Chad S. Spigel, born 1975; 1997 BA in English Literature with a minor in Near Eastern and Judaic Studies; 2005 MA degree (Master) in Judaic Studies; 2008 PhD in Ancient Jewish History; since 2008 Assistant Professor in the Religion Department at Trinity University (San Antonio, TX).
Preface

This book is a revised and expanded version of my Ph.D. dissertation, which was submitted to the Graduate Program in Religion at Duke University in August of 2008. There are two primary changes in this version. The section dealing with the seating capacity methodology was condensed and altered to reflect my thinking on the subject in light of newly gathered data and additional time to reflect on spatial requirements and ancient synagogue buildings. Therefore, some of the seating capacity coefficients in this book differ from those in the dissertation. The biggest change, however, is that in the dissertation I only applied the seating capacity methodology to eight synagogue buildings as case studies, but in this book I have expanded the scope of the project to include seating capacities for more than fifty synagogue buildings from ancient Palestine. Whereas the primary goals of the dissertation were to create and show the importance of the seating capacity methodology for understanding the role of synagogue worship in early Judaism, the goals of this book were expanded to include the creation of a catalog of seating capacities for ancient synagogues and to provide a more comprehensive analysis of the seating capacities.

While researching and working on this project I have had the opportunity to benefit from the assistance of a number of people, without whom I could not have completed this book. First and foremost, I would like to thank Eric Meyers for serving as my dissertation advisor and for his guidance throughout the process of creating and developing the ideas expressed in this book. As a teacher, advisor, editor, and friend, Eric made my experience at Duke University better than I could have ever imagined. Special thanks also go to the following faculty members at Duke University who helped me in various ways as I worked on the dissertation: Kalman Bland, E. P. Sanders, Tolly Boatwright, Mark Goodacre and Carol Meyers.

I also would like to thank the following people who contributed either directly or indirectly to the completion of this project: Jodi Magness for introducing me to the subject of ancient synagogues in her course at The University of North Carolina in Chapel Hill, and for providing me with the opportunity to work with her on the current excavations of the synagogue in the ancient village of Huqoq; Jonathan Reed for discussing this project with me in the early stages and for sending me copies of the research he had already done on the subject; Seth Schwartz for his comments on the dissertation and for his suggestions on how to
Preface

I am also grateful for a number of grants that contributed to the success of this project. The Graduate Program in Religion at Duke University provided two summer research grants during the initial stages of my research and a conference travel grant to present an early version of the seating capacity methodology. Trinity University provided a number of grants associated with this project, including a summer research grant and a Junior Faculty Fellowship. The project was also assisted by a research grant from the Southwest Commission on Religious Studies (SWCRS).

Finally, and most importantly, I would like to thank my wife Mia, who has been with me every step of the way. From her moral support, to her willingness to relocate, to her detailed and critical editing skills, to her company on visits to ancient synagogues, to her unwavering belief in my ability to reach this goal, her contributions to this book and to my life are immeasurable. This book is dedicated to her.
# Table of Contents

Preface ................................................................. V  
Abbreviations, Versions, Translations and Place Names .............. XI

**Chapter 1: Introduction** ........................................... 1  
A Method for Determining the Extent of Ancient Synagogue Worship ... 6  
Seating Capacities in Recent Scholarship ............................... 8  
Synagogue Seating Capacities: The Goals of this Book ............... 11  
Methodological Approach to the Study of Ancient Synagogues ..... 14  
An Exercise in Ancient Demography ................................. 16  
Outline of Chapters .................................................. 23

**Chapter 2: The Seating Capacity Methodology: Defining Ancient Synagogue Worship** ........................................... 25  
Defining Synagogue Worship ........................................... 26  
Synagogue Worship Activities ....................................... 31  
  Scriptural Readings and Targumim .................................. 32  
  Preaching .................................................................. 33  
  Prayers and Blessings ................................................ 33  
  Prostration .................................................................. 35  
  Giving and Receiving Charity ........................................ 36  
  Festival Worship ....................................................... 36  
  Unknown Worship Activities ........................................ 37  
Synagogue Furnishings and their Relationships to Worship Activities ... 38  
  Seating Furniture: Benches, Chairs, Floor Seating ............... 38  
  Raised Platforms and Tables ......................................... 42  
  Storage: Niches, Aediculae and Arks ............................... 44  
  Balconies .................................................................. 47  
  Partitions and Chancel Screens ....................................... 48
# Chapter 3: The Seating Capacity Methodology: Coefficients

**Anthropometrics and Seating Capacities**

- The Coefficients
  - Rule-of-Thumb General Coefficient
  - Permanent Stone Benches
  - Portable Benches
  - Shallow Tiered Benches
  - Individual Chairs
  - Floor Seating
  - Standing

**Applying the Coefficients**
- Determining Orientations
- Empty Space around Architectural Features
- Area for Worship Activities and Leaders
- Choosing Seating Plans and Methods

**Tables**

## Chapter 4: Case Study: Applying the Methodology to a Single Synagogue

**Introduction**

- Case Study: Gamla
  - The Building
  - Worship Activities and Orientation
  - Calculating Seating Capacities
  - Demographic Data
  - Analysis

## Chapter 5: Case Study: Applying the Methodology to Contemporaneous Synagogues in Tetracomia

**Introduction**

- Nabratein
  - The Building
  - Worship Activities and Orientation
  - Calculating Seating Capacities
  - Demographic Data
  - Analysis

- Khirbet Shema
  - The Building
  - Worship Activities and Orientation
  - Calculating Seating Capacities
  - Demographic Data
  - Analysis
Table of Contents

Meiron ................................................................................................. 113
  The Building ................................................................................. 113
  Worship Activities and Orientation ............................................. 115
  Calculating Seating Capacities .................................................... 115
  Demographic Data ........................................................................ 116
  Analysis ......................................................................................... 119

Gush Ḥalav ............................................................................................ 119
  The Building ............................................................................... 120
  Worship Activities and Orientation ............................................. 123
  Calculating Seating Capacities .................................................... 124
  Demographic Data ........................................................................ 127
  Analysis ......................................................................................... 129

Conclusion .......................................................................................... 130

Chapter 6: Catalog of Seating Capacities for Synagogues in Ancient Palestine ......................................................... 141

Introduction ......................................................................................... 141
  Arbel ............................................................................................ 143
  Assaliyeh ...................................................................................... 149
  Bar‘am (Central Synagogue) ......................................................... 150
  Bar‘am (North Synagogue) .......................................................... 152
  Beth Alpha .................................................................................... 154
  Beth She‘an Kyrios Leontis (Scythopolis) .................................... 159
  Beth She‘an North (Scythopolis) ................................................... 162
  Beth She‘arim .............................................................................. 165
  Beth Yerah (Khirbet el-Kerak; Philoteria) ..................................... 169
  Caesarea ....................................................................................... 171
  Capernaum ................................................................................... 173
  Chorazin ....................................................................................... 177
  Dabiyye ........................................................................................ 181
  Deir ‘Aziz ...................................................................................... 185
  ed-Dikkeh .................................................................................... 188
  ‘En Nashùt ................................................................................... 191
  el-Khirbe ...................................................................................... 194
  En-Gedi ....................................................................................... 198
  Eshtemoa ...................................................................................... 204
  Gamla ........................................................................................... 207
  Gaza (Aza) .................................................................................... 208
  Gush Ḥalav ..................................................................................... 211
  Ḥammat Gader ............................................................................. 212
  Hammath-Tiberias (Severos, Stratum II) ..................................... 215
  Hammath-Tiberias (Stratum I) ..................................................... 223
  Hammath-Tiberias North ............................................................. 227
  Ḥorvat ‘Ammudim ....................................................................... 230
  Ḥorvat ‘Anim ............................................................................... 233
  Ḥorvat Kanaf ............................................................................... 236
Abbreviations, Versions, Translations and Place Names

Abbreviations of the titles for ancient texts have followed The SBL Handbook of Style, P. H. Alexander et al eds. (Atlanta: Society of Biblical Literature, 1999). Translations of the Hebrew Bible and New Testament are based on the NRSV, with the Hebrew text following BHS and the Greek text following The Greek New Testament. Rabbinic sources were used primarily according to the versions in the Bar Ilan Responsa Project. Additional primary sources and translations are found below in the bibliography.

AASOR Annual of the American Schools of Oriental Research
ASOR American Schools of Oriental Research
AHR The American Historical Review
AJA American Journal of Archaeology
AJPA American Journal of Physical Anthropology
Arch Archaeology
Arch For Architectural Forum
BA Biblical Archaeologist
BAIAS Bulletin of the Anglo-Israel Archaeological Society
BAR Biblical Archaeology Review
B.A.R. British Archaeological Reports
BASOR Bulletin of the American Schools of Oriental Research
Bavli Babylonian Talmud
BHS Biblia Hebraica Stuttgartensia
BIJS Bulletin of the Institute of Jewish Studies
BJPES Bulletin of the Jewish Palestine Exploration Society
BMSAP Bulletins et memoires de la Societe d’anthropologie de Paris
BRF Bulletin of the Louis M. Rabinowitz Fund for the Exploration of Ancient Synagogues
CD Damascus Document
CII Corpus Inscriptionum Judaicarum
CIL Corpus Inscriptionum Latinorum
DOP Dumbarton Oaks Papers
DSD Dead Sea Discoveries
EI Eretz Israel
ESI Excavations and Surveys in Israel
HTR The Harvard Theological Review
HUCA Hebrew Union College Annual
IAA Israel Antiquities Authority
IEJ Israel Exploration Journal
IEQ Israel Exploration Quarterly
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IES</td>
<td>Israel Exploration Society</td>
</tr>
<tr>
<td>INJ</td>
<td>Israel Numismatic Journal</td>
</tr>
<tr>
<td>JAAR</td>
<td>Journal of the American Academy of Religion</td>
</tr>
<tr>
<td>JBL</td>
<td>Journal of Biblical Literature</td>
</tr>
<tr>
<td>JFA</td>
<td>Journal of Field Archaeology</td>
</tr>
<tr>
<td>JJA</td>
<td>Journal of Jewish Art</td>
</tr>
<tr>
<td>JJPES</td>
<td>Journal of the Jewish Palestine Exploration Society</td>
</tr>
<tr>
<td>JJS</td>
<td>Journal of Jewish Studies</td>
</tr>
<tr>
<td>JNES</td>
<td>Journal of Near Eastern Studies</td>
</tr>
<tr>
<td>JPOS</td>
<td>Journal of the Palestine Oriental Society</td>
</tr>
<tr>
<td>JQR</td>
<td>Jewish Quarterly Review</td>
</tr>
<tr>
<td>JRA</td>
<td>Journal of Roman Archaeology</td>
</tr>
<tr>
<td>JRS</td>
<td>Journal of Roman Studies</td>
</tr>
<tr>
<td>JSQ</td>
<td>Jewish Studies Quarterly</td>
</tr>
<tr>
<td>LA</td>
<td>Liber Annuus</td>
</tr>
<tr>
<td>LCL</td>
<td>Loeb Classical Library</td>
</tr>
<tr>
<td>NEA</td>
<td>Near Eastern Archaeology</td>
</tr>
<tr>
<td>NEAEHL</td>
<td>New Encyclopedia of Archaeological Excavations in the Holy Land</td>
</tr>
<tr>
<td>NTS</td>
<td>New Testament Studies</td>
</tr>
<tr>
<td>OEAH</td>
<td>Oxford Encyclopedia of Archaeology in the Near East</td>
</tr>
<tr>
<td>PEQ</td>
<td>Palestine Exploration Quarterly</td>
</tr>
<tr>
<td>Qad</td>
<td>Qadmoniot</td>
</tr>
<tr>
<td>QDAP</td>
<td>Quarterly of the Department of Antiquities in Palestine</td>
</tr>
<tr>
<td>RB</td>
<td>Revue Biblique</td>
</tr>
<tr>
<td>SBL</td>
<td>Society of Biblical Literature</td>
</tr>
<tr>
<td>VC</td>
<td>Vigiliae Christianae</td>
</tr>
<tr>
<td>WA</td>
<td>World Archaeology</td>
</tr>
<tr>
<td>Yerushalmi</td>
<td>Jerusalem Talmud</td>
</tr>
<tr>
<td>ZDPV</td>
<td>Zeitschrift des Deutschen Palästina-Vereins</td>
</tr>
</tbody>
</table>
Chapter 1

Introduction

“The historian often tends to forget people, except perhaps the patron of a building or its architect and the craftsmen involved in its construction … the worshipers are absent from the holy places as presented by the historian …”¹

“What does a statement about the Romans mean, if we do not know roughly how many Romans there were?”²

Did most Jews in late antique Palestine³ worship regularly in synagogue buildings?⁴ Is there a method that can be used to answer this question? These two questions provide the impetus for this study. However, before dealing with these questions, it is important to briefly discuss what is already known about synagogue worship in late antique Palestine.

Although scholars will probably never know exactly when synagogue buildings first appeared in Palestine,⁵ the archaeological and literary evidence suggest that by the first century CE they were commonly found throughout the region.⁶

³ For simplicity, and following the lead of other scholars, I refer to the entire region covered in this book as Palestine. Specifically, this corresponds to the regions known as Judea, Galilee, and Gaulanitis in the first century, and Syria-Palestina beginning in the second century. See Lee I. Levine, The Ancient Synagogue: The First Thousand Years (New Haven, CT: Yale University Press, 2000), 42n1.
⁴ Although “regular” worship can refer to any type of worship that is repeated on a consistent schedule – e.g. daily, weekly, monthly, and yearly – in this book I use the term to refer primarily to weekly worship on the Sabbath and yearly festivals.
⁵ For the variety of opinions about the origins of synagogues, see Levine, Ancient Synagogue, 19–41.
⁶ The archaeological evidence consists of a handful of synagogue buildings, including buildings in Gamla, Herodium, and Masada. Other buildings that may have been synagogues from the first century CE include buildings in Migdal, Jericho, and Qiryat Sefer. Although there is no building associated with it, the Theodotus inscription provides evidence for a first-century synagogue in Jerusalem. Literary evidence for synagogues in Palestine is found in Philo (Good Person 80–83), Josephus (Life 277–295; J.W. 2.128–132, 2.285–305, 4.406–409;
Chapter 1: Introduction

Based on this evidence, Lee Levine suggests that “by the middle of the first century of this era, the synagogue represented the central Jewish institution in any given community.” While synagogues may have been common at this time, worship was only one of many functions that took place within their walls. In addition to being the location for Sabbath meetings where scripture was read, homilies were given, and prayers may have been offered (cf. Mark 1:21–29, 3:1–5; Josephus, *J.W.* 2.285–305, *Ag. Ap.* 1.209–211, 2.175), synagogues were also used for study (Josephus, *Ant.* 16.43; Mark 1:21, 6:2), for communal meals (Josephus, *Ant.* 14.214–216, 16.164), as hostels, as the place for legal proceedings and the meting out of punishments (Mark 13:11; Matt. 23:34; Acts 22:19), as a place to collect and distribute charity (Matt. 6:2), and for political gatherings (Josephus, *Life* 276–289).

With the destruction of the Jerusalem Temple and cessation of the sacrificial cult in 70 CE, Jewish worship practices underwent significant changes. The fact that synagogues were already well-established in Palestine at this time made the transition easier and it makes perfect sense that while many of the diverse synagogue functions continued after the destruction of the Temple, the worship component of synagogues soon became the primary function. As Lee Levine writes, “the synagogue evolved from a community center with a religious component into a house of worship that included an array of communal activities.” Yet, despite the increasingly important role synagogues played as places of Jewish worship during the first few centuries of the Common Era, unlike the

---


Jerusalem Temple with its well-defined priesthood, there does not appear to have been a central authority that controlled what took place inside of synagogues. Whereas it was once thought that synagogue practices would have fallen under a “normative Judaism” determined by rabinic authorities, a number of studies from the second half of the twentieth century convincingly prove that based on both literary and archaeological evidence, rabbis did not have significant influence over synagogue worship prior to the medieval period. Instead, it is now generally accepted that early synagogues and their worship practices were determined by local leadership.

This brief review highlights three important pieces of information about early synagogues in Palestine. First, beginning in the late Second Temple period, synagogues were used for various purposes, including worship. Second, at some point after the destruction of the Jerusalem Temple, synagogues took on a more central role as places of Jewish worship. Third, although rabbis would ultimately have a significant amount of control over synagogue worship practices, in the centuries following the destruction of the Jerusalem Temple, synagogue practices were determined locally.

---


This brings us back to the opening question: did most Jews living in late antique Palestine worship regularly in synagogue buildings? To avoid any confusion, the question is not whether synagogues were commonly used for worship in late antique Palestine. The archaeological and literary evidence for synagogue worship overwhelmingly provides an answer of “yes” to this question; it is a fact that ancient Jews worshipped in synagogues. Instead, the question is whether the majority of Jewish people actually participated in synagogue worship. A modern comparison should make the focus of the book clear. Few would argue that modern Jews regularly worship in synagogues. Jewish worship in the modern period for the most part is synagogue worship. However, according to the 2001 American Jewish Identity Survey, only 44% of the American adults who self-identify as Jewish by religion or birth report being members of a synagogue or synagogue-like community. Despite the fact that synagogue buildings are ubiquitous in the American landscape – just as they seem to have been in late antique Palestine – and despite the fact that regular worship takes place in American synagogues, the data in the survey suggests that the majority of American Jews do not regularly participate in synagogue worship.

While a general understanding of the extent of synagogue worship in America can be determined from the survey data, for antiquity the evidence for the extent of synagogue worship is far less obvious. Therefore, many scholars have simply assumed that synagogue worship was commonly practiced by most Jews after the destruction of the Jerusalem Temple. For example, Stuart Miller writes the following about ancient synagogues:

Interestingly, only rarely have archeologists uncovered more than a single structure in a given town. True, no Talmudic town has been fully excavated and, in any case, the population during different periods could have varied in size; but one still wonders where it was that most people prayed and studied.

While Miller correctly identifies the discrepancy between the number of archaeologically excavated synagogues and the sizes of particular settlements, he searches for an answer to where most Jews in these cities would have worshiped before sufficiently determining whether or not most Jews in these cities actually

---

15 For a definition of synagogue worship, see Chapter 2 below.
worship regularly in synagogues. Miller’s answer is that most synagogue communities probably met in converted houses during times of worship. The ubiquity of synagogue worship is assumed, and a possible, but unverifiable explanation is crafted to make sense of the lack of evidence for monumental synagogue buildings. Similar assumptions about the extent of synagogue worship at this time are common in the scholarly literature.

Another approach has been to tiptoe around the question. For example, Lee Levine provides a rather cautious answer to the question when he writes that “in the post-70 era, it [the synagogue] would begin to acquire an increased centrality in Jewish religious life,” pointing out that synagogue diversity suggests that the process through which synagogues became accepted by most Jews as the place for regular worship differed from place to place. In a similar manner, Pieter van der Horst suggests that worship was common in ancient synagogues, but cautions against assuming this was the case everywhere:

I am not saying that all Jews in the entire Hellenistic-Roman period always worshipped on the Sabbath in all places in Israel and in the Diaspora. We have become too convinced of the surprising multiformity of Judaism in the ancient world to be able to accept this readily. Rather it is likely that the situation in practice displayed considerable variation, reflecting the views and customs of countless groups in a large number of places and periods.

19 In a later article Miller corrects this unwarranted assumption when he suggests that maybe “fewer Jews than is customarily thought prayed in synagogues (or at all).” Stuart Miller, “ ‘Epigraphical’ Rabbis, Helios, and Psalm 19,” JQR 94, no. 1 (2004): 38.


23 Levine, Ancient Synagogue, 4, 161. This approach is preferable to Levine’s earlier less-cautious suggestion that “already at an early period regular Sabbath and holiday services were held and attracted large numbers of worshippers.” Levine, “Ancient Synagogues: A Historical Introduction,” 3.

24 Van der Horst, “Was the Synagogue a Place of Sabbath Worship,” 37.
In these two cases hypotheses are offered, but no evidence is provided. Paul Flesher, writing about the earliest history of ancient synagogues, is even more cautious when he laments that “unfortunately, we lack the evidence to answer” the question of how synagogues were received in Palestine.25

Although Miller, Levine, Van der Horst and Flesher provide different ways of answering the question of whether or not most Jews participated regularly in synagogue worship, each of their answers reveal that our historical understanding of the situation is incomplete. While the evidence clearly suggests that synagogues were regularly used for worship by Jews living in Palestine throughout late antiquity, the evidence does not immediately provide an understanding of the extent of synagogue worship.

The problem, however, is not with the evidence itself. Instead, the problem is that a method does not yet exist for using the available evidence to determine whether or not most Jews actually participated in synagogue worship. This book creates that method.

A Method for Determining the Extent of Ancient Synagogue Worship

In the 1970s when Samuel Heilman wanted to learn about synagogue life, he became a participant-observer in a small Orthodox synagogue.26 Because he was dealing with a living community he was able to observe many things, including who in the local community attended this particular synagogue, the worship activities that took place in the synagogue, how the space in the synagogue was used by the congregants, the interpersonal relationships between congregants, the hierarchical structure of the congregation, and unofficial rituals such as gossip and joke telling. Based on his observations and interactions, Heilman was able to determine how the synagogue community interacted with their building and he could confidently conclude that the building served as the synagogue for “approximately 130 men, women, and children.”27 Furthermore, he was able to determine that there were some local Jews who would not worship in the synagogue regardless of the size of the building, and that the members of the synagogue were not likely to remain members their entire lives.28 In other words, the participant-observer approach allowed Heilman the opportunity to see the inner-workings of a particular synagogue, the level to which synagogue worship

27 Heilman, Synagogue Life, 4–24.
28 Ibid., 6–24.
played a part in the community’s Jewish life, and how that particular synagogue fit into the local context.

Unfortunately, scholars of ancient synagogues cannot conduct this same type of research: the congregation members have long since died, the words spoken in the synagogue have long since dissipated, the layout of the worship hall in many ancient synagogue buildings are unclear, and the local context is often difficult to recover. Yet, despite the inability to conduct a participant-observer study for ancient synagogues, in this book I suggest that there is a method for answering basic socio-historical questions about early Jewish communities and their synagogue buildings. The method begins with the calculation of seating capacities.

The important role seating capacities can play in answering basic socio-historical questions about Jewish worship practices can be seen in Rachel Wischnitzer’s book *Synagogue Architecture in the United States*. More than fifty years ago Rachel Wischnitzer realized that in addition to discussing the seating patterns and layouts of the synagogue buildings, it was also important to identify the seating capacities for the buildings. For example, in her description of Mikve Israel in Philadelphia, Wischnitzer writes, “the capacity of the synagogue according to the preserved seating plans was 192 men and 164 women,” and in the description of Bene Israel in Cincinnati she writes, “after being enlarged in 1841, the gallery seated 100 women, the floor accommodated 250 men.” Similar comments fill the book.

These numbers are not merely interesting, they also help illuminate our understanding of the synagogue communities and how the buildings were used. For example, Wischnitzer describes how the 2,300 seat Moorish style Temple Emanu-El in New York was constructed in the 1860s because of overcrowding in their previous building, and that this type of architecture was important because it “met the needs of the rapidly growing congregations.” By following the changing seating capacities of particular synagogues, it is possible to observe the growth in synagogue attendance and relate it to the demographic picture of a particular community.

The case of B’nai Amoona in St. Louis, Missouri suggests additional ways seating capacities help explain the relationship between a synagogue building and the local community. Wischnitzer writes:

The program of the B’nai Amoona congregation in St. Louis, which commissioned Mendelsohn [as its architect], provided for a temple seating 600 with additional accommodation for the High Holidays, a school for 400 pupils and the usual facilities […] Thrown

---

31 Ibid., 37.
32 Ibid., 72–76.
33 Ibid., 82.
together, the three units can seat 1500 […] By inserting a foyer between temple and assembly, the expandable synagogue area was considerably enlarged […] His synagogue was more than doubling its capacity.34

The seating capacity of the B’nai Amoona synagogue suggests that on a typical Sabbath fewer than 600 people were expected to be in attendance. However, the expandability of the main hall into a 1,500 seat mega-hall suggests that there were times – namely the High Holidays of Rosh Hashanah and Yom Kippur – when the congregation expected significantly more than the usual crowd. The seating capacity of the building therefore provides the following information about the relationship between the synagogue community and their synagogue building: (1) less than half of the synagogue’s membership would have attended worship services on a typical Sabbath; and (2) nearly the entire membership would attend on the High Holidays.35 In other words, most members of the congregation did not participate in synagogue worship on a regular basis.

A similar concern for seating capacities can benefit the study of ancient synagogues. Although ancient historians are not privy to the plethora of evidence available to Wischnitzer – including memoirs, correspondence, blueprints, newspaper and magazine articles, fully furnished buildings, and explicit references to seating capacities – her study proves that if seating capacity data can be gathered, they can be used to gain a more complete understanding of the relationship between synagogue buildings and their local Jewish communities.

Seating Capacities in Recent Scholarship

One of the earliest attempts to determine the seating capacity of an ancient synagogue building is found in E. P. Sanders’ book Judaism: Practice and Belief, where he describes the synagogue at Gamla. His method is to add the length of all of the tiered stone benches and assign a 50 cm width per-person for seating space. Using this simple methodology, and not including additional seating that may have been used in this building, Sanders determines that the synagogue could have seated approximately 300 people.36

35 As someone who was a member of B’nai Amoona as a child, I can attest to the accuracy of this interpretation: seats were readily available in the main sanctuary every Sabbath, but on the High Holidays latecomers would be lucky to find a seat at the back of the 1,500 seat expanded hall.
Around the same time Jonathan Reed wrote an article that discussed methods for determining the first century population of Capernaum.\textsuperscript{37} In this study Reed addresses, and quickly dismisses the possibility that synagogue capacities might be indicators of local populations.\textsuperscript{38} In addition to the problem of dating the Capernaum synagogue, Reed points out how public buildings like synagogues and theaters may have served more than the immediate population, and that their size may have been determined by factors other than demographics, including the wealth of the builders.\textsuperscript{39} With the capacities of synagogue buildings proving a dead-end, Reed turned to other methods for determining the population of first-century Capernaum.\textsuperscript{40}

A few years later A. T. Kraabel attempted to identify the seating capacity of the largest ancient synagogue found to date, the third-century synagogue at Sardis. Kraabel claimed that the main hall could hold just under 1,000 people, basing his estimate on the “standards of modern church and synagogue architecture (assuming benches or pews).”\textsuperscript{41} While Kraabel identifies his methodology, it is rather vague. It is unclear what Kraabel means by “modern church and synagogue” architectural standards. And he never explains why he thinks benches or pews were used for seating at Sardis or how the benches would have been arranged. While Kraabel’s calculation is a good first step, it is based on an undeveloped methodology.\textsuperscript{42}

In 1999, things became a bit more interesting with Ehud Netzer’s seating estimate for the controversially identified Hasmonean synagogue in Jericho.\textsuperscript{43} Netzer estimates that around 125 people could have sat on the benches in Jericho.\textsuperscript{44} Further...
thermore, he offers an estimate of around 170 “if wooden benches were used in Jericho along the walls of the eastern and southern aisle.” There are four things to note in Netzer’s estimates. First, he provides a methodology: he explicitly states that he assumes 50 cm as the average space for one person. Second, he considers the use of wooden benches along walls that did not have permanent stone benches. The third thing to note is what the estimate does not consider: the possibility that people also occupied the interior spaces of the room, either sitting on the floor or on portable benches. The fourth thing to note is that the implications of the seating capacity are not discussed.

Six years later, in their 2005 publication about the fifth-century Sepphoris synagogue building, Zeev Weiss and Ehud Netzer come very close to addressing the seating capacity question in a sound methodological manner. After describing the layout of the main hall, they suggest that it could have accommodated between 65 and 135 people, depending on the seating method. Not only do they show a concern for the seating capacity of the building, they also acknowledge that seating methods affect capacities. However, they do not identify in detail the different types of seating, nor do they identify how they determined the spatial requirements for the different types of seating. Furthermore, they do not consider any other factors that may have affected the capacity of the room, most importantly the spatial requirements needed for worship activities.

Most recently, in 2007 Stephen Catto directly addressed the question of synagogue capacities in an effort to understand the role of synagogue worship in first-century Capernaum. However, like the previous examples, the methodology behind his calculations is neither explained, nor does it consider the range of possible seating methods. Despite the shortcomings of his seating capacity methodology, Catto does a good job of using the data for analysis, exploring questions related to synagogue attendance and the role of women and children in the Capernaum synagogue. Still, Catto’s treatment only scratches the surface of how synagogue capacities can be used to better understand early Jewish worship practices.

46 Ibid., 220n29.
47 The use of multiple seating methods in ancient synagogues is discussed in more detail in Chapter 2.
50 Ramsay MacMullen’s recent book about early Christian churches uses the concept of seating capacities to better understand how Christian communities interacted with their churches during times of worship. MacMullen’s methodology for determining a church’s capacity takes into consideration a variety of seating methods, including chairs, benches, and floor seating. However, his methodological approach for calculating capacities is a bit vague and without sufficient explanation. For example, he settles on 1 m² for general seating and 0.66 m² for bench
Although a thorough and detailed study of ancient synagogue seating capacities has not been undertaken, such a project has been tried in the field of ancient Roman history. Nearly fifty years ago, Lily Ross Taylor and Russell T. Scott attempted to determine if ancient references to the attendance at Roman senate meetings were accurate.\(^5\) In order to determine the accuracy of these attendance numbers, Taylor and Scott first reconstructed the interior layouts of rooms used for senate meetings with the appropriate furnishings and types of seating.\(^5\) Then, they determined the amount of space each person needed for the various methods of occupancy. These first two steps were accomplished using numerous references to senate meetings in the works of Cicero, Cassius Dio, Pliny, Suetonius and other ancient Roman writers.\(^5\) These allowed Taylor and Scott to choose the remains of a relatively contemporary building for the starting point of their reconstructive process. The literary sources also provided enough information for Taylor and Scott to decide that benches and not chairs were the main source of seating and that there was a center aisle left open to allow for movement and voting.\(^5\) Finally, archaeological evidence for the sizes of chairs was combined with ancient literary references to spatial requirements and modern building codes to determine how many people could have sat on the benches and how many people could have stood in the rest of the room. In this book a similar approach is taken with ancient synagogue buildings.

Steven Fine recently wrote that “we seldom view these [synagogue] floors from the perspective of the ancients ... The details of mosaics that have been set in museums and reproduced in codices are ‘unencumbered’ by furniture, textiles suspended before the doors of a Torah shrine or perhaps between the columns of the nave, mats and of course, the presence of ancient Jews.”\(^5\) Fine correctly points out the unhistorical nature of viewing the archaeological remains of synagogue buildings as empty spaces: what is empty today was once filled with seating, but never identifies where these numbers come from. Ramsay MacMullen, *The Second Church: Popular Christianity A.D. 200–400* (Atlanta: Society of Biblical Literature, 2009), 1–32. These numbers are shown to be over-estimations below in Chapter 3.


\(^5\) For example, were chairs or benches used? Perhaps there was a combination of both? Or, did some people stand, as is the case in the modern British House of Commons?


\(^5\) Ibid., 541.

furniture and people. The problem is not that scholars are unaware of the fact that there were real people who physically worshiped in ancient synagogue buildings. Rather, the problem is that no one has found a way to effectively fill ancient synagogue space with furniture and people so that we might better understand not only how these buildings were used within ancient Jewish communities but also how prevalent their use was in various communities.

In light of this situation, this book has three primary goals. The first goal is to develop a clearly articulated methodology for calculating the seating capacities of ancient synagogue buildings when they were used for worship. The methodology will be specific enough to take account of the unique aspects of ancient synagogue worship, but flexible enough to allow it to be applied to any ancient synagogue building regardless of location, chronology, architectural features, furnishings, and worship practices. The second goal is to apply the methodology to synagogue buildings that have been excavated within the boundaries of ancient Palestine (see fig. 1.1). The third goal is to analyze the seating capacity data, both within the local context and in more general terms. First and foremost, the analysis will consider the following question: is it possible that most Jews living in the area surrounding the synagogue participated in synagogue worship on a regular basis? The process of asking and answering this question will lead to other questions, including questions about the role of women and minors in ancient synagogue worship, whether or not different synagogue worship practices may have kept some Jews away from synagogues, whether economic considerations may have determined the size of the synagogue and/or the attendance numbers, how synagogue congregations were organized, etc.

In order to accomplish these goals, a combination of archaeological remains and ancient literary sources are used as evidence. Although neither type of evidence alone provides enough information, various studies in recent decades have proven that the combination of archaeological and literary sources is not only helpful, but necessary for the task of writing history. While both archaeological and literary sources are used as evidence, because this study focuses on the physical use of ancient synagogue buildings, the archaeological evidence takes the lead in every case. The archaeological evidence first and foremost includes the dozens of ancient synagogue buildings from late antiquity that provide clearly defined floor plans. Additionally, many of the archaeological remains have permanent benches, providing a starting point for seating patterns as well as

---

56 Although ancient synagogues were used for a variety of purposes, this book is solely concerned with the question of communal synagogue worship.

spatial requirements for sitting. Other appurtenances found in ancient synagogue buildings – Torah shrines and niches, podiums, columns, chairs, etc.\(^5\) – serve as additional evidence, both for describing furnishings in ancient synagogues and for determining seating capacities of particular buildings. Additional archaeological evidence that can be related to synagogues through chronological, geographical, typological or other connections is used as well.\(^5\)

While archaeology is the starting point for the discussion, literary sources are often needed to complete the picture. Literary sources are chosen based on their contemporary dating, their reliability and their contextual applicability. Literary sources that refer to worship and the spatial use of the earliest synagogue buildings include Josephus, Philo, some of the Dead Sea documents, and the New Testament. From the third century onward, the bulk of evidence comes from rabbinic sources. Using some of the arguments made by Daniel Sperber, Martin Goodman, Ze’ev Safrai and Lee Levine, I work from the perspective that when used carefully and critically – always keeping the dating, geography, and reliability of the traditions in mind, and always considering the lack of rabbinic influence on ancient synagogue practice – rabbinic sources can provide reliable information about ancient synagogues.\(^6\) Of course, the closer a rabbinic

---


\(^6\) For example, the use of wooden benches from Herculaneum is discussed below in Chapter 2. See Stephan T.A.M. Mols, Wooden Furniture in Herculaneum: Form, Technique and Function (Amsterdam: J. C. Gieben, 1999).
source’s date is to the archaeological evidence being discussed, the more reliable it is; the same is true concerning the place where it was edited. Therefore, the earliest rabbinic sources – especially the Mishnah, Tosefta, early midrashim, and Palestinian Talmud – are used most frequently since they are most likely to reflect the appropriate social milieu. The Babylonian Talmud and other later rabbinic documents are used when the information can be connected to an earlier Palestinian setting.

There are also a number of non-Jewish literary sources that provide evidence. Vitruvius provides spatial requirements for seating in his *On Architecture*, while Cicero and other early Roman writers also provide hints about spatial requirements, mainly for theater seating. Early Christian writers, such as Eusebius, Justin Martyr, John Chrysostom, Epiphaneus, and Ambrosiaster also provide important data about Jews and synagogues as do Roman legal codes from the Roman and Byzantine periods.

Finally, in order to determine spatial requirements for various seating methods, modern architectural methods and anthropometric data are considered. These sources are discussed in more detail in Chapter 3.

Methodological Approach to the Study of Ancient Synagogues

The literary and archaeological evidence clearly point to diversity in nearly every aspect of ancient synagogues, a situation acknowledged by most scholars. Yet, despite acknowledging synagogue diversity, there is a tendency in recent scholarship to write about the synagogue, as if it were a monolithic institution. This tendency can be seen most recently in Lee Levine’s book *The Ancient Synagogue: The First Thousand Years*. Throughout the book Levine carefully and explicitly refers to the diverse aspects of ancient synagogues. And at the end of the book he clearly summarizes the state of the evidence when he writes that “in each and every one of these areas the ancient synagogue reflects a kaleidoscope of styles, shapes, customs, and functions …” However, there are also places within the book that suggest Jews uniformly related to the ancient synagogue, including on the same page as the previous quote, where Levine writes that “during late antiquity, however, while maintaining its status as a communal center, the synagogue began to acquire an enhanced measure of sanctity. Its liturgy expanded enormously, and its main hall assumed a dimen-
sion of holiness.” The problem with the second quote is not that it is wrong on general terms – generally speaking synagogues did move in these directions over the centuries – the problem is that the use of the singular pronoun and the definite article gives the false impression that all synagogues evolved into sacred places at the same time and that all synagogues had a single liturgy and sacred hall that developed over time.

The approach taken in this book was chosen because it minimizes the chance of falling into the trap of writing too generally about ancient synagogues. Indeed, the very nature of seating capacities forces one to focus on the specific rather than the general; in order to determine seating capacities one must look at specific buildings and the communities where they were located. Therefore, conclusions about one synagogue cannot be extended to another without first looking closely at the details of the second synagogue. This approach to ancient synagogues is largely influenced by Michael Satlow’s methodological approach to the study of Judaism. Building on Clifford Geertz’s concept of “thick description,” Satlow has recently suggested that to better understand Judaism across geographical and chronological boundaries one must begin by looking at the details of particular manifestations of Judaism (i.e. local communities): “to describe a community’s Judaism, then, involves a thick description of that community’s beliefs and practices within its specific historical context.”

63 Ibid. Italics are mine.

64 Shaye Cohen puts it perfectly: “[…] in reality there were many kinds of synagogues, during both the second temple and rabbinic periods, with varying functions, architecture, religious rituals, and social settings. There was no United Synagogue of Antiquity that enforced standards on all the member congregations.” Cohen, Maccabees to the Mishnah, 115. For a similar call against essentialist understandings of Jews and Judaism, see Hayim Lapin, Economy, Geography, and Provincial History in Later Roman Palestine (Tübingen: Mohr Siebeck, 2001), 175–76.

65 Clifford Geertz, The Interpretation of Cultures (New York: Basic Books, 2000), 3–32. One might also consider the process of calculating seating capacities as part of the pre-interpretative decisions and operations for specific Jewish communities. See Jonathan Z. Smith, Imagining Religion: From Babylon to Jonestown (Chicago: University of Chicago Press, 1982), 66. Although Smith refers specifically to the problem of historians of religion not doing the pre-interpretative work for texts, this concept can equally be applied to the interpretation of archaeological remains or even the historical reconstruction of a religious community. Until all of the available data are gathered for any historical subject – all of the data will never be available – the resulting conclusions will necessarily be incomplete. See also Talal Assad, Genealogies of Religion: Discipline and Reasons of Power in Christianity and Islam (Baltimore: John Hopkins University Press, 1993), 27–54. Assad points out how Geertz neglects the importance of ritual activities as expressions of religion.

According to this approach, it is only after we have a firm grasp of how Judaism was expressed in particular times and places that we can compare and contrast different iterations to identify points of overlap and points of divergence. This study applies this methodology to the question of the extent of synagogue worship in late antique Palestine. As such, each synagogue in Chapters 4–6 is analyzed within its particular historical and geographical context. It is only after the data are discussed within the local context that points of overlap and points of divergence are identified (in Chapter 7).

An Exercise in Ancient Demography

To slightly alter the epigraph from the beginning of this chapter: What does a statement about a synagogue’s seating capacity mean, if we do not know roughly how many Jews there were who could have been seated in the synagogue? In other words, for seating capacity data to be useful for understanding synagogue worship in late antiquity, they must be used in conjunction with ancient population estimates. This type of comparison takes interesting data about what went on in a particular building and makes it meaningful by putting it in context; it also prevents projecting the activities of a small subgroup onto the larger group: a single synagogue that seats 300 people in a city of 10,000 suggests something different about local Jewish worship practices than a synagogue building with the same seating capacity in a village of a few hundred residents.

This concern for turning seating capacities into meaningful historical data brings this study into the realm of ancient demography. Most obviously this involves determining population estimates, but it also involves discussing the religious/ethnic distribution of the population, sex ratios and age distribution. Although determining ancient demographics is hampered by the lack of primary data – a situation acknowledged by historians of both Roman and Jewish antiquity\(^{67}\) – the importance of a general demographic awareness is crucial to any social history of late antiquity.\(^{68}\)


\(^{68}\) For an example of the importance of demography for the study of ancient Jewish family life, see Amram Tropper, “Children and Childhood in Light of the Demographics of the Jewish Family in Late Antiquity,” Journal for the Study of Judaism in the Persian, Hellenistic and Roman Period 37 (2006).
The first demographic issue this study deals with – population estimates – is the most basic, yet one of the most difficult to determine.\(^69\) It is therefore important to identify the limits of determining ancient populations, but also how this study will proceed despite these limits.\(^70\) A few of the more common methods used to determine ancient populations for particular settlements include following ancient literary and epigraphic sources,\(^71\) basing populations on the region’s carrying capacity, basing populations on the size of theaters, using population density coefficients for predetermined areas,\(^72\) and using dwelling-based estimates based on the number of dwellings and the average household size or average amount of domestic space per person.\(^73\)

Each of these methods has shortcomings.\(^74\) Literary sources are highly subjective, unreliable, and it is often unclear whether ancient writers are referring


\(^{70}\) The study of ancient populations has been a topic of scholarly discussions for well over a century. This is true both in terms of populations on the local level – e.g. the city of Rome – and in terms of populations for larger regions such as Palestine or even the Roman Empire. In the past few decades, however, scholars have started to question how these numbers are determined and how much we can actually know about ancient population figures. My overall approach to ancient population estimates is informed by the recent works of Walter Scheidel, who identifies the shortcomings of various methods, but also acknowledges the importance of population estimates for contextualized ancient history. For his recent discussions of the methodological issues in ancient Roman population studies, see Walter Scheidel, “Roman Population Size: The Logic of the Debate,” in People, Land, and Politics: Demographic Developments and the Transformation of Roman Italy 300 BC–AD 14 (ed. L. de Ligt and S. J. Northwood; Leiden: Brill, 2008); Walter Scheidel, “Progress and Problems in Roman Demography,” in Debating Roman Demography (ed. Walter Scheidel; Leiden: Brill, 2001). My approach to the more pragmatic issue of calculating population estimates on the local level is influenced by Jeffrey Zorn, Charles Carter, and Jonathan Reed, who deal specifically with the types of settlements where ancient synagogues are found. See Jeffrey R. Zorn, “Estimating Population Size of Ancient Settlements: Methods, Problems, Solutions, and a Case Study,” BASOR 295 (1994); Charles Carter, The Emergence of Yehud in the Persian Period: A Social and Demographic Study (Sheffield: Sheffield Academic Press, 1999), 172–213; Jonathan L. Reed, Archaeology and the Galilean Jesus (Harrisburg, PA: Trinity International Press, 2000), 66–99.

\(^{71}\) This includes determining population estimates for settlements based on what the settlement is called in literary sources (e.g. village, town, and city). For an example of this method, see Safrai, Economy of Roman Palestine, 17–19.

