Digitizing Urban Heritage: The Digitization of Jerusalem's Architectural Archives

Noah Hysler Rubin, Bezalel Academy of Arts and Design, Jerusalem, Israel,
rubinnoah@post.bezalel.ac.il

Abstract

The digitization of Jerusalem Architectural Archives was a practical heritage documentation project establishing a platform for studying architecture and design in modern Jerusalem. The project ventured to locate, digitize, and catalog official and personal documents concerning the city's modern development. The resulting database consists of elaborate Excel tables incorporating seven archival and working collections produced under various regimes: Ottoman, British, and Israeli. Striving to divulge the material to as many readers as possible and facilitate multiple readings of the city's history, we questioned the terms and categories traditionally used for tagging and cataloging documents in the historiography of Jerusalem. Technically, the main challenges we faced were inconsistent and incomplete cataloging of the original archives, obtaining document publishing rights, and creating a sustainable platform. More substantial challenges pertained to the cataloger's interpretative role in objectively representing the information emerging from the various documents and the archive's role as a mediator in research and practice.

Keywords: urban planning; British Mandate; Ottoman Empire; conservation

Noah Hysler Rubin. 2023. Digitizing Urban Heritage: The Digitization of Jerusalem Architectural Archives. *Jerusalem Journal of Archaeology* 5: 101–120.
ISSN: 2788-8819; https://doi.org/10.52486/01.00005.7; https://jjar.huji.ac.il

1. Jerusalem Architectural Database: Theory and Practice

1.1. Introduction

The Jerusalem Architectural Archives database is a platform for studying architecture and design in modern Jerusalem. It is the outcome of a practical heritage documentation and digitization project aimed at locating, exposing, and digitizing official and personal documents regarding the city's modern development. The database builds on collections held in the Jerusalem Municipality, the National Library of Israel (NLI), and historical archives concerned with the planning, architecture, design, and conservation in modern Jerusalem from the mid-19th century until today. The project, which was recently completed, was planned and carried out by Prof. Arch. Mike Turner and Dr. Noah Hysler Rubin from the School of Architecture, Bezalel Academy of Arts and Design, Jerusalem, and supported by the Jerusalem Development Corporation (JDC). It was undertaken in collaboration with the Department of Conservation at the Jerusalem Municipality, the NLI, and the Ministry of Jerusalem and Heritage.

The United Nations (UN) recently recognized urban heritage as a means to promote cities' inclusiveness, safety, resilience, and sustainability. In 2016, it declared that one of its Sustainable Development Goals is to "strengthen efforts to protect and safeguard the world's cultural and natural heritage" (UNESCO, *Sustainable Development Goals*, 11.4). Locally, in Israel, the Fourth Amendment to the Planning and Building Law: Plan for Conservation of Sites (1996), article 12, demands that the local authority base its listing of buildings and sites worthy of conservation on physical information and historical documents. To facilitate these needs, the database is designed to render unique and essential materials that document Jerusalem's recent past—urban plans, building plans, urban maps, photographs, and related documents—accessible to planners, architects, and conservation practitioners.

The project also sought to overcome the gap between the information "consumers" and its sources—archives, libraries, municipal and governmental databases—which emerges for technical, administrative, or academic reasons. In other words, we strived to eliminate the archives as intermediaries that provide access to the city's development documents. Thus, the project assumed that digitizing architectural documents would improve conservation files' and management plans' scientific basis and support municipal decision-making. Digitization would also provide direct and immediate access for all interested parties, allowing for various readings of the city's history. We hoped to enable a

plethora of perspectives for understanding local phenomena and allowing researchers to gain better insights into the city's planning, design, and society, ultimately bypassing hegemonic narratives and historical and geographical conventions.

To meet these ambitions, we aimed to provide the database with a catalog and library-like search function and a searchable map linking the documents to specific sites or compounds in the city. We based the cataloging system on the NLI's catalog, to which we strived to link our database as well as other related digitization initiatives in Israel, including the Archive Network Israel Project (https://www.nli.org.il/en/discover/archives/ian) the Visual Culture and Performing Arts Project (https://www.nli.org.il/he/at-your-service/who-we-are/projects/visual-culture-preforming-arts) and the Ronnie Ellenblum History of Jerusalem Knowledge Center (Avni et al., this volume), all incorporated in the NLI.

1.2. The democratization of Jerusalem's heritage

Recent research into the history and geography of Jerusalem has been applying integrative analysis of Jewish and Arab communities in modern Palestine and the spaces they produced, effectively challenging the traditional readings of the city's modern development (Klein 2001; Campos 2010; Nassar 2010; Mazza 2011; Lemire 2017; Jacobson and Naor 2018; Tamari and Khalidi 2020; Wallach 2020). Thus, for example, whereas most research traces the city's modern development from the British Mandate era, new approaches call to start in the late Ottoman period (Jacobson 2011). Some readings argue against the tendency to rely only on formal, institutional documents, calling to expand archival research, study history "from below," and consider daily life and conduct (Dalachanis and Lemire 2018).

A cardinal challenge derives from the *epistemic archival turn*, which views archives as "epistemological experiments" rather than simply as repositories of facts (Stoler 2002). Historians, anthropologists, and sociologists, especially in colonial and postcolonial cities, treat archives as active renderings of events preserved through governing (Sabbagh-Khoury 2022). Consequently, archives' standardizing and abstracting mechanisms emerge as biased agents of historical and political conventions, raising critical questions about archival classification systems and the advantages and disadvantages of digitization (Kozma 2023). The choice of archival collections for our database, the catalog we built, the terminology we employed, and the means of document presentation we devised reflect our wish to cope with these various challenges.

2. Building a Documentation Database

Building the database, we confronted various professional, academic, and technical issues that required consultation with professionals from numerous disciplines. An academic committee comprising scholars of architecture and urban studies, history, geography, Middle Eastern studies, political science, and cultural studies helped us formulate appropriate goals and identify archives suitable for our purposes. An advisory committee whose members included faculty from the Bezalel School of Architecture, the Jerusalem Municipality, the NLI, and the Israel Antiquities Authority (IAA) assisted us in defining our goals practically and connecting with similar databases. Additionally, we held several local and international meetings to consult with local end-users and experienced practitioners in conservation and digitization.

2.1. Searching for archives

The database's construction was based on identifying and cataloging relevant archives and collections. Wishing to portray the most extensive range of sites, people, and institutions in modern Jerusalem, we sought collections that would result in a rich and representative catalog. Furthermore, striving to create a democratic exposition of archival material concerning the planning and building of modern Jerusalem drove us to incorporate a broader range of archives than usually employed for this purpose, including documents produced under the Ottoman, British, and Israeli regimes. During our work, we dealt with various concerns regarding present-day archives' accessibility, materials, and maintenance, including incomplete cataloging systems, systemic changes over time, and, most challenging, document relocation and loss. We also attempted to combine professional and institutional collections with personal ones. This venture necessitated carefully negotiating publication rights and adapting our needs to the collection owners' wishes.

Ultimately, the selected collections resulted from both content-based and pragmatic considerations, including technical accessibility and legal possibilities and restrictions. Collections we examined and were not incorporated into the database include the Central Zionist Archives, which hold a large part of Bezalel's historic documentation, and the Jerusalem YMCA, whose historical collections include plans of its site and renovations. We also viewed the archive of Shomrei ha-Homot (i.e., the Wall Keepers) Kolel, the ultra-orthodox community that established the Me'ah She'arim neighborhood at the end of the 19th century, and the historical collection of the protestant Church of the Messiah (Immanuel), which consists of photographs of Jerusalem from the 1850s onwards and documents of Conrad Schick's architectural work of in the city.

2.2. Documentation: how, why, and for whom?

As our main goal was to assist planners, architects, and conservation practitioners, we worked closely with the Department of Conservation at the Jerusalem Municipality, considering ways to improve their primary task of compiling and disseminating documentation files of individual buildings and compounds in the city. We held an "end-users" workshop in July 2021, tracing how they search for sources and trying to identify their main challenges. The workshop was hosted by the head of the Department of Conservation and the head of the Conservation Committee of the municipality. It hosted some 40 leading conservation architects working in Jerusalem and across the country, both privately and in the major planning institutions, and members of the Council for the Conservation of Heritage Sites in Israel. The major issues raised pertained to locating and exposing various sorts of information, processing them, and better appreciating the contexts of sites' establishment. Another notable issue cited was the need for collaboration across different institutions dealing with conservation and heritage and unifying their accumulated knowledge (e.g., the conservation files).

Seeking advice from international documentation experts in March 2019, we hosted Edward Denison, professor at the Bartlett School of Architecture, who led the inclusion of Asmara, Eritrea's capital city, in UNESCO's World Heritage List in 2017. In January 2020, we hosted Dr. Ona Vileikis Tamayo of the Institute of Archaeology, University College London, a documentation expert and a member of the scientific committee of the ICOMOS Documentation Centre. Both experts shared with us their experience of historical and spatial research and presented various documentation and dissemination models. We held day-long workshops on both visits, sharing our study with representatives of relevant municipal and governmental offices and leading Israeli archives.

2.3. Digitization and computation

We researched means of digitization and examined various platforms for supplying thesauri-enhanced and geospatial searches for conveniently and professionally retrieving and presenting documents. On their visit to Jerusalem in 2019, Prof. Denison and his team presented their website, Survey of London: Histories of Whitechapel (https://surveyoflondon.org/), part of the historic Survey of London preservation endeavor. The project allows the public to explore the many histories of Whitechapel's buildings and sites by presenting a wide range of information, including photographs, film clips, and audio recordings uploaded by historians, locals, and other interested individuals. We thus explored the advantages of crowdsourcing and its attendant disadvantage of employing

"gatekeepers" to review the materials suggested by the public and select those that suit our database.

We also examined three additional web-based platforms: (1) the Open Jerusalem Database (http://www.openjerusalem.org/database) produced by Prof. Vincent Lemire in the course of an ERC project (2014—2019), presenting a detailed catalog of archives about the history of late Ottoman and British Mandate Jerusalem, (2) the Planning Authority's Story Map website (https://storymaps.arcgis.com/stories/1ce0aa7f0ade46d388b665caa29ef256), which displays current national-scale statutory plans relating to conservation, and (3) Arches (https://www.archesproject.org/), an open-source software platform for cultural heritage data management, developed and managed by the Getty Conservation Institute. We weighed these platforms' advantages and disadvantages against the mapping and spatial analytics software ESRI GIS solutions (https://www.esri.com/).

3. The Collections and Their Processing

The collections in the database include one personal collection of a Jerusalem Municipality clerk, two historical archive collections, and four working collections at the municipality. Each collection is unique, compelling us to study it separately, manage completely different types of documents, and confront dissimilar technical and administrative challenges.

3.1. Ottoman Jerusalem collection in the Ottoman Archives, Istanbul

To substantiate our understanding of the making of modern Jerusalem, we collaborated with a team of researchers at Kadir Has University, Istanbul. This team was headed by Prof. Yonça Erkan, an architect and UNESCO Chair on the Management and Promotion of World Heritage Sites: New Media and Community Involvement. We outsourced Prof. Erkan's team to identify and locate visual images and documents on the urban development of Jerusalem stored in the Ottoman Archives of the Prime Minister's Office (Başbakanlık Osmanlı Arşivi). Focusing on the years between the Tanzimat Edict and the end of Ottoman sovereignty (1839—1917), the team reported finding a vast number of documents relating to spatial changes that occurred in Ottoman Jerusalem or, as it is referred to in the archive, al-Quds al-Sharif (the Holy Sanctuary). They focused on religious and public buildings, searching for the Ottoman administration's attitude toward building activity and prioritizing archival documents that include architectural drawings, photographs, or other visual materials (Erkan 2019). They retrieved 197 documents, four maps, 79 photos, two engravings, and one plan and grouped them into three categories: repairs of

existing buildings, replacement or extensions of existing structures, and construction of new structures, both within and without the Old City's borders.

As the researchers explained in the report they attached to their findings, the documents provide an opportunity to examine how Ottoman modernization expressed itself in al-Quds al-Sharif and unfolded through a delicate balance between state intervention and local demands. Moreover, as Jerusalem was never planned on an urban scale like other Ottoman cities at the time, the research unveiled the urban agenda tacit in individual interventions and explored whether this urban agenda of local modernization was systematic (Erkan and Alioğlu 2019).

The Ottoman Archives scanned all original documents. We received the scanned documents, all written in Ottoman Turkish, along with English translations provided by Erkan's team. We translated them into Hebrew and, finally, into Arabic. The production of multilingual translations raised many queries, mainly about the cultural context of each language, especially regarding institutions and formal positions that ceased to exist as the empire dissolved. We thus employed Israeli researchers of Ottoman Palestine who returned to the original Ottoman documents to recover all that might have been "lost in translation."

While these documents constitute an essential part of our database and catalog, we have not yet been granted permission to present the scanned documents. Two elaborate exhibitions in Istanbul and Jerusalem presented them to the public (see below).

3.2. The British Mandate Planning Collection, the Jerusalem Municipality Historical Archives

The official British planning of Jerusalem, 1918–1948, established rules, regulations, and basic urban perceptions for years to come. Although British concepts regarding the planning and conservation of Jerusalem were debated under the Israeli planning system, especially after 1967, they are generally followed to this day in, for example, safeguarding the Old City walls and their park surroundings.

The official collection of the Jerusalem Town Planning Committee is kept at the Jerusalem Municipality Historical Archives (JMHA), consisting of some 1,000 British town planning schemes and approved plans, hundreds of maps, and minutes of the planning committees from the entire period. In fact, this collection and the JDC's interest in making it more readily available to the public provided the first impetus for our work. Specifically, the JDC wished to make public iconic plans, such as Charles Robert Ashbee's and Patrick Geddes' famous 1921 plan for the city (Fig. 1).

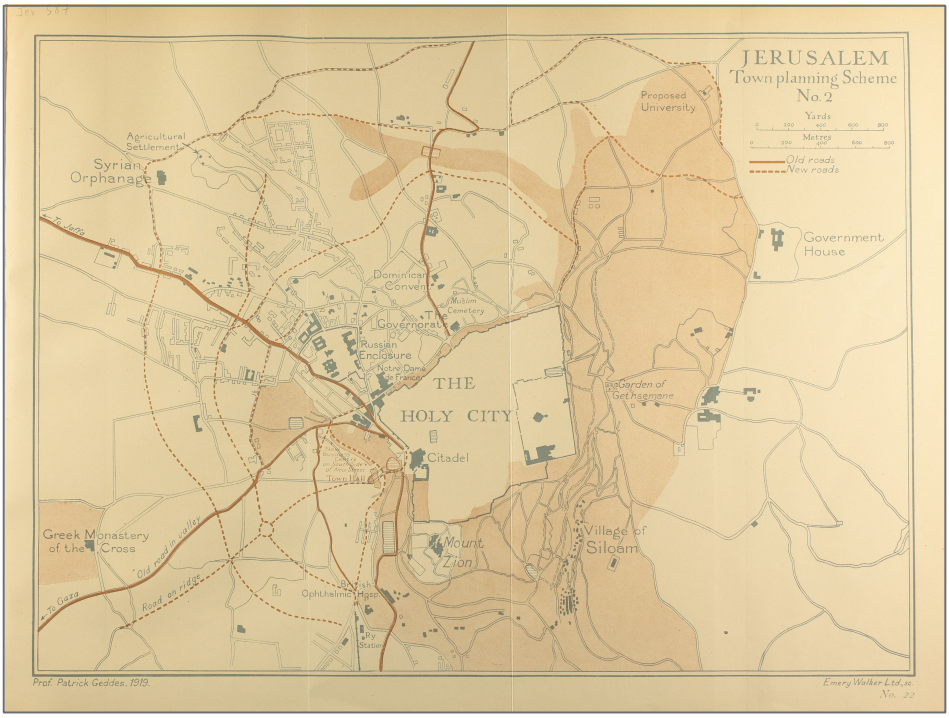

Fig. 1. Jerusalem town planning scheme No. 2, by Patrick Geddes, 1919 (Eran Laor Map Collection, NLI).

Mr. Benny Weil, who became intimately acquainted with the collection while working in the municipality, studied it on behalf of our project. His research builds and updates work he undertook for the Jerusalem Municipality in the late 1970s. Mr. Weil noted that, at the time, the materials in both the municipal and state archives were stored in poor conditions compared to the archival requirements of the day. Furthermore, a considerable part of the archival material documented in the 1970s has since been lost because of a move to a new, modern storage facility or other circumstances. Altogether, we retrieved and fully cataloged 1,500 documents. However, we were not granted permission to scan them.

Mr. Weil traced various filing systems and produced an innovative, unified listing. In his report, he compiled the files into four series, attempting to remain loyal to the original planning and approval procedures (Weil 2019):

1. *Approved plans.* Copies of all the plans approved during the British Mandate in Jerusalem as of the establishment of the Local Planning and Building Committee in 1922;

2. *Parcellation/town plans.* A collection of maps, primarily parcellation plans, prepared according to property surveying and registration requirements (cadaster) introduced and practiced by the British authorities in Palestine;
3. *Central/district town planning committees and advisors to the central Mandatory government*. Two files originating outside of the Jerusalem Municipality; and
4. *Town planning schemes.* Correspondence files for specific plans, usually spanning all stages from the initial submission of a proposed plan until its approval. As such, these files contain the most intricate information and refer to all the other series, constituting a centerpiece that links the various elements together. The plans' listing continued to serve as the basis for the numbering of the city planning files after the Mandate period, which, for town planning schemes, remained in use until just a few years ago. For example, Plans 1–27 include some of the most important British Mandate-era plans in Jerusalem, including 16 district and neighborhood plans that contain most of the built-up area in the city, plans for future ring roads, and plans for the City Walls and a park around them.

3.3. The Ben Zion Guini private collection

Ben Zion Guini was born in 1869 in Izmir, Turkey, and moved to Palestine in 1883. He studied mechanical engineering in Paris and London, and in 1911, the Ottoman government appointed him the city engineer of Jaffa. In 1917, Guini was invited by the mayor of Jerusalem, Hussein Salim al-Husseini, to serve as Jerusalem's first city engineer. Guini continued in this position under the British Mandate regime until 1926. As Jerusalem's city engineer, Guini planned neighborhoods, main roads in the downtown area, infrastructure, and neighborhood parcellation. He also designed several Jewish public buildings in the Old City and engaged in the development and renovation of the al-Aqsa Mosque.

Those studying the modernization and development of Jaffa know Guini well as the expert who designed Jamal Pasha Boulevard (Giller 2015; 2018). However, his work in Jerusalem is much less known, mainly for lack of historical material. There is no official archive of Guini's work, and his archived work is not cataloged under his name. Thus, his private collection, kept by his family, is pivotal for understanding the shift from Ottoman to British urban planning. Additionally, as the key practitioner responsible for Jerusalem's planning across the transition between the regimes, Guini's work provides a closer, more personal view of the particularities of the change.

Guini's collection consists of four boxes with some 2,000 documents, all of which were cataloged and scanned at the NLI's digitization center, with

the collaboration and total funding of the Harvard Judaica Digital Collection (https://library.harvard.edu/collections/judaica-collection). Our catalogers arranged the document in four units: architecture, personal matters, newspapers and publications, and general historical issues. The architecture unit is especially interesting; it contains many plans for famous public buildings in Jerusalem, including the Zion Cinema (Fig. 2), the San Remo Hotel, the Moshav Zekenim Hospital; plans for the Porath Yossef Synagogue, and the Bate Mahasse Neighborhood in the Old City. It also includes flooring for the Me'ah She'arim Neighborhood, the parcellation for Sha'are Hesed, and plans for Guini's family home on King George Street.

3.4. Jerusalem Municipality conservation collections

3.4.1.Heritage sites documentation

About 4,000 sites are listed in Jerusalem's conservation list. This list was compiled by the British and augmented in Jerusalem's master plan, 1968. Not all sites are protected by law. About 1,000 were researched and documented, sometimes in response to development plans threatening the building. These files were prepared by architects and planners and greatly vary in length and detail. They contain historical maps, aerial and non-aerial photographs, building plans, technical details, and other lines of architectural background and building contexts.

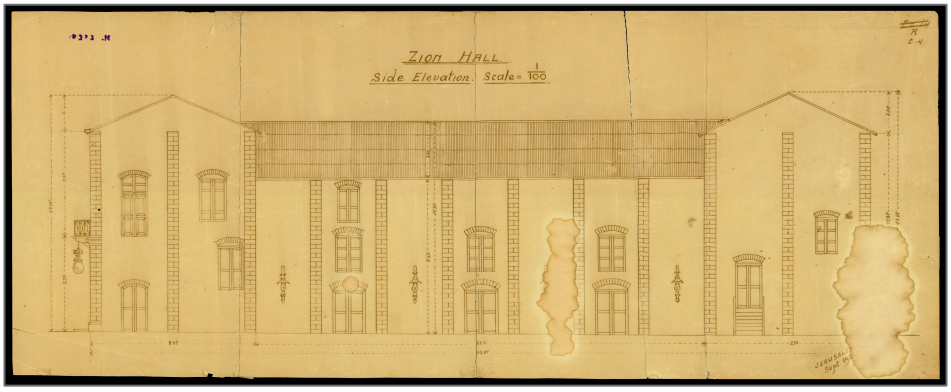

Fig. 2. Ben Zion Guini's plan for Zion Hall: side elevation (The personal collection of Ben Zion Guini courtesy of Yoav Ginai can now be accessed online as part of a collaborative initiative between The Landmark program of The Ministry of Jerusalem and Heritage, the Judaica collection at the Harvard University Library, Jerusalem Development Authority, Bezalel Academy of Arts and Design and The National Library of Israel).

We analyzed and cataloged about 350 files accessible online as PDF files on the Jerusalem Municipality website. As part of the analysis and cataloging process, we identified many essential documents, such as historical maps and aerial photos, which recur in multiple files. However, over the years, this corpus of documents has become a handy shorthand reference that spared practitioners and researchers the need to explore further possibilities, which, in turn, perpetuated the mainstream historical tale of Jerusalem's urban development.

3.4.2. Compound documentation files

Seventeen documentation files were dedicated to more extensive compounds and neighborhoods, usually located within the historic or inner city. We received and cataloged files for the following compounds: East Jerusalem Central Business District, a-Tur, the German Colony, the Greek Colony (Talbiye), Kerem Avraham, the Van Leer Institute, the Hiram Compound (Romema Neighborhood), Old Katamon; Bayit va-Gan Neighborhood, Meqor Haim Neighborhood, Teddy Park, and Shim'on ha-Tzadiq Tomb Compound (neighborhood).

3.4.3. The Old City documentation

The original list of sites for conservation in the Old City was compiled by the British and has been annotated by Israeli planning agencies and the IAA. Upon the declaration of the Old City and its walls as a UNESCO World Heritage Site (1981; https://whc.unesco.org/en/list/148/), additional documentation was carried out. Finally, teams at the architectural offices of Mike Turner and Ari Cohen carried out a detailed walking survey of the Old City streets and many sites. They created an impressive pool of photographs and drawings of architectural elements, buildings, and street views, capturing the details of daily life at these locations. They produced 120 detailed one-page "identity cards" for each site. We received and cataloged 80, all digitized and stored at the Jerusalem Municipality.

3.4.4. The city model documentation

The Jerusalem City Model was created in 1978 by Dick and Ethel Harvey. The model-building process relied on some 20,000 photos taken in 350 specific locations within the inner city, producing a unique snapshot of the city and capturing it at a particular time. One hundred and twenty planning survey sheets were used to map the photography sessions, carefully indicating the

Fig. 3. Musrara at the Jerusalem model collections, Jerusalem Municipality (Photographs, Model Display Table 16), the NLI (The Jerusalem Model collections, Jerusalem Municipality, can now be accessed online as part of a collaborative initiative between The Ministry of Jerusalem and Heritage, The National Library of Israel, Bezalel Academy of Arts and Design, and the Judaica collection at the Harvard University Library).

photograph's location and point of view. Figure 3, for example, is a photo taken in the Musrara neighborhood; it was marked on a sheet and eventually built into the model (Table no. 16). The model and associated preparatory documents were ultimately turned over to the Jerusalem Municipality, which uses them for planning, tourism, and research purposes. Over the years, newly developed areas have been added to the model, and photographs have also accumulated. We cataloged and scanned all 120 plans and 350 photograph files (20,000 photos) at the NLI digitization center with the collaboration and funding of the Harvard Judaica Digital Collection.

4. The Database Catalog

Two architects who were then working at the NLI on a similar project to ours (the National Digital Collection of Culture Project: Architecture, Dance, Design, and Theatre; https://www.nli.org.il/he/at-your-service/who-we-are/projects/visual-culture-preforming-arts) designed the database structure and guided the catalogers, Bezalel Architecture students, in

technical and more substantial matters. The catalogers first prepared the various documents for scanning at the NLI's Digitization Center. This entailed arranging the materials according to physical format in anticipation of the required handling procedure and linking the physical records with their listings. Next, the catalogers identified each item's primary data value and fed it into spreadsheets (see below). Each student was assigned a specific collection; they held weekly meetings to discuss common issues and share lessons learned.

4.1. Catalog structure

The project catalog is built to reflect the original archives and institutions in which the collections were assembled. Accordingly, each collection was registered into a separate Excel table (file) according to the NLI cataloging system. Each entry includes detailed information regarding the document's location in the archive of origin, retaining as much as possible the order of that archive and allowing researchers to reach the original document easily. Thus, the first sheet in each table describes the collection and lists sections, series, files, and individual documents.

Another sheet describes the items and documents in the collection. It relates to a document's essential characteristics, such as title, creator (person, institution, or both), time of creation, document type, description, and relevant keywords. The sheet contains information relating to technical aspects of the document itself, including physical size, format, scale, and publication rights. Finally, it includes cataloger comments for the end-users.

In another sheet, we registered site-specific information concerning matters of preservation (state-of-conservation listing), building materials, past and present uses (programs), and location. Notably, the preservation data is cross-referenced with the IAA database, which provides relevant thesauri and vocabularies for Jerusalem's history and heritage.

Similarly, in another sheet, we entered information regarding the site's location. Each location is furnished with its coordinates (longitude and latitude) and identified according to various parameters, including street, neighborhood, block, and parcel identifications in accordance with the Jerusalem Municipality listings. The global GPS correlated with the municipality's GIS identification system (https://jergisng.jerusalem.muni.il/baseWab/?config=../gisviewerngsupport/api/InjectingConfig&locale=he) was our primary means of reference, onto which places' former names were added as synonyms wherever necessary (and possible).

4.2. Democratizing the archives

As research shows, cataloging is not only technical but also involves personal and cultural interpretation. To overcome historical and political conventions, we concentrated on the city and its development. We mainly addressed the development of sites and compounds while continuously questioning the terminology and categories customarily used for tagging and cataloging them. To minimize inflections and establish a common "Jerusalem ontology," we reduced the number of interpretative categories and eliminated the use of historical frameworks or concepts relating to architectural styles.

Furthermore, to make this information accessible and widely retrievable, we transcribed numerous names into Hebrew, Arabic, and English. In the process, many issues of transliterations and nomenclature came to light, exposing different, sometimes competing interpretations, which had to be negotiated. We, therefore, added multiple synonyms, enabling us to express changes in place, people, and institute names over the years.

Finally, our cataloging process allowed us to develop a network of relevant sites and entities directly related to the buildings and neighborhoods in the catalog. It includes sites, people, and institutions involved in the making of modern Jerusalem, allowing us to position otherwise individual items in a contextual network, harmonize our data, and link it to databases external to our project. When possible, we augmented the data gathered from the documents with additional information regarding the sites' establishment (dates), other creators (architects, planners, entrepreneurs, donors, and others), and institutions involved in its building (architectural firms, charities, municipal or government institutes).

Altogether, we compiled lists of 980 sites, 660 people, and 350 institutions. Through this process, connections across entities disclosed networks that would be hard to discern by reading the collections separately, linking practitioners, entrepreneurs, community leaders, institutions operating in Jerusalem and outside it, and the sites and compounds with which they were involved.

4.3. Document digitization and presentation

The project's computation was based on the creation of the database and the exposition of the digitized material as a searchable library list and a map. Eventually, high maintenance costs compelled us to use existing platforms hosted by our main collaborators. As of today, Ben Zion Guini's collection (https://www.nli.org.il/en/archives/NNL_ARCHIVE_AL997011128936205171/NLI) and the City Model collection (https://www.nli.org.il/he/archives/NNL_ARCHIVE_

AL997012195380705171/NLI) are embedded within the NLI catalog and provide direct access to documents for which the project holds publication rights. At the municipality, the database is expected to serve as a basis for a specific GIS layer featuring all the site locations incorporated in the database. Bezalel's website links all the materials relating to the Digitization of Jerusalem's Architectural Archives Project (https://www.bezalel.ac.il/en/node/651314), including the academic and public events held as part of it, as described below.

5. Initial Findings and Dissemination through Public Events

5.1. Ottoman collection exhibitions

5.1.1. His Merciful Majesty: An Architectural Glance at Jerusalem in Light of Ottoman Documents (1839–1917), Kadir Has University, Istanbul, November 2019

The findings at the Ottoman archives of the Prime Minister's office resulted in an exhibition in Istanbul in November 2019 titled *His Merciful Majesty: An Architectural Glance at Jerusalem in Light of Ottoman Documents (1839–1917)*. Erkan described the exhibition, which opened in the presence of the Israeli ambassador to Turkey, as one that "opens doors to the process of modernization of, as it is expressed in the Ottoman archival documents, the al-Quds al-Sharif. Archival visual materials such as architectural projects, maps, drawings, and photographs, as well as official documents, not only help generate a comprehensive understanding of the process but also shed light on the architectural dimensions of Ottoman modernization" (Erkan 2019).

5.1.2. Kudüs i-Sherif: A Look from Istanbul to Jerusalem, Hansen House, Jerusalem, January 2022

The Ottoman archive materials also formed the basis for an exhibition compiled by our team. It was displayed in January 2022 at Hansen House, Jerusalem, as an independent exhibition titled *Kudüs i-Sherif: A Look from Istanbul to Jerusalem* (Fig. 4). We presented the findings under five headings that capture the city's importance and uniqueness on the one hand, and its urban nature and development, on the other: (1) Jerusalem as a center of attraction, (2) the balance of power changes, (3) improving roads and infrastructures, (4) education in a changing world, and (5) changes in health and medicine. An Ottoman expert was hired to compose introductory texts, and all images and documents were presented in their original language, along with Hebrew, English, and Arabic translations.

Fig. 4. *Kudüs i-Sherif: A look from Istanbul to Jerusalem* exhibition at Hansen House, Jerusalem, January 2022 (photo: Noah Hysler Rubin).

The exposition of these Ottoman papers allowed us to examine some concepts of Ottoman Jerusalem. Thus, we did not engage the foundation of Jewish hospitals, such as Bikur Holim and Shaʿare Tzedek, as a unique Jewish initiative but as part of a broader movement for establishing municipal hospitals. In doing so, we could also trace the ties between Jewish founders, like Yoel Moshe Solomon, and the Ottoman authorities. Similarly, we could examine the opening of the New Gate in 1897 as part of the Ottoman investment in local infrastructure and the widening of the Jaffa Gate in 1898 upon the visit of the German Kaiser as a local act of modernization.

The exhibition also offered an opportunity to experiment with public participation or crowdsourcing. We encouraged the visitors—researchers, students, local enthusiasts, and tour guides—to share their knowledge about the retrieved documents with us. We were surprised to receive corrections to the original documents, not only regarding site identification but also concerning translation, compelling us to retrace our steps to find the stage in the translation process the mistake was made. We also received specific information about unknown corners of the city and even suggestions for personal, relevant collections to explore.

5.2. Digitizing Jerusalem's archives: Urban Heritage in the Age of Digital Culture, Hansen House, Jerusalem, January 2022

Upon completing the project's research stage, we convened in January 2022 more than 30 international researchers and practitioners to discuss the technical and substantial issues of urban heritage digitization and interpretation. The assembled scholars comprised archaeologists, historians, geographers, architects, conservation experts, and digitization professionals, who participated in three keynote lectures and 12 sessions. Due to COVID restrictions, the gathering took place in a hybrid format, hosting speakers and audience in-person and online. Its proceedings have been recorded and are available on a designated YouTube channel (https://www.youtube.com/@jerusalemarchives986).

The themes that emerged from the papers included expanding urban narratives, alternative and endangered archives, digital data usage for urban heritage, and mapping and virtual reality. Two keynote lectures were provided by Mario Quintero Santana, General Secretary of ICOMOS, and Cornelius Holtorf, UNESCO Chair on Heritage Futures, world-leading experts on documentation and heritage-related digitization. Another lecture was delivered by Dr. Dani Schrire of the Hebrew University of Jerusalem, an expert on cultural collections. We honored the Guini family with a special session and paid tribute to the late Prof. Ronnie Ellenblum of the Hebrew University, founder of the first digital collection of Jerusalem historical maps, tracing the path from that pioneering project to our latest endeavors.

Four papers based on our database materials were delivered: Professor Erkan's review of her work on the Ottoman archives, a report on the results of cataloging Ben Zion Guini's archive provided by the student responsible for it, and two papers by the author, one analyzing the British planning collection and the other presenting the project. Notably, the unusual opportunity to juxtapose documents pertaining to Jerusalem's development at the end of the Ottoman era with the early British Mandate plans for the city allowed us to compare for the first time the two planning regimes, their motivations, and the concepts they employed. Furthermore, we asked whether and to what extent the innovative Western discipline of town planning constituted a significant shift in Jerusalem's development. One plan, presented at the conference, epitomizes the significance of compiling documents from different archives in one database. It is a base map of Jerusalem's built landscape prepared by Guini, dated March 1921, and recovered from the JMHA. The map was ordered by Charles Robert Ashbee and Patrick Geddes, the British planners working in Jerusalem, as a background for their

modern city planning. Yet, Guini drew red lines on the map suggesting additional roads, manifesting his understanding of how the city ought to be developed, inevitably reflecting the notions of the previous regime. This document attests to continuity, rather than rupture, in the modern planning of Jerusalem and the various perspectives—local and foreign—that made their impression on it. We expect that further research of this JMHA document and others retrieved from Guini's archive will assist in shedding more light on these and other topics.

5.3. Ben Zion Guini at the Bezalel Pavilion, July 2022

The first Bezalel Pavilion hosted pop-up exhibitions of Bezalel students and lecturers. One of these exhibitions was curated by one of the project's catalogers. It assembled works of art created by various Bezalel students inspired by documents from Ben Zion Guini's collection and produced personal artistic interpretations of Guini's creations (Fig. 5).

6. Conclusion

The project compiled some 25,000 documents and produced over 5,000 catalog listings, attesting to the depth and complexity of Jerusalem's spatial history and demonstrating its digitization's enormous contribution to knowledge, research, and practice. The technical challenges we encountered in the archives (e.g., varying cataloging systems, inadequate storage, and bookkeeping) stress the needs and the advantages of digitization. The matter of

Fig. 5. A work by Ruthie Gvaryahu, *Tri-Lingual Font, Zion Cinema*, presented at Bezalel Pavilion 2022.

publication rights is, however, a significant obstacle to the complete exposition of scanned documents, as are institutions' difficulties in storing and sustaining websites. This challenge, we believe, can be overcome by inter-database collaborations and their incorporation within more extensive institutional catalogs and digital platforms.

However, cataloging and publishing historical documents invite more critical and substantial issues concerning vocabulary, historiographic frameworks, resulting taxonomies, and transliteration. These issues highlight the complexity and multidimensionality of the city's development and the need for its intricate exposition and democratization.

Significantly, our project demonstrated that the conglomeration and juxtaposition of various document types from multiple sources laid the foundations for new perspectives regarding the modern development of Jerusalem. Albeit small, our database encourages integrative research and a critical evaluation of present-day urban perceptions. It also invites an analysis of discrepancies between the popular readings of the city's recent history and new stories that emerge from more comprehensive research. Presumably, the potential for integrative studies of the city's making may also offer opportunities for contemporary planning and conservation policies; the accumulated data may be used by various spatial technologies for producing visual data and modeling, stretching disciplinary boundaries and offering alternatives to the future.

Acknowledgments

I wish to thank Prof. Mike Turner and an anonymous reader for enhancing earlier versions of this paper. I am also grateful to our collaborators at Bezalel, the Jerusalem Municipality, and the National Library and to the Jerusalem Development Corporation for funding the project.

References

Campos, M. U. 2010. *Ottoman Brothers: Muslims, Christians and Jews in Early Twentieth Century Palestine*. Stanford: Stanford University Press.

Dalachanis, A. and Lemire, V. eds. 2018. *Ordinary Jerusalem, 1840–1940*. Leiden: Brill. DOI: 10.1163.9789004375741.

Erkan, Y. 2019. Introduction to *His Merciful Majesty: An Architectural Glance at Jerusalem in Light of Ottoman Documents (1839–1917)*. An exhibition held at Kadir Has University, Istanbul, November 2019.

Erkan, Y. and Alioğlu, F. 2019. Modernization of Jerusalem in the Light of Ottoman Archival Documents (1839–1917). A report submitted to the Jerusalem Architectural Archives Project, Jerusalem.

Giller, S. 2015. The Jews Street of Jaffa: The Development of Howard-Butrus-Raziel Street. *Cathedra* 157: 53–76 (Hebrew).

Giller, S. 2018. The Renovation of Jaffa during World War I. *Cathedra* 165: 161–180 (Hebrew).

Jacobson, A. 2011. *From Empire to Empire: Jerusalem Between Ottoman and British Rule*. Syracuse, NY: Syracuse University Press.

Jacobson, A. and Naor, M. 2018. *Oriental Neighbors: Middle Eastern Jews and Arabs in Mandatory Palestine.* The Schusterman Series in Israel Studies. Waltham, MA: Brandeis University Press.

Klein, M. 2001. *Jerusalem: The Contested City*. New York: New York University Press.

Kozma, L. 2023. The Archive and the Task of the Historian. *Zmanim* 148: 92–103 (Hebrew).

Lemire, V. 2017. *Jerusalem 1900: The Holy City in the Age of Possibilities*. Chicago: University of Chicago Press.

Mazza, R. 2011. *Jerusalem: From the Ottomans to the British*. London: I.B. Tauris.

Nassar, I. ed. 2010. *Al-Quds: Tarikh al Mustaqbal.* Ramallah: Institute of Palestine Studies.

Sabbagh-Khoury, A. 2022. Settler Colonialism and the Archives of Apprehension. *Current Sociology*. DOI: 10.1177/00113921221100580.

Stoler, A. 2002. Colonial Archives and the Arts of Governance. *Archival Science* 2: 87–109.

Tamari, S. and Khalidi, R. eds. 2020. *The Other Jerusalem: Rethinking the History of the Sacred City*. Jerusalem: Institute for Palestine Studies and the Khalidi Library.

Wallach, Y. 2020. *A City in Fragments: Urban Text in Modern Jerusalem*. Stanford: Stanford University Press.

Weil, B. 2020. Series of Files and Plans Relating to the Planning of Jerusalem during the British Mandate Period (1922–1948): An Archival Research. A report submitted to the Jerusalem Architectural Archives Project, Jerusalem.