useless sacrifice is disallowed.** However, bringing all the birds as say *olot*, is viewed by Rambam as having value; it guarantees that every bird that is credited was sacrificed on behalf of its actual owner.[[79]](#footnote-79)

There is still another detail that sheds light on Rambam’s approach. Rambam suggests sacrificing 10 birds as *olot* while credit is received only for 7 birds. Assume instead of 10 birds sacrificed, only 7 birds were sacrificed *as olot*. Could the women not agree to grant each other credit with each receiving credit for their required *olot*, regardless of the ownership of the 7 birds sacrificed? Why the additional, and perhaps unnecessary, sacrifice of 3 birds?

Again, some of Rabbi Heller’s comments on Rambam’s approach in the second chapter are helpful. The answer may be that sacrificing all 10 birds ensures that a woman receives credit for a bird that she clearly owns outright, without the need to rely on reciprocal sharing. While sharing is allowed,[[80]](#footnote-80) perhaps Rambam prefers clear ownership and when possible, to sacrifice in a way that that each woman is sacrificing her own birds. This method appears preferable to Rambam, even at the expense of additional sacrifices, **and even though it does not change the number of birds deemed valid.** This observation strengthens the assumption that Rambam places a significant premium on clear ownership. Note as well that in the **case** in the second chapter of 4 birds in each nest, after two flights, Rambam’s language seems to imply that all the birds in each nest were sacrificed,[[81]](#footnote-81) rather than getting the identical number of valid sacrifices by combining the nests and sacrificing only half of the birds on behalf of both women jointly**.**

Rambam’s positions are:

* Limiting or completely discounting implicit designation, replacing it with a more general principle of required value.
* Requiring or preferring ownership of a bird for whose sacrifice one is credited.

These two positions are not linked allowing agreement with Rambam on either issue without the need to agree on the other.

Even if one were to accept all Rambam’s positions, the overwhelming question is why the *mishnayot* did not provide or even hint at Rambam’s practical advice in the first chapter of sacrificing all the birds as *ḥatta’ot* or *olot*? One can only speculate regarding how Rambam might explain this omission by the *mishnayot*.[[82]](#footnote-82)

There is one additional critical issue in Rambam’s position that must be addressed. In the case of N *olot* mixing with an undesignated nest of 2\*M birds, Rambam suggests sacrificing all (N + 2\*M) birds as *olot* and receiving credit for N + M *olot*. As noted, any reduced number of sacrifices **cannot guarantee** that credit is given only to a bird’s owner without any need for sharing. However, when 2 undesignated nests (particularly of unequal size, 2\*N and 2\*M, N>M) are intermingled, Rambam suggests the sacrifice of all 2\*N + 2\*M as opposed to only 2\*N + M of the birds. It is easy to demonstrate that once only 2\*N + M birds are sacrificed, at least N belonged to the woman who brought 2\*N birds and M belonged to the woman who brought 2\*M birds. Sacrifice of the remaining M birds has no additional utility. If as we have claimed that this case is after the fact, the question is not compelling, since the women could not be assumed to have described the situation to the *Kohen*.[[83]](#footnote-83) Furthermore, since both women are obligated to bring *ḥovot*, then the *Kohen* suggesting all birds be sacrificed as olot would not be at all likely in a consulted case.

**Sub-section 4: Birds traveling between seven nests**

The third Mishnah in the second chapter concerns birds that fly in a complex pattern between undesignated nests. In the Mishnah there are seven nests, with 2, 4, 6, 8, 10, 12 and 14 birds, respectively.[[84]](#footnote-84) Unlike the previous case of two nests of Rachel and Leah, where the *halakhic* ruling was subject to dispute between the standard interpretation and Rambam and Raavad, the *halakhic* ruling in this more involved case is stated unambiguously in the Mishnah; all agree on what the *halakhic* rules stipulate. Before turning to the circumstances and principles, where disagreement reappears, the *halakhic* rule must be examined in detail.

The birds fly three or six times, depending how you choose to count, three round-trips or six one-way trips.[[85]](#footnote-85) One bird flies from the nest of 2 birds to the nest of 4 birds, then a bird (not necessarily the same bird, but any bird present in the nest at that point) flies from the nest of 4 birds (actually 5 birds at that point) to the nest of 6 birds, and so on until a bird flies from the nest of 12 birds (13 birds at that point) to the nest of 14 birds. Each such sequence constitutes a one-way trip. At that point, having reached the last nest, the birds fly in the other direction. A bird flies from the nest of 14 (15 birds at that point) to the nest of 12, and so on until a bird finally returns and restores 2 birds to the first nest. The Mishnah declares that after this first round-trip there are 0, 0, 2, 4, 6, 8 and 12 valid birds within their respective nests. The first and last nest, that had 2 and 14 birds originally, lose 2 birds, the five other nests in between lose 4 birds.[[86]](#footnote-86) [[87]](#footnote-87)

This pattern of birds flying from the smallest nest that still contains valid birds, to the seventh nest and then back, occurs two more times. As well, this *halakhic* ruling that the two nests at the two ends lose 2 birds, while those in between lose 4 birds is also repeated each time there is a back-and-forth flight. However, the standard interpretation assumes that each time two additional nests, having no valid sacrifices, remain dormant; their birds no longer fly. As this assumption simplifies the case, we will use this assumption throughout the monograph.[[88]](#footnote-88) Raavad’s (as well as likely Rambam’s) assumption that birds from dormant nests continue to fly has no impact on the *halakhic* rule as will be explained.

After the second round-trip, the *halakhic* ruling is the same: the first valid nest, the third nest of the original set and the last nest each lose 2 birds, and the three intermediate nests, nests 4, 5, and 6 of the original nests, lose 4 birds each. Starting with the previous sequence of valid birds in each nest, there are initially in sequence 0, 0, 2, 4, 6, 8, 12; after the losses during the second set of round-trip flights of 2 birds in each of the 2 end nests and 4 birds in the middle nest we are left with 0, 0, 0, 0, 2, 4, and 10 valid birds within the seven original nests. Now birds fly between the three remaining nests; after this third round-trip, only the largest nest has not been entirely disqualified and after losing two more birds, it still has 8 valid birds. An alternate opinion stated in the Mishnah allows not just 8 birds, but either 10 birds[[89]](#footnote-89) or all 14 birds[[90]](#footnote-90) in the largest nest to be sacrificed, ostensibly, but not necessarily, because the other nests have no remaining valid birds.[[91]](#footnote-91)

The circumstances, principles, and *halakhic* rules for the simple case of two undesignated nests of 4 birds where a single bird flies from one nest to the other leaving 3 and 5 birds in the two nests and a second flight restoring 4 birds to each nest were explained in detail in a previous section, covering Mishnah 2:2. It may not be obvious, but the three approaches, the standard approach as well as those of Raavad and Rambam, all generalize from that simple case to this complex case, without the need to introduce any new principles. While the complexity of the case requires concentration,[[92]](#footnote-92) no additional concepts are introduced.

As will be demonstrated, many commentators who follow the standard interpretation struggle with the interpretation of this Mishnah; no complete solution has ever been proposed. Unlike the standard interpretation, both Rambam’s and Raavad’s approach will be shown to explain the Mishnah in a manner entirely consistent with the Mishnah’s text, precisely as written. Rambam’s approach generalizes beyond the cases considered, providing a simple, but more general, halakhic *rule*.[[93]](#footnote-93)

One caution is critical; the Mishnah is difficult enough without again revisiting the rationale of the standard interpretation, Raavad, or Rambam for the principles that have been identified. Going forward, only the case under consideration, principles and *halakhic* rules are considered. Unlike the simpler case in the second Mishnah of the chapter, in which the *halakhic* ruling is in dispute, in this third Mishnah the three opinions must all agree; the *halakhic* rulings of the Mishnah are expressed unambiguously.

First, after any one-way flight, the standard approach, disqualifies 2 birds from the nest that a bird left and none from the nest to which a bird arrived. Ostensibly, this *halakhic* ruling comports with the Mishnah’s ruling. In their first round-trip, both the first and last nest each had one only bird departing during the round-trip; no bird departs from the last nest in the direction of a larger nest, and no bird departs the first nest in the direction of a smaller nest. Thus, the first and last nests with 2 and 14 birds respectively, lose 2 birds each, exactly as specified. Each of the intermediate nests has a bird fly out twice, once in each direction during each one-way trip, and as a result, each loses 4 birds, as the Mishnah specifies. The *halakhic* ruling seems to be exactly as the Mishnah specifies.

However, the problem becomes clear if we carefully examine the return trip when a bird leaves the 2nd nest that originally had 4 birds going to the 1st nest that originally had 2 birds. Prior to that bird departing, the 2nd nest had 5 birds of which 2 were valid. When this second bird departs, 2 valid birds are again reduced by 2, leaving the second nest with no valid birds. The first nest was already invalid after its first bird departed.[[94]](#footnote-94) The Mishnah, as indicated above, states there are no birds left in the first or second nests. The standard interpretation presumes the same logic applies to the bird flying from the 2nd nest to the 1st nest as to the 3rd. The difficulty with this interpretation is that there are no longer any valid birds in the first nest and consequently there is no concern that a bird in the 2nd nest must be invalidated for if sacrificed, it will implicitly designate the bird that flew from the 2nd to the 1st nest. There is no impact to the owner of the first nest if a designated bird flies into the nest as no birds in the 1st nest will be sacrificed. As a result, no bird in the second requires invalidation. Instead, the 2nd nest now should be acting as an “end” nest and have only lost 2 birds, not 4.[[95]](#footnote-95) This dilemma for those who use the standard interpretation has no resolution and represents an unanswered difficulty.

The proposed justification[[96]](#footnote-96) is that the Mishnah is trying to teach a general rule that has an occasional inaccuracy. The need for a general rule would be more plausible if a case such as this were a common occurrence. When there is an event that is a common occurrence, the need for *halakhic* rulings that can be generalized makes sense, even if there are minor inaccuracies that could in very rare instances result in an additional stringency. However, these cases are theoretical and are hardly likely to have ever occurred. It is therefore understandable that both Rambam and Raavad would find alternate interpretations that would not encounter this problem.

Ironically, a logical equivalent to the very example identified that creates the dilemma for the standard interpretation is already referenced in the Mishnah as *yesh omrim*, the alternate opinion. Assuming the interpretation of R. Ovadiyah of Bartenura, the alternate opinion suggests that since the 6th sixth nest now contains no valid birds, the 7th nest should be able to sacrifice 5 pairs or 10 birds, 5 *olot* and 5 *ḥatta’ot* instead of only 8. The interpretation of the *yesh omrim* according to R. Yisroel Liphshitz (*Tiferet Yisroel*) is to allow all 14 birds currently in the 7th to be sacrificed. His rational is that regardless of where the escapees of the 7th nest reside, outside the 7th nest, since, in any case, they will not be sacrificed, then sacrifice of any bird in the 7th nest doesn’t create the concern of implicitly designating any of them. Ostensibly, the sacrifice of all 14 birds should therefore be allowed.[[97]](#footnote-97) [[98]](#footnote-98)

We now turn to the views of Rambam and Raavad. They assume that as a bird flies between nests, one bird, in addition to the escapee, must be invalidated from each nest, in accordance with the ruling of the Mishnah.[[99]](#footnote-99) After one complete round trip, the nests with 2 and 14 birds each had only one bird fly in and one bird fly out; hence each nest loses 2 birds.[[100]](#footnote-100) Each intermediate nest had a bird fly in and out twice, and hence must lose 4 birds,[[101]](#footnote-101) corresponding to the Mishnah’s *halakhic* ruling. We now prove separately for Raavad and Rambam that their approach corresponds precisely to the *halakhic* ruling of the *Mishnah* without encountering the difficulties raised by the standard interpretation.[[102]](#footnote-102)

Let us carefully examine Raavad’s interpretation. Under his assumption of no prior consultation, we must prove that we have derived the worst-case scenario as is required when there has been no prior consultation. Note that this case is, in one respect, more elaborate than the case addressed in *Kinnim* (3:2)[[103]](#footnote-103) where all the nests are intermingled, and we are looking only for a single number, the (even) number of birds correctly sacrificed even under the worst-case scenario. Here we must prove a worst-case scenario not for one large, intermingled nest, but for each of 7 separate nests into which birds have flown in and out several times.

The total number of birds in all the nests is 2 + 4 + 6 + 8 + 10 + 12 + 14 = 56. We must look at the configuration at the end of each of the three round-trip flights and the results given in the Mishnah for each individual nest. The cases get progressively harder. In every case, to prove that we have derived the worst-case scenario, we must:

1. Prove that no other scenario disqualifies more birds than the proposed worst-case.
2. Construct that worst-case[[104]](#footnote-104)
	1. using the Raavad’s principles,
	2. under the assumption that each nest is sacrificed half as *ḥatta’ot* and half as *olot*, while
	3. exactly matching the Mishnah’s ruling.

Proving 1) is straightforward. Since each nest is assumed to be sacrificed correctly, ½ as *olot* and ½ as *ḥatta’ot*, all birds in their original nest are sacrificed correctly. A bird both outside its original nest and from a previously active nest is disqualified if it may have been sacrificed the same as ½ of the birds in its original nest.[[105]](#footnote-105) As there are two end nests that have one flight out each and 5 middle nests, each having two flights out, after the first round of flights, there are potentially[[106]](#footnote-106) (1+2+2+2+2+2+1 =) 12 such birds. In the second round of the round-trip flights, since the 1st and 2nd nests have no valid birds, this leaves 5 nests two end ones with one flight each and 3 middle ones with two flights each resulting in (1+2+2+2+1 =) 8 such birds. In the final round there are 3 nests left, two end nests and one middle nest, resulting in (1+2+1 =) 4 such birds. This total of 24 birds potentially outside their original nests, cause 48 disqualifications, 2 per escapee. Each escapee can be sacrificed as either a *ḥattat* or *olah*, something we cannot determine. In either case, whether sacrificed as a *ḥattat* or *olah*, each such bird can have been sacrificed in the same manner as ½ of its original nest, and thus disqualified. Thus, there can be at most (2 \* (12 + 8 + 4) =) 48 disqualifications, exactly as the Mishnah stipulates at every stage; no worst scenario can exist.

To demonstrate item 2) above, a configuration disqualifying the requisite number of birds at each stage must be constructed. After the first round-trip, there are at most 12 birds outside their original nest and we must construct a configuration that disqualifies (2 + 4 + 4 + 4 + 4 + 4 + 2 =) 24 birds from the seven nests, respectively.[[107]](#footnote-107) After the second round-trip, another (2 + 4 + 4 + 4 + 2 =) 16 birds must be disqualified. Only 3 nests are still active and after the third round-trip another (2 + 4 + 2 =) 8 birds must be disqualified. Note of the 56 original birds, exactly 8 are left; 2\*24 = 48 have been disqualified.

After the third and final set of flights, **exactly half of each nest except the last is potentially comprised of birds from an outside nest**. At that point, all birds outside the largest nest can potentially be disqualified. We will construct a case where all foreign birds are disqualified and since each of those foreign birds could have been sacrificed as either a *ḥattat* or an *olah*, one can also construct a parallel case interchanging *ḥattat* and *olah*. As a result, twice the number of the escapees are disqualified. In the final nest there are potentially 3 birds from outside that nest, disqualifying twice that number, leaving 8 of the 14 birds in that nest valid. We construct all 3 configurations below. The intuition[[108]](#footnote-108) behind constructing each worst-case scenario is:

* allow no bird to fly more than once, and
* assign the sacrifices to achieve maximal disqualification.

First, assume each bird flies only once, meaning that once a bird flew into a nest from either direction it remains in that nest for the duration of the three round trips. That assumption maximizes the number of birds outside their original nest. After each of the three roundtrips, the *Kohen* sacrifices half of each of the 7 nests as *ḥatta’ot* and half as *olot.*  Then presume a “bias,” or a disposition toward *ḥatta’ot* or *olot*, in each nest. In a *ḥatta’ot* bias, half of the birds originally from that nest that currently reside in that nest, as well as all birds from that nest that have flown to another (adjacent) nest are sacrificed as *ḥatta’ot*. This results in all the remaining birds originally from that nest and not yet sacrificed and all the foreign birds (i.e., escapees) now residing in that nest to be sacrificed as *olot*. An *olot* bias would do exactly the opposite. Assigning sacrifices for maximal disqualification involves sacrificing that nest’s escapees, now residing in different nests, identically to the bias of their original nest. By sacrificing in that way all (foreign) birds that come from other nests will be sacrificed opposite the bias of the nest into which they flew, in the same manner, either all as *ḥatta’ot* or all as *olot*.[[109]](#footnote-109) [[110]](#footnote-110) To maximize disqualification the nests must be alternated in relation to their bias i.e., if one nest has a *ḥatta’ot* bias, then the adjacent nests will have an *olot* bias. Given this construction, despite each nest being sacrificed correctly, each bird outside its original nest and half the birds in its original nest can be seen to be sacrificed identically, and hence incorrectly, thereby invalidating them. Take for example *ken* 4 which originally contained 8 birds. After the first round-trip, examine the construction below. *Ken* 4 has a *ḥatta’ot* bias while *kinnim* 3 and 5 have an *olot* bias. *Ken* 4 contains 2 foreign birds, one each from *ken* 3 and *ken* 5. To create maximal disqualification, i.e., the worst-case, assume the 2 foreign birds are sacrificed as *olot*, the same way as their original mates in *ken* 3 and *ken* 5. Now since now more than half of their original nest has been sacrificed as olot, the escapees from each direction who now reside in *ken* 4 are disqualified. Those 2 birds because of the *ḥatta’ot* bias of nest 4 were assigned to be *olot*; constructing a parallel case where *ken* 4 has an *olot* bias, those two birds would now be presumed to have been sacrificed as *ḥatta’ot* requiring that we disqualify 2 other birds in *ken* 4. Only the 4 birds in *ken* 4 where **both they and their pairs** were originally from *ken* 4 and two sacrificed as *ḥatta’ot* and 2 are sacrificed as *olot* are correctly sacrificed.

The above example related to the first roundtrip is applicable to the other two roundtrips as well. Below is a construction detailing all 3 trips and what may occur in each nest during each of these trips to create the worst-case scenario. The example below alternates the bias in individual nests, starting with an *olot* bias in the example given in the text; an example starting with a *ḥatta’ot* bias is given as a footnote. Although as noted above, both biases must be considered thereby doubling the number of invalid birds to create the worst-case scenario; nevertheless, it is useful to initially separate them.

The sequence of flights given in the text and footnotes below are explained as follows:

1. The *kinnim* have an alternating *ḥatta’ot* and *olot* bias. The first *ken* in the text begins with an *olot* bias; in the footnotes, the first ken begins with a *ḥatta’ot* bias.
2. The letters “H” and “O” following the *ken* number represent *ḥatta’ot* and *olot*, respectively.
3. Occurring after the fact, without consultation, we assume the *Kohen* always sacrifices half the birds as *ḥatta’ot* and half as *olot* in each nest. The presumptions on what is sacrificed as ḥatta’ot and *olot* is constructed to create the worst-case scenario.
4. The numbers separated by commas after the letters H or O represent the *ken* from which the bird originated. To illustrate, after the second roundtrip ken5 is presumed to have been sacrificed as follows: *Ken* 5: O: 5, 5, 5, 5, 5. H: 5, 4, 4, 6, 6, there are now 2 valid birds in the nest. In this case 1) *ken* 5 has an *olot* bias, something that *kinnim* 1,3,5, and 7 always maintain in the example give in the text, 2) 6 birds currently in nest 5 originated in nest 5, 3) 5 of the 6 original birds are presumed sacrificed as *olot* and 1 as a *ḥattat*, and 4) the 4 birds now in the nest that originated in nests 4 and 6 are also sacrificed as *ḥatta’ot.* 5) the number of valid birds, i.e., not disqualified, is listed at the end of each *ken*.

As can be seen by the above illustration, after any roundtrip, the Nth nest will contain 2\*N[[111]](#footnote-111) birds, the same amount it initially contained, some from that nest and the rest from adjacent nests.

The number of valid birds that are indicated always presumes that both possibilities of sacrifice by the escapee are considered (either with a *ḥatta’ot* or *olot* bias.) Thus, the number of invalid birds is doubled.[[112]](#footnote-112)

After the first round-trip:[[113]](#footnote-113)

*Ken* 1: O: 1. H: 2. This *ken* has no valid birds. Note that while in this scenario the first *ken* can claim credit for an *olah*, as indicated since there is no way to determine if the escapee was sacrificed as a *hattat* or *olah*, one must reverse *olot* and *ḥatta’ot*, throughout the construction, in which case a *ḥattat* not an *olah* would be valid. As we are establishing the worst-case, we disqualify both birds whether it was sacrificed as a ḥattat or olah. This argument applies throughout.

*Ken* 2: H: 2, 2. O: 1, 3. This *ken* has no valid birds.

*Ken* 3: O: 3, 3, 3. H: 3, 2, 4. This *ken* has 2 valid birds.

*Ken* 4: H: 4, 4, 4, 4. O: 4, 4, 3, 5. This *ken* has 4 valid birds.

*Ken* 5: O: 5, 5, 5, 5, 5. H: 5, 5, 5, 4, 6. This *ken* has 6 valid birds.

*Ken* 6: H: 6, 6, 6, 6. 6. 6. O: 6, 6, 6, 6, 5, 7. This *ken* has 8 valid birds.

*Ken* 7: O: 7, 7, 7, 7, 7. 7, 7. H: 7, 7, 7, 7, 7, 7, 6. This *ken* has 12 valid birds.[[114]](#footnote-114)

After the second round-trip:

*Ken* 1: O: 1. H: 2. This *ken* has no valid birds.

*Ken* 2: H: 2, 2. O: 1, 3. This *ken* has no valid birds.

*Ken* 3: O: 3, 3, 3. H: 2, 4, 4. This *ken* has no valid birds.

*Ken* 4: H: 4, 4, 4, 4. O: 3, 3, 5, 5. This *ken* has no valid birds.

*Ken* 5: O: 5, 5, 5, 5, 5. H: 5, 4, 4, 6, 6. This *ken* has 2 valid birds.

*Ken* 6: H: 6, 6, 6, 6, 6, 6. O: 6, 6, 5, 5, 7, 7. This *ken* has 4 valid birds.

*Ken* 7: O: 7, 7, 7, 7, 7. 7, 7. H: 7, 7, 7, 7, 7, 6, 6. This *ken* has 10 valid birds.[[115]](#footnote-115)

After the third round-trip:

*Ken* 1: O: 1. H: 2. This *ken* has no valid birds.

*Ken* 2: H: 2, 2. O: 1, 3. This *ken* has no valid birds.

*Ken* 3: O: 3, 3, 3. H: 2, 4, 4. This *ken* has no valid birds.

*Ken* 4: H: 4, 4, 4, 4. O: 3, 3, 5, 5. This *ken* has no valid birds.

*Ken* 5: O: 5, 5, 5, 5, 5. H: 4, 4, 6, 6, 6. This *ken* has no valid birds.

*Ken* 6: H 6, 6, 6, 6. 6. 6. O: 5, 5, 5, 7, 7, 7. This *ken* has no valid birds.

*Ken* 7: O: 7, 7, 7, 7, 7. 7, 7. H: 7, 7, 7, 7, 6, 6, 6. This *ken* has 8 valid birds.[[116]](#footnote-116)

In summary, Raavad assumes no consultation, hence concerns about implicit designation of mates that posed a dilemma for the standard interpretation does not apply. Raavad uses only one basis for disqualification of birds in the construction of the worst-case scenario: More than half of the birds in a *ken* (N birds in a ken of size 2\*N) are sacrificed identically, either as *ḥatta’ot* or *olot.* This demonstrates that Raavad’s ruling corresponds precisely to the primary text of the Mishnah without the challenges presented by the standard interpretation.[[117]](#footnote-117) The *yesh omrim* in the Mishnah suggesting 14 birds[[118]](#footnote-118) from *ken* 7 to be sacrificed creates an additional difficulty with Raavad’s opinion. Since Raavad’s opinion is that this Mishnah is dealing with non-consulted cases, that would seem to imply that all nests were sacrificed by the *Kohen* half as *ḥatta’ot* and half as *olot*. If that were the case, then *ken* 7 would be limited to 8 birds as sacrifice of the other 6 birds could have resulted in more than half a *ken* being sacrificed identically. The only way to resolve this dilemma is to presume that each of the owners of first 6 *kinnim* desists from sacrificing, then the *ken* with 14 birds should be entirely valid. Of course, if we assume that all owners bring their nests *a*nyway without consultation, then the alternate opinion appears completely inconsistent with Raavad’s position.[[119]](#footnote-119)

We now turn to Rambam.[[120]](#footnote-120) The position of Rambam is completely consistent with the primary ruling of the Mishnah. We need only calculate the number of potentially foreign birds in each nest. As noted, that is (1 +2+2+2+2+2+1 =) 12 after the first round, 8 more after the second round and 4 more after the third round. Each bird may have been sacrificed as either an *olah* or a *ḥattat*, doubling the number of disqualifications exactly as specified in the Mishnah.

Given the principle that no credit is received for a bird that you do not own, the configuration(s) constructed above for Raavad, demonstrates Rambam’s *halakhic* result as well. For Rambam as well we must choose the case with the maximum number of birds disqualified, which in his case need only meet two simple criteria:[[121]](#footnote-121)

* no bird flies more than once, and
* all foreign birds in a nest are sacrificed the same way either as *ḥatta’ot* or *olot*.[[122]](#footnote-122)

The reason for disqualification does not depend on the state of any other nest. If a nest of 10 birds contains 4 foreign birds, then those 4 birds, assuming they are all sacrificed the same way, invalidate 4 other birds in that nest as well, since there is no way of knowing which way they were sacrificed. Thus, only 2 birds in the nest remain valid. Note how complex Raavad’s approach is compared to that of Rambam. For Raavad, there is a 2-step process. First bird X has a mate in an adjacent nest from which it flew that was sacrificed the same way; either it or its original mate must be disqualified. For reasons of fairness, we choose the bird in the improper nest, and then we disqualify a second bird in that nest based on the parallel worst-case, again because it is unknown if the birds were sacrificed as *ḥatta’ot* or *olot*. To demonstrate the Mishnah according to Rambam, there is no need to examine other nests as was required in demonstrating the view of Raavad. According to Rambam if bird X is foreign; both it and its mate in the nest in which it currently resides are disqualified, not knowing whether it was the foreign bird or its mate that was sacrificed as an *olah* or *ḥattat*.[[123]](#footnote-123)

Interestingly, Rambam’s point of view has one critical feature that, once recognized, makes it possible to prove a more general theorem. This theorem generalizes Rambam’s approach, albeit to only 1 nest not 7. Assume that 2\*K are originally in a nest which J birds join and L birds leave. The number of birds that flew into the nest (J) and the number of birds that left the nest (L) do not have to be equal. We know only J (the number of birds that flew in) and L (the number of birds that flew out), not which birds flew in and out. We also do not know if a bird that left belonged to the original nest or as one of the J that entered later. Similarly, we do not know if a bird that joined was a foreign bird or a bird that left previously returning and is now rejoining the nest. Rambam would require 2K + 2J birds to be sacrificed to fulfill the original obligation. Think of the process in two stages: first a known number of birds enter and leave, resulting in 2\*K – L + J birds currently residing in the nest.

***Theorem****:* Assume K, J, and L are defined as above and 2\*K – L + J birds are currently in the nest. If the owner adds L+J birds, then 2\*K – L + J + L + J = **2\*K + 2\*J birds correctly fulfill the original requirement**.[[124]](#footnote-124) [[125]](#footnote-125)

**Proving that the above formula works in a single nest in all cases:** Before the formal proof, first note that if J + L is equal to or exceeds 2\* K, we simply start over; too many birds have come and gone and there is no point in using the original nest. Informally, we assume all foreign birds are sacrificed the same way, but we do not know if they are *olot* or *ḥatta’ot*; as a result, we must disqualify twice the number of foreign birds. Since there are (at most) J foreign birds the owner of the nest must add J birds as their mates.[[126]](#footnote-126) We also replace the L birds that flew away restoring 2K birds, purchased by the owner, to the nest. We also do not know if a bird leaving was an original member of the nest or one of the foreign birds who had entered. If we knew the bird was a foreign bird, then we could simply reduce J by 1, reducing the number of birds that must be added by 2:

1. the bird we added for the bird that left that may have been from the original nest of 2\*K birds, and
2. the mate of the foreign bird.

 As we cannot know what occurred, we assume every bird that left was a part of the original nest and every bird that entered was a foreign bird, again the worst- case scenario. This argument provides both the intuition behind the theorem and an informal proof. A formal proof follows in the footnote below.[[127]](#footnote-127)

There is one major difficulty with Rambam’s position; the alternative proposed in the Mishnah that all 14 birds (or 10) in the last nest are valid is highly problematic. Since that nest may contain 3 foreign birds that position is difficult to reconcile with Rambam’s approach. Even given that Rambam rejects that option, it still requires a plausible hypothesis as to why it might be permitted. Perhaps, (unconvincingly in my opinion) the alternate opinion allows use of another’s birds in a *ḥovah* when the original owner is completely removed from the picture and would therefore be expected to relinquish ownership. In that case, the owner of the nest originally with 14 birds can take ownership and thereby when subsequently sacrificed, those birds are valid.

**Sub Section 5 – Summary Section 2**

Many who study *Kinnim* are unaware of the novel approaches of Rambam and Raavad. Rambam and Raavad both avoid several issues with the standard interpretation of the first 3 *mishnayot* in the second *perek*:

* the less than intuitive attribution of the loss of 2 birds from the nest from which a bird departs as opposed to the loss of one bird from each of the nests,
* the unavoidable imprecision of the *halakhic* rule, in Mishnah 2 of the 3rd *perek*,
* the seemingly overwhelming logic of the alternative opinion in Mishnah 3 of the 3rd *perek* is so compelling that it is more reasonable that it should have been the primary opinion, not (just) an alternative view.

However, each of the views of Raavad and Rambam also has their unique challenges. Raavad is challenged by

* by presuming a case of no prior consultation in the second *perek*, despite the implication by the opening Mishnah of the 3rd *perek* that only now, and not in previous *perakim*, do we deal with cases where sacrifice proceeded without consultation.

Rambam is challenged by

* the lack of a clear explanation of the alternate opinion in the 3rd Mishnah, in the second *perek*, and
* allowing sacrifice of all the birds as either *ḥatta’ot* or *olot* in the first *perek*, which receive no mention anywhere in the entire tractate.[[128]](#footnote-128)

The challenges to Raavad’s position were easiest to address. As well, Raavad’s innovations are technical; conceptually he is consistent with the standard interpretation.[[129]](#footnote-129) However, Rambam’s position is a radical departure from the standard interpretation. Both

* replacing implicit designation with a notion requiring that sacrifices have utility, and
* insistence on either ownership or precisely reciprocal benefit for the sacrifice to be valid.

This approach of Rambam upends the classical approach to the entire tractate.

Again, to summarize Rambam’s position:

* The assignment of a bird in a *ken* as an *olah* or *ḥattat* is based **only** on an initial specification by the owner at the time they are designated for sacrifice or by the specific bird’s actual sacrifice by the *Kohen*, excluding designation that results from the prior sacrifice of any other birds (i.e., implicit designation.)
* Having initially been brought as a *ḥovah*, sacrificing the entire *ken* as *olot* or as *ḥatta’ot* is not *a priori* excluded.
* There exists a strong preference for direct ownership of sacrificed birds even when that preference requires additional sacrifices that do not increase the number of valid birds.[[130]](#footnote-130)
* An entirely useless sacrifice is always prohibited; however, establishing clear ownership renders a sacrifice useful.
1. Pinḥas Kehati, *Mishnayot Mevuarot*, Vol.10, (Jerusalem, Israel 1977.) [↑](#footnote-ref-1)
2. Available on the web: https://d1qe4utlcyprt0.cloudfront.net/learning/UDror%20Ken%20Lah.pdf [↑](#footnote-ref-2)
3. Moshe Koppel, *Sefer Kinnim: A Mathematical Commentary on Tractate Kinnin* (Jerusalem, Israel 1998.) [↑](#footnote-ref-3)
4. The three works noted as well as other contemporary works largely follow the commentary of the Rosh and R. Ovadiyah of Bartenura. [↑](#footnote-ref-4)
5. This monograph purposely avoids mathematical notation unless unavoidable, and only uses such notation where it adds precision that would be difficult to express otherwise. My preference is to concentrate on classical mathematical reasoning. I would like to believe that this approach is more consistent with the way *tannaim* and *rishonim* may have thought. Even the one short formal proof, which uses modern mathematics does so largely for structure not content. Its intuition is given in the text and the formalities are contained in a footnote. [↑](#footnote-ref-5)
6. *Kinnim* are brought in several situations but most commonly by women after childbirth. [↑](#footnote-ref-6)
7. Where the blood of the *korban* is sprinkled, above or below a line around the middle of the *mizbayaḥ* called the *ḥut ha-sikrah* is one of the things that differentiate the sacrifice of *ḥatta’ot* and *olot.* In the instance of a bird sacrifice, the *olot* are sacrificed above and the *ḥatta’ot* below the *ḥut ha-sikrah.* [↑](#footnote-ref-7)
8. This can occur if the *olot* in a *ḥovah* were already sacrificed. [↑](#footnote-ref-8)
9. This is explained clearly at the beginning of the tractate. [↑](#footnote-ref-9)
10. In addition to this introduction, studying *masekhet* *Kinnin* in its entirety, as well as chapters 8 and 9 of Rambam’s *Pesulei Ha-Mikdashim* will be very helpful to understand the monograph more fully. [↑](#footnote-ref-10)
11. In defense of Raavad and others who assumes no consultation already in the second chapter, they will read the phrase at the beginning of the third chapter as connected to a similar case in the first chapter, effectively rendering the second chapter as if it were a digression between the first and third chapter. While the first and third chapters largely discuss the **complete** intermingling of nests, the second chapter discusses individual birds that fly between nests, providing somewhat increased credibility to Raavad’s position. Raavad entertains this position while discussing giving credence to the standard interpretation as well. [↑](#footnote-ref-11)
12. I know of no instance where this rule is disputed. In those (very few) instances where a commentator appears to disagree, I believe it is more than likely that while the *halakhic* rule is accepted, it is incorrectly applied or computed. [↑](#footnote-ref-12)
13. If the two birds in the smaller *ken* were not sacrificed identically but instead one was sacrificed as an as an *olah* and the other as a *ḥattat*, both *kinnim* are sacrificed correctly and all 6 birds would have been sacrificed correctly, clearly not the worst-case. [↑](#footnote-ref-13)
14. Replacing *ḥatta’ot* with *olot* provides an equivalent example. [↑](#footnote-ref-14)
15. This case of unequal sized nests that are intermingled generalizes easily. If 2 undesignated *kinnin* of 2\*N and 2\*M birds are intermingled where N < M, then with consultation 2\*N birds can be sacrificed. However, without consultation, after the fact, the owners get credit for 2\*M birds. This rule, which I believe is accepted without dispute, is stated explicitly by Rambam, in Mishnah Torah *Pesulai Ha-Mikdashim* 8:6. This is a simple, special case of the term *merubah* that we will address more generally. [↑](#footnote-ref-15)
16. See reference 19 and 20. [↑](#footnote-ref-16)
17. [↑](#footnote-ref-17)
18. *Pesulai Ha-Mikdashim* 8:3, 4, and 6. *Rambam Le-am*, Mossad Ha-rav Kook, *Pesulei Ha-Mikdashim* 8:3, (Jerusalem, Israel 1963.) [↑](#footnote-ref-18)
19. R. Yehoshua ben Aharon Heller, Av Beit Din of Telz, in his commentary *Mei’aiyanei Yehoshua* on the Mishnah, provides resolute support for Rambam’s approach to the second chapter. However, as Rambam only addressed his innovative approach to the first chapter in his halachic treatise – Mishnah Torah and never raised these issues in his *Peirush Ha-Mishnayot* , Rabbi Heller never addressed these issues either. (See next footnote as well.) [↑](#footnote-ref-19)
20. The *halakhic* ruling given in the Mishnah is described by various commentators as only a useful approximation. Other commentators explain that the Mishnah is stating a *halakha* that while normally correct, invalidates certain sacrifices unnecessarily to articulate a rule that could be more easily understood and followed. Some go so far as to consider the halachic ruling a *gezairah*. All major commentators who follow the standard interpretation recognize the imprecision. [↑](#footnote-ref-20)
21. Whenever lacking any indication to the contrary, Rambam’s Mishnah Torah and his *Peirush Ha-Mishnayot* are treated as consistent. Therefore, the ninth chapter of *Pesulei Ha-Mikdashim* in Mishnah Torah and the Rambam’s explanation of the second chapter in *Kinnim* in his *Peirush Ha-Mishnayot* are assumed identical. In fact, rather than being repetitive in explaining parts of the ninth chapter of *Pesulei Ha-Mikdashim*, R. Kapach refers readers to his commentary in *Peirush Ha-Mishnayot*. However, Rambam’s innovations in the eighth chapter of *Pesulei Ha-Mikdashim* are introduced by the phrase “*ve-yiraeh li*,” which is normally assumed to indicate that Rambam did not have a firm source for his point of view. Not surprisingly, these innovative approaches that lack a firm source do not appear in his *Peirush Ha-Mishnayot*. Thus,when discussing Rambam’s views on the first *perek* of *Kinnin*, his point of view in the eighth chapter of *Pesulei Ha-Mikdashim* in *Mishnah Torah* is presumed to represent Rambam’s final point of view related to his understanding of the first *perek* in *Kinnim.* [↑](#footnote-ref-21)
22. However, as will be seen only Raavad’s approach matches precisely the exact circumstances described by *Kinnim* (2:3). [↑](#footnote-ref-22)
23. To accommodate those with an unnatural fear of mathematics, the proofs appear only at the end of the section on Rambam and Raavad’s approach to the first two *perakim* and avoid excessive formulism.  The informal proof provided is close to the way classical commentaries on *Kinnim* expressed themselves and how *tannaim*likely reasoned.  While the statement of the theorem is important, skipping the formal proof will not detract from one’s understanding. [↑](#footnote-ref-23)
24. Philip Reiss, “A mathematical proof of *Kinnim* 3:2,” The Torah u-Madda Journal 9 (2000) 58-75. [↑](#footnote-ref-24)
25. The Torah u-Madda Journal 10 (2001) 189-192, where I used a bin-packing model. Despite its modernity, bin packing provides a precise formulation of *Kinnim* 3:2, where an arbitrary number of intermingled sacrifices are brought without consultation. I lengthened and sharpened that brief note in an article in Ḥakirah 28, Summer 2020. The article was further expanded in this monograph [↑](#footnote-ref-25)
26. Meaning: “and it [the obligation for the purchase of additional birds (to sacrifice)] is divided between them [the women who brought the sacrifices.]” [↑](#footnote-ref-26)
27. Note that the principles of (even overwhelming) majority do not apply; the Mishnah does not differentiate based on the size of N. [↑](#footnote-ref-27)
28. *Pesulai Ha-Mikdashim* 8: 3, 4. [↑](#footnote-ref-28)
29. In the eight *perek* of *Pesulai Ha-Mikdashim.* [↑](#footnote-ref-29)
30. In the first chapter where consultation is assumed, cases where more than two nests of assorted sizes are completely intermingled do not add more complexity. After consultation, only the number of birds in the smallest nest may be sacrificed. However, the cases dealt with in the third chapter where there is no consultation, the *halakhic* (and mathematical) complexity increases dramatically as Dr. Reiss’s paper demonstrates and will be clear in the discussion of the term – m*erubah* in the following chapter. [↑](#footnote-ref-30)
31. There may be a ***halakhic*** benefit, a topic we return to later in the paper. [↑](#footnote-ref-31)
32. As previously noted, if this sacrifice was performed without consultation, Rambam’s ruling would be consistent with the normally assumed outcome of a sacrifice performed without consultation. (As noted above, when sacrifice is not guided by prior consultation, the guiding principle is to construct the worst-case, invalidating as many birds as possible, with the remaining birds considered to have been sacrificed correctly.) The phrase “*ve-yiraheh li”* which implies a novel explanation not found directly in the Mishnah, would not make any sense. Consequently, according to Rambam in this case, it appears that such a sacrifice (of all the birds identically) could be considered an option, even with prior consultation. [↑](#footnote-ref-32)
33. In *Pesulai Ha-Mikdashim* (8:6) Rambam writes: אִם עָשָׂה הַכּל לְמַעְלָה אוֹ עָשָׂה הַכּל לְמַטָּה מֶחֱצָה פָּסוּל וּמֶחֱצָה כָּשֵׁר . - If he had offered all above, or had offered all below, half are invalid and half are valid. [↑](#footnote-ref-33)
34. Both the lack of the phrase “*ve-yiraheh li”* and the use of the verb in the past sense, *“asah*.*”* [↑](#footnote-ref-34)
35. As will be demonstrated later in this chapter, the women do not join equally in bringing the 10 additional sacrifices, but the owners of the smaller and larger nest bring 3 and 7 *ḥatta’ot*, respectively. [↑](#footnote-ref-35)
36. When performed without consultation, the guiding principle is to construct the worst-case, invalidating as many birds as possible, with the remaining birds considered to have been sacrificed correctly. Bringing all the birds as either *olot* or *ḥatta’ot,* thus results in exactly half being valid. [↑](#footnote-ref-36)
37. R. Yehoshua Heller’s commentary on Rambam *Peirush Ha-Mishnayot,* *Kinnim*, entitled *Mei’einai Yehoshua*, is found in most standard editions of the Talmud or *Mishnayot*. [↑](#footnote-ref-37)
38. This principle will be discussed several times in this chapter. It will be illustrated, and its use delimited in some cases. [↑](#footnote-ref-38)
39. A rationale for this position has several possibilities only one is suggested here. [↑](#footnote-ref-39)
40. Rambam is explicit on this point in *Pesulei Ha-Mi*k*dashim* (8:8) that refers to *Pesulei Ha-Mikdashim* (5:11). He states: “…nests are designated only when taken by their owners or when they are sacrificed by the *Kohen*, as we explained.” This statement made in the *gemara* (specific reference) as well, appears to be taken literally by Rambam. See footnote 48. [↑](#footnote-ref-40)
41. Demonstrating that *Mishna* 3 is just an application of the principles in the first two *mishniot* in the *perek* in detail is tedious. For Rambam and Raavad, the proofs of their positions demonstrate this dependence of the third *Mishnah* on the first two in detail. For the standard interpretation, either R. Ovadiah of Bartenura or R. Kehati’s explanation makes this dependence clear; the extent to which the Mishnah does not follow the principles in the first two precisely is viewed as problematic by other commentators. All this will be discussed in detail in the body of the monograph. [↑](#footnote-ref-41)
42. Why there must be two separate pairs of birds sacrificed, as opposed to just 2 birds added to Rachel’s nest, is explained in footnote 38. [↑](#footnote-ref-42)
43. Leah would sacrifice 3 *ḥatta’ot* in conjunction with Rachel; Leah getting credit for 2 and Rachel for 1. Rachel would separately sacrifice 2 *olot* and one *ḥattat*, and Leah would bring 2 additional birds as *olot*. Such an option is disallowed. [↑](#footnote-ref-43)
44. Given a choice between Rachel’s penalty of 2 birds or a penalty of one bird to Rachel and 2 birds to Leah, the former option is chosen. Of course, the situation could get worse if Rachel does not carefully note how the added bird is sacrificed. Were Rachel to add one bird and then sacrifice all four without regard to how the new bird is sacrificed, then Leah would be restricted from sacrificing any of the 5 birds in her nest, since her nest now contains an implicitly designated bird, that may be either an *olah* or a *ḥattat.* [↑](#footnote-ref-44)
45. The probability that Rachel’s bird is one of the 4 sacrificed is 80% -- each of the five birds has an equal 20% probability of being left out. The precise rationale behind this ruling is not given and as stated is not our focus. Via some mechanism, Rachel may have gifted one of her birds to Leah or an act of the *Beit Din* gives the bird to Leah, perhaps to penalize Rachel for allowing her bird to escape. In any case, the principle is clear -- Rachel loses two birds. [↑](#footnote-ref-45)
46. According /to both reasons for disqualification, Rachel cannot form a nest of 4 birds and then sacrifice the 4 birds; she must first mark the original birds to guarantee that they are sacrificed differently. If she were to sacrifice her original 2 remaining birds identically, as say *olot*, then she again has created a *ḥattat* in Leah’s nest, according to the first reason, or 3 birds from her original nest may have sacrificed identically, according to the second reason. As noted, the 2 birds from the original nest and the 2 new ones must be treated as two separate nests, with each pair sacrificed one as an *olah* and one as a *ḥattat*. [↑](#footnote-ref-46)
47. Some of these variants are necessitated by the third Mishnah*.* [↑](#footnote-ref-47)
48. What may have driven Raavad to this explanation is covered at the end of the section. As noted, Raavad also considers the standard interpretation. [↑](#footnote-ref-48)
49. In a case without consultation, implicit designation is not relevant; we need only establish the worst-case or cases to determine what is nonetheless valid. [↑](#footnote-ref-49)
50. As we will explain after introducing the second problem, the escapee is the one chosen to be disqualified; its disqualification is both sensible and fair. Note as well, that we do not have to identify the bird we are disqualifying; we need only define the number of birds that might be disqualified. If a sacrifice is done without consultation, what must be determined is the number of pairs that still need to be sacrificed. Determining exactly which birds in the original nest are valid is not required; we need know only the maximum number of birds that were sacrificed incorrectly. Knowing only that number, we know how many additional birds must be sacrificed. [↑](#footnote-ref-50)
51. Our concern is not identifying which bird(s) are disqualified, but only the number of such birds. [↑](#footnote-ref-51)
52. Although both birds that were disqualified came from Leah’s nest, since Leah started with 4 birds and now has 6, one of the two birds she loses represents Rachel’s bird, which had flown into her nest. Rachel replaced that bird into her nest. As such, in reality, both Rachel and Leah added a bird. and Leah added a bird. [↑](#footnote-ref-52)
53. In, for example, *Pesulei Ha-Mikdashim* 8:3. [↑](#footnote-ref-53)
54. Rambam uses the phrase the phrase “*ve-yiraeh li*,”over 150 times in Mishneh Torah. Raavad rarely disagrees, though about half the time Raavad claims a source for the position exists. Though on rare occasion Raavad disagrees, only on these 2 occasions is his language this scathing. He assumes that bringing half of a nest as say *olot,* implicitly designates the remainder of the as *ḥatta’ot.* [↑](#footnote-ref-54)
55. Raavad assumes that the straightforward meaning of the *halakhic* ruling is that Leah and Rachel each lose, and each must bring one additional bird versus the standard interpretation’s reading that Rachel adds 2 birds, a reading that Raavad probably considered forced, particularly in the third Mishnah. Specifically, according to Raavad, the language implies that the bird that flew into Leah’s nest and its mate which had originally been in Leah’s nest are disqualified, an interpretation that is matched by Raavad’s approach. Although it appears as if both birds came from Leah’s nest, one – the one that flew in from Rachel’s nest – is replaced by Rachel, resulting in each woman losing and replacing one bird. [↑](#footnote-ref-55)
56. Raavad’s commentary on the third Mishnah of the chapter definitively formulates his acceptance of implicit differentiation as well. [↑](#footnote-ref-56)
57. The second *perek* in *kinnim* is normally assumed to involve prior consultation and we assume that Rambam in the 9th chapter of *Pesulei Ha-Mikdashim* where he addresses the second *perek* in *Kinnim* also agrees. As well, Rambam never states otherwise, although that is not a conclusive proof. As we observed earlier, in the eighth chapter of *Pesulei Ha-Mikdashim* where Rambam addresses both the first and third chapter of *masekhet Kinnim*, we hypothesized that it is highly likely that in part of the 6th *halakha* in the 8th chapter*,* Rambam, although he does not state it explicitly, is addressing a case of no prior consultation.

That Rambam assumes prior consultation is not universally accepted. The view that there was no prior consultation is maintained by R. Y. Heller. R. Heller’s disagreement involves another issue that is addressed subsequently in this monograph. See footnotes 49 and 50 (change to correct footnotes). Despite that position, he supports some of the major principles developed in this paper to address Rambam’s approach to the second chapter.

 [↑](#footnote-ref-57)
58. Yet worse, we may know only that Rachel had brought her sacrifices, but do not know what exactly what was sacrificed where. Then the bird that entered Leah’s nest is designated but we do not know as what. Assuming implicit designation, it stands to reason that Leah cannot sacrifice any of the birds in her nest. [↑](#footnote-ref-58)
59. . כֵּיצַד. פָּרַח גּוֹזָל מִן הַסָּתוּם לַעֲשָׂרָה עוֹפוֹת סְתוּמוֹת. אִם עָשָׂה חֲמִשָּׁה לְמַטָּה וְשִׁשָּׁה לְמַעְלָה. הֲרֵי חָמֵשׁ עוֹלוֹת כְּשֵׁרוֹת מֵהַשִּׁשָּׁה שֶׁל מַעְלָה וְאַרְבַּע חַטָּאוֹת כְּשֵׁרוֹת מֵהַחֲמִשָּׁה עוֹפוֹת שֶׁנַּעֲשׂוּ לְמַטָּה. שֶׁאֲנִי אוֹמֵר שֶׁמָּא הַגּוֹזָל הַפּוֹרֵחַ הוּא אֶחָד מֵחֲמִשָּׁה שֶׁל מַטָּה. וְכֵן אִם עָשָׂה מֵהֶם שִׁשָּׁה לְמַטָּה וַחֲמִשָּׁה לְמַעְלָה נִמְצֵאת הַכָּשֵׁר חָמֵשׁ חַטָּאוֹת וְאַרְבַּע עוֹלוֹת. שֶׁאֲנִי אוֹמֵר שֶׁמָּא הַגּוֹזָל מֵחֲמִשָּׁה שֶׁל מַעְלָה. נִמְצֵאת הַכָּשֵׁר מֵהָעֲשָׂרָה תִּשְׁעָה הֲרֵי פָּסַל אֶחָד: What is implied? A dove from a group of unspecified doves flies to an unspecified group of ten doves. If [the priest] offered five on the lower portion [of the altar] and six on the upper portion, five of the burnt-offerings from the six offered on the upper portion are acceptable and four of the sin-offerings from the five offered on the lower portion are acceptable. [The rationale is that] one says: "Perhaps the dove that flew is one of the five offered on the lower portion." [↑](#footnote-ref-59)
60. Rambam is also not concerned if the sacrifice of the escapee from Rachel’s nest is the 3rd of 4 birds from that nest that are sacrificed similarly. [↑](#footnote-ref-60)
61. Three birds from Rachel’s original nest must have yielded two *olot* or two *ḥatta’ot*. Whichever bird was not paired is then paired with the new bird. Of course, the Mishnah presumes that we may not know whether two *olot* or two *ḥatta’ot* were sacrificed from Rachel’s original nest. [↑](#footnote-ref-61)
62. Without consultation, all sacrifices except the escapee are valid. In Rambam’s case of a *ken stumah* of 10 birds into which a foreign bird flew, an additional bird must be sacrificed as the group of 5 (versus six) were sacrificed, resulting in 5 valid sacrifices as *olot* and *hatta’ot.* [↑](#footnote-ref-62)
63. This scenario assumes we know that Rachel sacrificed her entire nest, but we are unaware whether 2 *olot or* 2 *hatta’ot came* from the 3 birds from her original nest. In that scenario, with prior consultation Leah can make no sacrifice at all. Any bird she sacrifices may be the escapee and the third bird brought as an *olah* or *ḥattat.* However, assuming we observed Rachel’s sacrifice carefully, and we know precisely how the 4th bird added was sacrificed. We then know that two birds from Rachel’s original nest were sacrificed differently. If the new bird was an *olah,* then two birds from the original nest were *hatta’ot*; if the new bird was a *ḥattat*, then two birds from the original nest were *olot.* In both cases, Leah’s nest can only sacrifice birds that are similarly sacrificed to what the new added bird in Rachel’s nest was sacrificed. [↑](#footnote-ref-63)
64. *Pesulei Ha-Mikdashim* 5:11 and 8:8:

שֶׁאֵין הַקִּנִּין מִתְפָּרְשׁוֹת אֶלָּא בִּלְקִיחַת הַבְּעָלִים אוֹ בַּעֲשִׂיַּת כֹּהֵן:

שֶׁאֵין הַקִּינִין מִתְפָּרְשִׁין אֶלָּא בִּלְקִיחַת הַבְּעָלִים אוֹ בַּעֲשִׂיַּת הַכֹּהֵן כְּמוֹ שֶׁבֵּאַרְנוּ:

See the translation of the *gemara* in *Keritot* 28a in the next footnote, which serves as a translation of the above two statements of Rambam as well. [↑](#footnote-ref-64)
65. Rambam’s i halachic determination apparently originates from the *gemara* in *Keritot* 28a which states: אמר רב חסדא אין הקינין מתפרשות אלא אי בלקיחת בעלים אי בעשיית כהן

**Rav Ḥisda says: Nests,** i.e., pairs of birds, **are not designated,** half as a burnt offerings and half as a sin offering, **except** in the following manner: **Either** by the **owner** at the time **they are purchased (**or presented for sacrifice**,);** if the owner did not designate the birds at that stage, they become designated **when** the **priest sacrifices them.** This translation (in bold lettering) (and the accompanying explanation not bolded) has support from both R. Yaacov Ettlinger in the *Arukh LaNe*r in his commentary on *Keritot* and by R. Meir Simḥah of Divinsk in his commentary on Rambam.

The phrase the *gemara* uses “designation when sacrificed” may be in dispute. For Rambam it should be read literally, only the specific bird sacrificed becomes designated. While those who maintain implicit designation probably interpret the *gemara* as also including some form of implicit designation of the other bird in the pair, by the sacrifice of the first bird of the pair [↑](#footnote-ref-65)
66. Rambam states in *Pesulei Ha-Mikdashim* 8:3: לְפִיכָךְ אִם הָיְתָה הַחוֹבָה שְׁתַּיִם בְּחַטָּאת. חֲצִי הַחוֹבָה כָּשֵׁר וְחֶצְיָהּ פָּסוּל. וְיֵרָאֶה לִי שֶׁהוּא עוֹשֶׂה כֻּלָּן לְמַטָּן כְּמַעֲשֵׂה חַטָּאת:. If a *ḥovah* that is twice the size of a nest of designated *ḥatta’ot are intermingled,* half of the *ḥovah (****the*** *hatt’ot)* is valid and half is not validand it appears to me, that all the birds in the entire (combined) nest may be brought as *ḥatta’ot.*

The rulings of the standard approach, Raavad, and Rambam were discussed earlier, on pages xx-yy. Clearly, the standard and Raavad’s approaches comport precisely with the wording of the Mishna, חֲצִי הַחוֹבָה כָּשֵׁר וְחֶצְיָהּ פָּסוּל whereas the ruling of Rambam conflicts with the text of the Mishna.

To concretize Rambam’s statement, assume a *ḥovah* of 10 birds intermingled with 5 designated *ḥatta’ot.* The standard and Raavad’s approaches would only permit sacrifice of 5 *ḥatta’ot*; a sacrifice of a sixth *ḥattat* is disallowed since all 6 birds might come from the *ḥovah*. According to some commentators this limitation may result from applying the principle of implicit designation, and according to others it may result from the limitation that half of a *ḥovah* must be sacrificed as *ḥatta’ot* and half as *olot*. Rambam’s suggestion that all 15 birds be sacrificed as *ḥatta’ot* conflicts with both reasons,either implicit designation, or that only half a *ḥovah* can be sacrificed as *ḥatta’ot* (or *olot.*) that would limit sacrifice to half the birds in the *ḥovah* Rambam’s approach allows 10 valid sacrifices 5 designated *ḥatta’ot* and 5 *ḥatta’ot* from the *ḥovah.* [↑](#footnote-ref-66)
67. R. Heller makes an almost identical argument in his introduction to the second chapter. He argues that one woman cannot receive credit for a bird that another woman brought or sacrificed. It appears that one woman cannot gift that right to another either. Other commentators do not raise this issue, of not being allowed to receive non-reciprocal benefit, anywhere in their approaches to the entire tractate. Those commentators must assume that in this case everyone can and must relinquish or gift their rights, or the bird is assigned, or gifted by the power of the *Beit Din*. [↑](#footnote-ref-67)
68. R. Hellers novel suggestion that Rambam does not allow Leah to receive credit from Rachel’s bird goes one step further. R. Hellers opinion is that Leah not only is unable to receive credit for the bird that she does not own but with prior consultation would not be allowed to sacrifice such a bird. Consequently, Leah would not even be permitted to sacrifice any birds in the nest if the *Kohen* was consulted in advance. As a result, he asserts that Rambam must assume this case involves no prior consultation; a presumption **that is not necessary and doesn’t seem consistent with Rambam’s language.** Rambam’s approach could potentially apply even with prior consultation, if Rambam does not accept R. Hellers opinion that it is not even permitted to sacrifice a bird from another nest.Nonetheless, Rav Hellers fundamental position, that ownership is a prerequisite for receiving credit for sacrifices has other sources of support, as we will see. [↑](#footnote-ref-68)
69. See arguments for assumed consultation on pages xx-yy. [↑](#footnote-ref-69)
70. Rambam disagrees with Raavad on whether there was prior consultation and with the standard interpretation which asserts that Rachel loses two birds. [↑](#footnote-ref-70)
71. To the best of my knowledge, the notion of implicit designation is not found in the writings of either the *ge’onim* or Rif, the prior literature with which Rambam was familiar. Implicit designation appears to have flourished in the time of R. Zeraḥyah Ha’Levi and Raavad and then in many subsequent commentators. [↑](#footnote-ref-71)
72. Contrast Rambam’s formulation with that of *Kinnin* 2:2:

כֵּיצַד. שְׁתֵּי נָשִׁים, לָזוֹ שְׁתֵּי קִנִּים וְלָזוֹ שְׁתֵּי קִנִּים, פָּרַח מִזּוֹ לָזוֹ, פּוֹסֵל אֶחָד בַּהֲלִיכָתוֹ. חָזַר, פּוֹסֵל אֶחָד בַּחֲזִירָתוֹ. פָּרַח וְחָזַר, פָּרַח וְחָזַר, לֹא הִפְסִיד כְּלוּם, שֶׁאֲפִלּוּ הֵן מְעֹרָבוֹת, אֵין פָּחוֹת מִשְּׁתָּיִם:

How is this so? Two women, this one has two pairs and this one has two pairs, and one bird flies from the [pairs of] one [woman] to the other [woman's pair], then it disqualifies one by its escape. If a bird returned, it disqualifies yet another by its return. If it flew away again and then returned, and again flew away and returned, no further loss is incurred, since even if they had all become mixed together, no fewer than two [pairs would still be valid].

Rambam Pesulai Ha-Mikdashin 9:3,4 states:

אַרְבָּעָה עוֹפוֹת סְתוּמוֹת וְאַרְבָּעָה עוֹפוֹת שְׁנִיּוֹת סְתוּמוֹת. פָּרַח אֶחָד מִן הָרִאשׁוֹנוֹת לַשְּׁנִיּוֹת פָּסַל אֶחָד מִן הַשְּׁנִיּוֹת. אַחַר שֶׁנִּתְעָרְבוּ חָזַר אֶחָד מִן הַשְּׁנִיּוֹת וּפָרַח לָרִאשׁוֹנוֹת פָּסַל אֶחָד מִן הָרִאשׁוֹנוֹת. וְנִמְצָא הַכָּשֵׁר מִן הָרִאשׁוֹנוֹת שְׁתַּיִם בִּלְבַד:

חָזַר אֶחָד וּפָרַח מִן הָרִאשׁוֹנוֹת לַשְּׁנִיּוֹת אֲפִלּוּ כָּל הַיּוֹם אֵינוֹ מוֹסִיף לְהַפְסִיד יֶתֶר עַל זֶה שֶׁאֲפִלּוּ הֵן מְעוֹרָבוֹת כֻּלָּן זוֹ בָּזוֹ מֶחֱצָה כָּשֵׁר וּמֶחֱצָה פָּסוּל כְּמוֹ שֶׁבֵּאַרְנוּ:

Note that even though after 2 flights the result matches the result after 2\*N flights, Rambam chooses to address the cases separately. [↑](#footnote-ref-72)
73. Note that both the Mishnah and Rambam are dealing specifically with 2 equal sized nests of **4 birds** each. Similar, but different rulings can easily be derived for larger nests of size 2\*N. [↑](#footnote-ref-73)
74. Note the one bird Rachel lost was replaced potentially by Leah’s bird. Similarly, Leah may still have Rachel’s bird that entered her nest. In both cases 3 of the 4 birds present after only 2 birds flying between nests belong in their original nest. By sacrificing all the birds each woman sacrifices at least one of her original birds as a *ḥattat* and one as an *olah*. The third bird that came from her original nest may have been sacrificed as a *ḥattat* or as an *olah*, something we cannot determine. Hence, each woman must bring an additional *ken* of two birds. [↑](#footnote-ref-74)
75. The value of combining them is that the women will be able to receive credit for sacrificing the birds that they own. Without combining the nests, the birds that one woman sacrifices could belong entirely to the other woman. Combining the nests and sacrificing all the birds allows each woman to be credited only for birds she originally owned. [↑](#footnote-ref-75)
76. According to Rambam we assume all the birds in both nests are sacrificed, as per the previous footnote. [↑](#footnote-ref-76)
77. Evaluating an incisive comment by R. Shabtai Rappaport contained in his approbation to Prof. Koppel’s book inspired this approach. Assuming the position of the standard interpretation that Prof. Koppel was following, R. Rappaport noted that initial designation of a bird by the owner equates with implicit designation by the sacrifice of a bird’s theoretical mate. The difference is merely the method of designation. While agreeing with R. Rappaport’s observation with respect to the standard interpretation, it is clearly not a logical deduction that implicit designation is derivable from original verbal designation. As hypothesized in this monograph, Rambam does not agree with this conclusion whatsoever. [↑](#footnote-ref-77)
78. See Footnote 60. [↑](#footnote-ref-78)
79. To summarize, there are at least two ways to formulate Rambam’s position:

Rambam completely rejects implicit designation and uses only a disqualification based on bringing a sacrifice with no value.

Rambam limits implicit designation to a case where the intent is to fulfill requirements for the sacrifice of an undesignated *ḥovah*. When that is not the purpose, there is no implicit designation. (One can change their mind and bring only *olot* but would obviously be left with the obligation to bring *ḥatta’ot* to complete their sacrifice of a *ḥovah*.)

The first alternative, one that I prefer, was explained in detail above and will be restated in the summary. [↑](#footnote-ref-79)
80. It is possible that in this case and others Rambam may disallow sharing since a better alternative is available or because the benefit is not shared equally. [↑](#footnote-ref-80)
81. Note that Rambam’s language does not mention combining nests, just that 2 birds are valid. See Rambam’s precise language in footnote 72. [↑](#footnote-ref-81)
82. Yet more troubling is why this option is only raised in the 3rd *perek* where no prior consultation is assumed. To address why Rambam’s suggestion of sacrificing all the birds as one type does not appear in first *perek*, one might speculate that Rambam assumed that the *mishnayot* in the first *perek* restricted themselves to only the sacrifice of *ḥovot*, an equal number of *ḥatta’ot* and *olot*; the suggestions Rambam introduces sacrifice all the birds as *ḥatta’ot* or *olot*. [↑](#footnote-ref-82)
83. According to Rambam, in the case of a nest of *olot* and a *ḥovah* intermingling, it is conceivable that a *Kohen* could suggest all the birds be sacrificed as *olot*. In a case of two *ḥovot* that were intermingled, a *Kohen* suggesting bringing only *olot* is not even remotely likely. [↑](#footnote-ref-83)
84. The nests are referred to as the first through the seventh nest counting from the smallest to the largest. [↑](#footnote-ref-84)
85. One minor question for which again I cannot even speculate, is why Rambam who normally counts roundtrips, chose once in *Peirush Ha-Mishnayot* to count one-way trips, instead. [↑](#footnote-ref-85)
86. According to the standard interpretation, the nest from which a bird flew, loses a bird in addition to the escapee; otherwise, if the owner of the nest sacrificed the escapee’s pair, the escapee would become a designated bird. This would limit the sacrifices possible by the owner of the nest into which the escapee flew. The first and last nests have only one escapee, from the 1st to 2nd nest and from the 7th to 6th nest. as such they only lose one bird (in addition to the escapee.) The intermediate nests lose 4 birds. For example, the 5th nest has an escapee to both the 6th  nest on the way forward, and 4th nest on the way back and each escapee “costs” them one additional bird for a total of 4 each round trip. [↑](#footnote-ref-86)
87. Note that in each of the six flights, the birds fly sequentially from nest to adjacent nest; a bird leaves from a nest only after a bird has first arrived at that nest. An alternative case where all flights occur simultaneously within each of the six trips is not considered. See footnote xx for a consequence of such a case. [↑](#footnote-ref-87)
88. This assumption is not critical to any of the interpretations and is explicitly rejected by Raavad. Raavad states that all nests participate in each of the three rounds of flights. As will be shown in the construction proving the correctness of Raavad’s interpretation, whether birds from nests containing only invalid birds fly or not does not impact the final *halakhic* ruling. Rambam’s assumption as to whether nests without valid sacrifices remain dormant or continue to fly is not entirely clear from his commentary. [↑](#footnote-ref-88)
89. The opinion of R. Ovadiyah of Bartenura and others. [↑](#footnote-ref-89)
90. The opinion of R. Yisroel Liphshitz, the author of *Tiferet Yisroel*, and others. [↑](#footnote-ref-90)
91. As noted, the alternative opinion concerning more valid birds in the last nest is disputed; some argue for all 14 birds being able to be sacrificed and some support only 10 valid birds. The logic for both opinions would seem to rely on the fact that since no other nest can sacrifice any birds, there is no reason to restrict sacrifice in the largest nest. Even if sacrifice of a bird implicitly designates a bird on one of the smaller nests, there is no reason for concern, since no sacrifice of a bird from a smaller nest will occur. As will be explained in the following paragraphs that situation occurs in other cases without that alternative being raised, another challenge to the standard interpretation. [↑](#footnote-ref-91)
92. And perhaps pen and paper to help keep track of 58 birds in 7 nests. [↑](#footnote-ref-92)
93. Raavad’s approach does not lend itself to a fundamentally more insightful general theorem. [↑](#footnote-ref-93)
94. See footnote 86. [↑](#footnote-ref-94)
95. Instead of (0,0,2,4,6,8,12) valid birds in the 7 nests, the Mishnah should have had (0,2,2,4,6,8,12) valid birds. [↑](#footnote-ref-95)
96. See Kehati’s explanation of *Kinnin* (2:3). [↑](#footnote-ref-96)
97. Again, one would wonder why the alternate opinion of Bartenura is not raised immediately in relation to the first and second nests as is outlined 3 paragraphs above. Troubling as well, the alternate opinion appears so logical under the standard interpretation; perhaps again, the primary opinion is the result of the desire for a simple rule. [↑](#footnote-ref-97)
98. The suggestion of the *yesh omrim* permitting all 14 birds to be sacrificed, appears very attractive. Perhaps, one can speculate that those who like R. Ovadya mi’Bartenura allow only 10 birds to be sacrificed from the 7th nest at the end, maintain that once birds are declared invalid, they cannot be revalidated. [↑](#footnote-ref-98)
99. Both Rambam who as argued does not maintain implicit designation, particularly across nests, and Raavad who considers the case not to have had prior consultation that would have disqualified sacrifices because of implicit designation, will have to find other bases for disqualification, as will be demonstrated as we unpack their positions. [↑](#footnote-ref-99)
100. A bird flies from the 1st nest to the 2nd nest and the 1st nest receives one bird from the 2nd nest. A bird also flies to the 7th nest from the 6th nest and the 7th nest sends a bird back to the 6th nest. Thus, only one flight leaves from each of the two endpoint nests. [↑](#footnote-ref-100)
101. For example, the 5th nest receives a bird from the 4th nest and a bird escapes from the 5th nest to the 6th nest. On the return trip a bird flies into the 5th nest from the 6th nest and from the 5th nest to the 4th. As such, birds fly from the intermediate nests twice. [↑](#footnote-ref-101)
102. In the case of Rambam it turns out that it does not matter whether one assumes prior consultation or not. [↑](#footnote-ref-102)
103. *Kinnim* (3:2) is studied in detail in the next section. [↑](#footnote-ref-103)
104. One can demonstrate the worst-case either by a formal proof without actual demonstration, or by an actual demonstration; in this case we chose the latter. A general construction, versus a formal proof, is also much more likely to be the way Raavad conceived of the Mishnah. For those mathematically adept, one could generalize the case in the Mishnah from (2\*1=) 2 through (2\*7=) 14 birds to 2\*1 through 2\*K birds, where K (the number of nests) is odd with (K-1)/2 round trips, to create a theorem. While this creates work mathematically, it adds no insight into the *halakhot* of *kinnin*. [↑](#footnote-ref-104)
105. Raavad uses only this one basis for disqualification throughout his argument. A bird is sacrificed incorrectly if its sacrifice results in more than half the birds in its **original** nest having been sacrificed as *ḥatta’ot* or as *olot*. [↑](#footnote-ref-105)
106. If as we will see in the actual construction of Raavad’s worse case, birds fly at most once. In that case, there are exactly 12 birds outside their original nest [↑](#footnote-ref-106)
107. We will construct a scenario that disqualifies 12 birds. If we reverse *ḥatta’ot* and *olot* in that scenario, we disqualify 12 more birds. Since we do not know which scenario occurred, all 24 birds are disqualified. [↑](#footnote-ref-107)
108. Understanding the intuition behind the construction of a worst-case is important but strictly speaking unnecessary. The construction itself is what proves the assertion. [↑](#footnote-ref-108)
109. Foreign birds can only be in nests adjacent to their original nest, since they flew only once. Adjacent nests always have an alternate bias. [↑](#footnote-ref-109)
110. This avoids 2 members outside their nest being mates which reduces the number of disqualifications by 2. [↑](#footnote-ref-110)
111. During any roundtrip intermediate nests may contain either one more or one less bird. The 1st and 7th nest may contain 1 less and 1 more bird respectively. [↑](#footnote-ref-111)
112. Note that the construction presumes that only birds from valid nests fly as supported by many commentators. Raavad, however, includes such flights. See footnote xx. To comply with Raavad’s opinion that birds from dormant nests also fly, the constructions given in both the text and footnotes must assume that a bird in dormant nest N flies to nest N+1 as birds fly from nest 1 to 7, and back to nest N from nest N+1 as the birds fly in the reverse direction. This is not like the assumption regarding birds flying from valid nests, which they fly only once and remain in the nest into which they flew for the duration of the three roundtrip flights. Using this assumption, none of the numbers would change and the cases when combined (i.e., the cases with *ḥatta’ot* and *olot* bias) remain valid as examples of the worst-case scenarios. [↑](#footnote-ref-112)
113. The reader should convince himself that the sequence of flights can produce the configuration noted. Note that each bird flies as most once; it either remains in its original or enters and then stays in an adjacent nest. The numbers listed below are the original nest of each bird. Note again how all birds originating in a nest are sacrificed the same way to maximize disqualification. [↑](#footnote-ref-113)
114. Alternatively:

After the first round-trip:

*Ken* 1: H: 1. O: 2.

*Ken* 2: O: 2, 2. H: 1, 3. This *ken* has no valid birds.

*Ken* 3: H: 3, 3, 3. O: 3, 2, 4. This *ken* has 2 valid birds.

*Ken* 4: O: 4, 4, 4, 4. H: 4, 4, 3, 5. This *ken* has 4 valid birds.

*Ken* 5: H: 5, 5, 5, 5, 5. O: 5, 5, 5, 4, 6. This *ken* has 6 valid birds.

*Ken* 6: O: 6, 6, 6, 6. 6. 6. H: 6, 6, 6, 6, 5, 7. This *ken* has 8 valid birds.

*Ken* 7: H: 7, 7, 7, 7, 7. 7, 7. O: 7, 7, 7, 7, 7, 7, 6. This *ken* has 12 valid birds. [↑](#footnote-ref-114)
115. Alternatively:

After the second round-trip:

*Ken* 1: H: 1. O: 2. This *ken* has no valid birds.

*Ken* 2: O: 2, 2. H: 1, 3. This *ken* has no valid birds.

*Ken* 3: H: 3, 3, 3. O: 2, 4, 4. This *ken* has no valid birds.

*Ken* 4: O: 4, 4, 4, 4. H: 3, 3, 5, 5. This *ken* has no valid birds.

*Ken* 5: H: 5, 5, 5, 5, 5. O: 5, 4, 4, 6, 6. This *ken* has 2 valid birds.

*Ken* 6: O: 6, 6, 6, 6, 6, 6. H: 6, 6, 5, 5, 7, 7. This *ken* has 4 valid birds.

*Ken* 7: H: 7, 7, 7, 7, 7. 7, 7. O: 7, 7, 7, 7, 7, 6, 6. This *ken* has 10 valid birds. [↑](#footnote-ref-115)
116. Alternatively:

After the third round-trip:

*Ken* 1: H: 1. O: 2. This *ken* has no valid birds.

*Ken* 2: O: 2, 2. H: 1, 3. This *ken* has no valid birds.

*Ken* 3: H: 3, 3, 3. O: 2, 4, 4. This *ken* has no valid birds.

*Ken* 4: O: 4, 4, 4, 4. H: 3, 3, 5, 5. This *ken* has no valid birds.

*Ken* 5: H: 5, 5, 5, 5, 5. O: 4, 4, 6, 6, 6. This *ken* has no valid birds.

*Ken* 6: O: 6, 6, 6, 6. 6. 6. H: 5, 5, 5, 7, 7, 7. This *ken* has no valid birds.

*Ken* 7: H: 7, 7, 7, 7, 7. 7, 7. O: 7, 7, 7, 7, 6, 6, 6. This *ken* has 8 valid birds. [↑](#footnote-ref-116)
117. A reader who remains unconvinced, can painstakingly construct these scenarios (and the parallel scenario switching *olot* and *ḥatta’ot*) using the method described – one flight maximum from all non-dormant nests, sacrifice as many as possible of the original birds from a given nest identically. and alternate the bias of the nests between *olot* and *ḥatta’ot* to maximize disqualification. [↑](#footnote-ref-117)
118. To justify Raavad’s view regarding the *yesh omrim* in the Mishnah we must postulate that none of the other owner of nests will sacrifice birds. In that case, limiting to 10 (versus 14) would make no sense. That opinion by R. Ovadiah mi’Bartenura must relate only to the standard interpretation, which he follows. [↑](#footnote-ref-118)
119. Interestingly, the Raavad’s approach raises the need to stress one detail about the flights of the birds. During each of the three round trips, all commentators assume that birds fly successively not simultaneously. Only when a bird flies to an adjacent nest, can a bird currently in that nest, potentially the bird that just arrived, fly to the next nest. Were all birds to fly simultaneously but only to an adjacent nest, a bird can only be one nest away from its original nest in each round, and at most 3 nests away after all three rounds. On the other hand, if they fly successively, then a bird from any nest can end up in any other nest. A single bird can fly from the first to the last nest, if that bird was the bird flying all 7 times going from nest 1 to 2 to 3 to 4 to 5 to 6 to 7 all in the first round. It is important to understand that although this sequence of flights does not follow our above assumptions, those assumptions were only made to create the worst-case scenario. If we modify the normal interpretation and assume birds can fly simultaneously and we further assume we can restrict owners from sacrifice, then according to Raavad’s principles, the alternative opinion could propose a yet stronger example: Allow 20 valid sacrifices by letting the owner of both the 3rd and 7th *ken* who cannot overlap when all the flights to occur simultaneously., bring their sacrifices while everyone else desists. Note that in three rounds birds from nest 7 when all fly simultaneously can only get as far as nest 4, given only 3 flights. Similarly, birds from nest 3 can go down to nests 1 or 2 or up to nests 4, 5, or 6. Nests 3 and 7 cannot reach each other in only 3 simultaneous steps. Similarly, a bird from the 7th *ken* can be anywhere from the 4th to the 7th *ken* but cannot reach the 3rd *ken*. By the Raavad’s principles, **both** the 3rd and the 7th *kinnin* should be able to sacrifice all of their birds according to the alternative opinion, receiving credit for all their sacrifices. This further proves that the Mishnah must be interpreted where the flights within each of the six rounds (three roundtrips) are successive. [↑](#footnote-ref-119)
120. Note that the explanation and proof that follows does not depend on whether Rambam interpreted these *mishnayot* with or without prior consultation. R. Y. Heller assumed the latter and the 3rd Mishnah may be seen as supporting his position. If the case was consulted, one can argue there is no reason to allow any birds to be sacrificed as they might be foreign birds. However, that would apply to the first 2 *mishnayot* in the *perek* as well; while the owner of the nest gets no credit for a foreign bird, there is no reason for those birds, rightfully owned by someone who we are unable to determine, not to be eligible to be sacrificed. Furthermore, one could argue that all the birds are allowed to be sacrificed in order that the owner not be overly penalized. See footnote 124 as well. [↑](#footnote-ref-120)
121. For Raavad the construction dealt with three rules: one flight maximum, sacrifice all original birds from the same nest identically and alternate the bias of the nest. The last rule is complex and adds significant structure required to construct a worse case. Note that for Rambam the complexity of alternating nests is entirely unnecessary, allowing many more examples. For Raavad, the example is essentially unique. Furthermore, their bases for disqualification are entirely different. Rambam simply counts the number of possibly foreign birds, which are Rambam’s only basis for disqualification. This requires that only one nest must be examined at a time. On the other hand, Raavad’s basis for disqualification is sacrificing more than half of any *ken* as either *ḥatta’ot* or *olot*. That is determined by adding the number of birds in nest N, sacrificed identically to its former mates in either nest N+1 or N-1, as was described when examining Raavad’s interpretation. It should be noted that the nest where more than half of its birds were sacrificed identically is N-1 and N+1, who both have the same bias, opposite to the bias of nest N. [↑](#footnote-ref-121)
122. Unlike the Raavad’s position the birds do not have to be sacrificed the same way as the birds in adjacent nests. [↑](#footnote-ref-122)
123. It should be obvious that for Rambam there are many more examples than the one given for Raavad. [↑](#footnote-ref-123)
124. Note that the theorem implicitly assumes that even with consultation we would knowingly allow the sacrifice of all the birds, including those J birds that may be foreign. [↑](#footnote-ref-124)
125. For example, assume an original nest of 10 birds with J=4 and L=2. There are now 12 birds in the nest. Were we to sacrifice those 12 birds as 6 *ḥatta’ot* and 6 *olot*, it is possible that 4 of the 6 *olot* are foreign birds. As well the situation can be reversed, substituting *olot* for *ḥatta’ot.* The owner of the nest would have only correctly sacrificed 2 pairs or 4 birds. Any of the other 8 birds could be the mate of an ineligible foreign bird.

However, following the theorem’s suggestion J +L. (4+2 =) 6 birds are added. The nest now has 18 birds, 14 coming from the owner; the 18 birds now in the nest are sacrificed as 9 *ḥatta’ot* and 9 *olot*. Even if all the foreign birds were sacrificed similarly as *olot* or *ḥatta’ot*, 5 *ḥatta’ot* and 5 *olot* are still provably birds that the owner of the nest provided for sacrifice. Since 9 total birds are sacrificed in each category, even in the worst-case when all four foreign birds are sacrificed the same, it still leaves (9 - 4=) 5 of the owner’s birds properly sacrificed as both *olot* and *ḥatta’ot.* [↑](#footnote-ref-125)
126. If some of the foreign birds are sacrificed as both *olot* and *ḥatta’ot* we would require fewer birds to be added, but we must assume the worst-case that all the foreign birds are sacrificed identically. [↑](#footnote-ref-126)
127. Assume L+J is less than 2\*K and use a simple proof by induction. Let L=1 and J= 0. Clearly a bird leaving is simply replaced: 2\*K – 1 + 1 = 2\*K + 2\*0 = 2\*K. If L=0 and J= 1, then one bird entered the nest, and we add one additional bird and sacrifice 2\*K + 2\*1 = 2\*K + 2 birds. Sacrificing those 2\*K + 2 birds yields exactly 2\*K valid sacrifices. The additional bird and its mate are disqualified, as we are unable to determine whether the foreign bird was sacrificed as an *olah* or a *ḥattat*. This establishes the first step of the induction. To continue the proof using induction 1 bird is added in the induction step i.e., going from(L+J=) N birds to (L+J=) N+1 birds, adding 1 to either L or J. Thus, we must prove the case if either L or J is increased by 1. Consider first a bird leaving, increasing L by 1. Before L is increased by 1, we assume 2\*K + 2\*J birds sufficed to create a validly sacrificed nest and adding back a bird again results in 2\*K + (L+1) – (L+1) +2\*J = 2\*K + 2\*J birds. If a bird joins, then J becomes J+1. Another bird must be added as the mate to J which results in 2\*K + 2J + 1 + 1 = 2\*K + 2(J+1). If 2\*K+2\*J was sufficient before, adding an additional bird to the one that flew in guarantees that whether sacrificed as an *olah* or *ḥattat*, the foreign bird is not counted as a valid sacrifice. This shows that for all values of J (be it J+1, or +2, etc.) 2\*K + 2\*J is sufficient to assure that the birds thus sacrificed fulfill the owner’s obligation.

Note: If one were to assume that a bird leaving the nest was a foreign bird (a J bird), or that one entering the nest was one of the original birds (an L bird) returning, this would decrease the number of foreign birds in the nest. This would result in more birds having been validly sacrificed. However, as mentioned before we are interested in determining the worst-case scenario and maximizing the number of foreign birds in the nest. Therefore assuming all birds that leave the nest, (L birds,) are those that were from the nest original and all birds entering the nest, (J birds,) then stay there as foreign birds serves this purpose.

Note that Rambam demands that we be conservative to create maximal disqualification. Two assumptions ensure that conservative worst-case. First, as noted the bird that arrives is not one that subsequently leaves; this maximizes the number of foreign birds in the nest. Second, if 2 foreign birds were sacrificed as a mated pair, more valid sacrifices would result; as a result, all foreign birds are assumed to be sacrificed the same manner.

To be formally uber-correct, note that at every step in the proof, adding a bird always preserves 2\*K valid sacrifices under any circumstance. [↑](#footnote-ref-127)
128. Even in the third chapter that considers cases with no prior consultation. [↑](#footnote-ref-128)
129. Raavad’s issue is textual versus conceptual. In the second Mishnah in the 2nd *perek*, the language used would seem to imply that each woman loses one bird, not that the woman from where the bird flew loses 2 birds. This drives Raavad to consider sacrifice without consultation with the source of disqualification being more than ½ of a *ken* being sacrificed as *olot* or *ḥatta’ot.* However, Raavad remains a supporter of implicit designation. [↑](#footnote-ref-129)
130. Direct ownership does not exclude mutual ownership by multiple people. [↑](#footnote-ref-130)