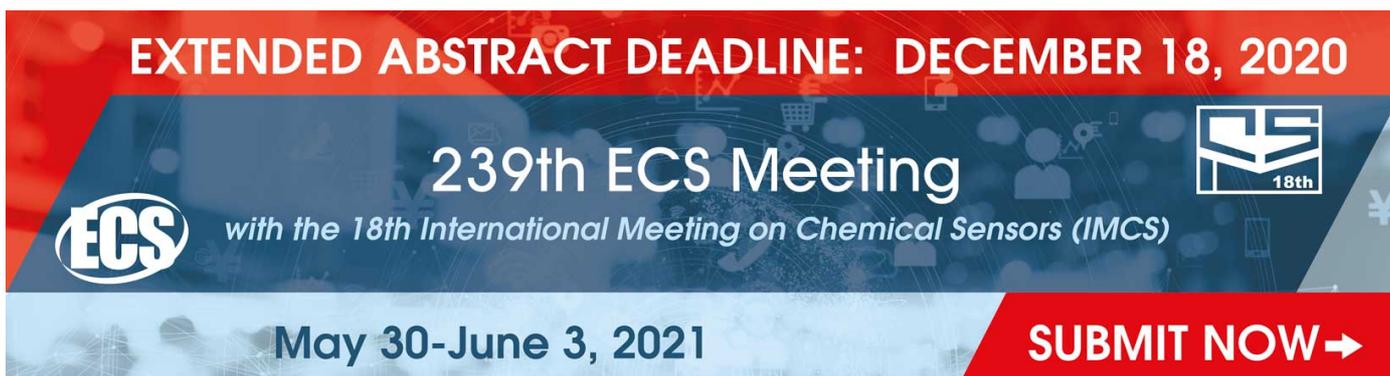


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Around some Jewish Architectural Features

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Abstract. Central and Eastern Europe were always on the edge of cultural, historical, and political transformations. The constant modifications reshape the architecture and urban realm of cities and urban fabric. Structural and socio-political boundaries are affecting cultural minorities. In most cases, the effect is so critical that the cultural heritage of the minority in terms of architecture and built environment is degrading. The memory, as a collective force to the reality of the city, always follows these modifications. The built environment in these complex areas rather of showing the truth (coexistence of physical realm and built form) is mutating and presenting the fragmentation of its different parts. The phenomenon of Jewish reality and settling styles in Central and Eastern European cities, its transformations, assimilations and segregations became an operational tool for the research, to build a wider understanding of the problematic aspects. The characteristic generalisation was done in terms of the architectural settings. However, all the cases are specific and need a deep understanding of each one's problems deeply. In Central Europe, the problem occurs in terms of segregation and closure, while in Eastern Europe, the cases of separation were presented along with condition that leads to structural integration. The Prague Ghetto in the old town, the Jewish settlements of Warsaw city and the shtetl in Eastern Europe state the criticality of the problem of memory in a wider range, from physical build one to the intangible. In Prague, due to the constant pressure of segregation and final demolition of Ghetto, the fragmented pieces of the Jewish culture in terms of a building fabric were left. The space was gone but the memory still alive. Jewish culture's integration into Warsaw's build form through years and final demolition of the city during the Second World War left singular architectural pieces of their complex reality in the city, as a fragmented island of memory. In contrast, Shtetl presents a case of physical form while the spirit of the place is absent. Memory as an operational tool ensures the collectiveness, as it depicts the contrast of elements within its architecture and urban form. The coexistence of different part of the city with their specific architectural character and memory ensures the fact of its completeness as a whole.

1. Introduction

Why an analysis of the Jewish settlement in a paper around the memory of the city? Several reasonable perplexities may arise from the instrumental practice of the historicism, which endorses the continuity of Architecture as a reflection of historical epochs. For instance, since the Medieval age, the role of Jewish settlement, as a minority, in the core of the city is swinging between international diffusion and local peculiarities, that belong to each specific reality where this phenomenon has been noticed.

Cities are entities of constant transformation. Configuration of urban spaces is resulting from socio-political factors while changing powers and authorities are using a modification of lands and territories as a tool to state and identify their own power. Examining processes of transformations would be evident the intention to set the model of living for inhabitants, way of interaction or, conversely, non-intercourse.



Similarly, the socio-political conditions will generate the level of autonomy individuals would have over their lives [1]. Such a study is especially relevant when the discourse is connected with the issue of bordered cultures. The legitimacy of this approach is to be sought in the awareness that the value of the great architecture has always had even concrete relations with the historical events. In terms of memory, the role of historical occurrences in the European city was central in two main and alternative aspects: as input since the urban design has tried to extend, with cognitive care, beyond a stereotyped conception the notion of identity (as style, line, route, trend, standard and so on); as an output since in its most significant typologies (from the Temple of Solomon till the modern Synagogues) a deep incidence of the structural factors may be found.

While, there is an interdependent relationship between humans-culture and the urban fabric, the built environment adapting the inhabitant's interaction through gradual creation of visible and invisible boundaries. Such a process, while reaching its critical point, often, if not always, can be traumatic for the cultural minority. The collective exposure to social cataclysm becomes a crisis of meaning and identity.

In defining this specific field of research, the awareness of the role of minority communities in the development of urban structure is decisive for a better comprehension of the becoming of architecture and settlement especially in some European regions - such as the Central and Eastern Europe - particularly susceptible to influence of continental extent and to autonomous conditioning of the local context in the long period. The anomalous and specific characters of such a blending, according to a universal classifying point of view, have been even regarded as marginal in the comparison with the model of the hegemonic centres.

The city is absorbing the facts of reality and instantly mirroring the uncertainty and dispute. Narrative of the events linked to physical replacement represented by interrupted fabric and urban gaps, scars of disorder in contextual homogeneity, while cultural processes referring to a variety of representational forms and reflecting through the modification of collective memory. Thus, a trauma in its essence is a transformation.

Therefore, the case of the Eastern Europe centres, where without deepening the specific intersection among monumental buildings, settling morphologies and typology of their respective units - between enclave and town, mobility and adaptability, limits and borders, powers and institutions, community and family - become oversimplified, incomplete and backward. In addition, the exceptionality of the architectural experiences of the enclaves as a minority, result casual, underestimating this way the paradigms of persisting originality and of a meaningful identity in the era of globalization. Therefore, with a better understanding of the contributing factors to post-traumatic stress, we can increase our capacity to propose the methodologies and working methods to deal with the memory of the spaces. Thus, the focus of this study will be how architecture and urban tissue is reflecting man-made disasters and how to preserve the memory that layered within the complex structure of the urban fabric affected by man-made trauma.

2. Jewish cultural enclaves

The current debate around the old town has by now overflowed on the habitual problem of historical and archaeological centres, moving to a specific architectural question. It seems that recently the hope of the ideology of modern architecture - with the intent of recovering the awareness on the specific formal value of the new inserted among the old - has failed in front of the alleged urgency of simply preserving or critically destroying whole parts of the city.

This process, due to physiological dynamics of cities, has thrown some doubts upon the survival and continuity of the old city, showing at the same time some limitations of a large part of modern architecture and supplying the fans of the old with good reasons.

Central - Eastern Europe lands have always been a scene of waves of migrations, transformations and reorganisations resulting from the complexity of its history. Hear the transformations that affected the urban fabric can be seen not only as a physical act, but it covers a wider range of cultural, political, religious and social issues. On the other hand, the contemporary tendency in the prevalent architectural debate seems to have passively accepted the idea of the greatest respect of the ghettos, as a memory of itself and as a kind of open-air museum. Fatally, this presumption of respect on the historical environment, made of small old buildings and meaningless houses belonging to the past full of dear memory, faint colours, and falling romantic plaster, collapses, changes into something else that is a kind of short-term memory.

Whether major political problems emerge or curtain adversity of changing conditions it would instantly affect the most exposed sector of the society and the way of their living. Such a weak social layer within Europe throughout centuries has been a cultural enclave of the Jewish population.

Jews in large numbers lived in the territory of Central - East and the state greatly influenced the character their communities were shaped. Jewish culture plays an important role in these transformations as their presence as an urban form can be traced back to different periods and different areas. They experienced uncertainty on their skin and that affected their way of living consequently shaping and transforming the built environment. Thus, to analyse the effects of traumatic interruption, Jewish culture and its presence as a concept can be implemented as a studying tool.

The presence of the Jewish culture within Europe as an operational tool opens the wide range of possibilities in the analysis of traumatised territories. The range of results from the different variations of trauma (demolition, transformation, forced segregation, acculturation and integration in its negative aspect) can be studied.

With regard to this specific aspect of the Jewish settlements, after Prague's old Ghetto was torn down Kafka wrote: "*...They are still alive in us, the dark corners, the mysterious alleys, blind windows, dirty courtyards, noisy taverns and secretive inns. We walk about the broad street of the rebuilt town, but our steps and looks are uncertain. Inside, we still tremble as we did in the old miserably lanes. Our hearts know nothing yet of any clearance carried out. Inside us, the old unhealthy Jewish Ghetto is more real than the new healthy town around us. We walk about as in a dream and are ourselves only a ghost of a past time*".

3. Jewish settlement in Central/Eastern Europe

It is possible to make a characteristic generalisation of Jewish traces in the Central and Eastern Europe according to the outer forces that shaped them in that way. However, each place has its uniqueness and it forces to apply the unique methodology to deal with the issue.

The central European region throughout its history was under the strong influence of religious issues, thus, Jews were placed under strict regulations. It assumed settling of the community in defined quarters and resulted in the phenomenon of distinguished urban form, so-called Ghetto. It emerged in the early Middle Ages: this form of collective Jewish segregation determined the way of their coexisting with the surrounding population for centuries ahead.

In contrary to the Jewish quarter generated by the will of segregation and self-protection, the Ghetto in its classic sense as a result of physical pressure from the side of the governmental authority of a

hosting city. Such rigid segregation placed within massive walls was composed of narrow streets and overcrowded dwellings.

City dynamics destroy old buildings: habits, customs, social groups and functions, interest change the use and functions, interest change the use and the aspect of the old town. The main parts that are transformed are the residential settlements, which renew according to the new culture standards and modify themselves with new technologies: they are supposed to wear and tear circle more rapid than other typologies.

However, houses constitute most of the so called "environment" and thence it arises that we must leave this environment to its density since we are aware of the fact that the feeling with which it binds us is only a fragment of a person or group experience, but it does not identify itself with the collective memory and the history of the town. Nevertheless, we know that in the town dynamics some typical elements persist which play a key role in its structure. These are not only monuments, as a tangible memory, but also a hidden system not physically perceivable, secretly covered by the layer of memory. A system of meaning had stabilized collective memory and identity by appearing to respond to active appeals of why tangible heritages of objects, archives, museums, monuments and memorials exist, and why intangible - almost atmospheric - heritages persist as well, in order to make us believe, to persuade us in the permanence of identity and authenticity of the origins of our architectural environment.

4. The nature of the Jewish Ghetto and the urban settlement

The character of Ghetto was various through time. The intense growth of the community was preceding densification and deterioration of living conditions. While the instability of the ruling power of the state was resulting in the constant ways of explosions and returns. Thus, such insecurity was reflected in material terms.

The Jewish Ghetto was gradually disappeared after the process of emancipation that in Central Europe took place in the nineteenth century. However, the term itself became an appellative for the settlements of minorities living under social, legal or economic pressure. Abolition of the Ghetto as an urban phenomenon that existed within the urban tissue for centuries left indelible imprints on a historical fabric. Thus, in many cases fragmentation of the network and the urban gaps are evident.

While in Central part Jews were continuously suffering from the uncertainty of their being, in Eastern Europe they never saw a Ghetto. In large settlements from the early centuries the members of the community were involved in the feudal economy and managed businesses, running industries, therefore, were the allies of the nobility. It was a foundation for the broad autonomy they enjoyed.

The difference in social conditions greatly influenced by the way Eastern European communities were shaped. Therefore, starting from the sixteenth century Jews had a right for colonisation, participating in establishing town development by adopting agricultural areas. The process generated a unique type of settlement - shtetl, where the Jewish population often was an absolute majority. Shtetls were not a result of gradual planning but are of nature of the vernacular character, were composed with all elements of the traditional Jewish way of living [2].

With the beginning of the age of modernisation in Eastern Europe appeared the national movement for the gradual repeal of the presence of the culture within the culture. Therefore, they started the process of integration of the Jewish minority into a broader unity using the tool of educational and socio-political systems. The community had to assimilate into the local nationality or to be banished from the territory.

It is difficult to say if Jews were a phenomenon of a cultural enclave in Eastern Europe maintaining their specific role and cultural characteristics, or an integrated sector within the general territory. Way of Jewish settling in Eastern Europe can be considered as an antonymous of Central European Ghetto.

Such a model of relationships between Jews and non-Jews cannot be described as assimilation as in this case, the minority always kept cultural distinctiveness. However, the question of Jewish identity in Eastern - European cities becomes merely “symbolic” [3]. The bright example of this phenomenon can be demonstrated by major Polish cities, where traces of Jewish history are spread and have a character of adaptation, thus less identifiable.

On the contrary, in small towns, Jewish ways of life survived until the massive emigration of the twentieth century [3]. Regarding its isolated character in rural areas, shtetl kept its unique structure and cultural identity of its inhabitants until was resettled with Eastern European citizens. It can be seen that the triggering forces affected all Jewish settlements in Eastern and Central Europe, but the result in terms of built fabric, however, was different. The settlements that are connected with Jewish culture each demonstrate specific outcomes after transformations historical and physical.

5. Methodology

The city is a phenomenon of complexity made by inhabitants, architectural elements, and urban spaces. Decomposition and fragmentation of the fabric open a variety of possibilities for defining the system of structural relationships. The creative processes of rethinking architectural and entire urban shapes will start once the contextual gaps will be defined. Therefore, to systemise, the study can be defined as 3 global issues that we are facing while exploring the Jewish traces.

Central Europe, once the walls of Ghetto were destroyed, provides the martial to study the problem in its physical aspect of the decomposition deterioration and transformation.

The major cities of the Eastern part would give the chance to examine the case and outcome of subsequent integration within the hosting socio-territorial conditions. Here, the objects of the memory can be recognised as singularly enclaved elements within the urban fabric. The case demonstrates the lack of distinguished materiality or memory of materiality.

The case of Shtetl, a settlement developed within the country by Jews and for Jews, poses the issue of historical urban fabric resettled and abandoned for the decay. Here the gaps have the character of the contextual void of symbolic meaning, while physically the structure still exists. The settlement kept physical structure, but through the rehabilitation, it lost the intangible memory. That resulted in the formal gaps in turns of its usability that abandoned for the decay. By looking at this phenomenon from two different sides, from an inclusivism or expansive conception - to which belong those designed objects ranging over the whole of the built environment-; or on the other side from an exclusivist conception - with a range that describes only some coherent subset of the whole of the built environment - we are supposed to go deeper into the significance of these important facts in the process of urban transformation.

In addition, it would be said that preservation and conservation tendency prompt additional considerations, such as whether restoration or maintenance of a built structure or an urban settlement sustains it as an authentic architectural whole — and if this is independent of functional integrity, or holds for reconstructions.

In other words, this may be a task of research on towns carried out with scientific method: what conditions warrant preserving or conserving a built structure; and what principles guide warranted alterations or completions of built structures — and whether other considerations may include creativity, fancy, or sensitivity to contemporary needs and context [4].

As concerns the specific case of Jewish settlement, to understood how to deal with the problem of traumatised urban areas it will be specified 3 cases (Josefov ghetto in Prague, Czech Republic; Warsaw in Poland; shtetl of Eastern Europe), that will present the critical differences of the types of the settlings.

Besides that, it will ensure to define the problem and to generate the strategies of preserving the memory in each specific case.

5.1. Josefov Ghetto in Prague. Case of segregation

Jews started to settle in Prague from the twelfth century. The significant enclosure of densely built Jewish dwellings emerged on the right bank of Vltava river. Later on, gates and fences were constructed for protection. The community was growing along with the pressure from the side of city authorities. However, the surrounding walls were undimmed. Thus, four centuries later from the formation the settlement turned into a crowded ghetto.

Decrepit dwellings were gradually growing in height, meanwhile splitting into pieces to accommodate new inhabitants, streets ran one into another, the Ghetto overwhelmed unsanitary and chaos. The Jewish community of Prague survived waves of explosions and consequences of fires, disease epidemics, and subsequent clearances. Despite the insufficient living condition, the settlement maintained the structure or self-regulated community with own infrastructure, religious institution and beliefs without significant interaction with neighbouring areas and its inhabitants until in nineteenth century, when Jews were released from the ghetto walls. (Figure 1)

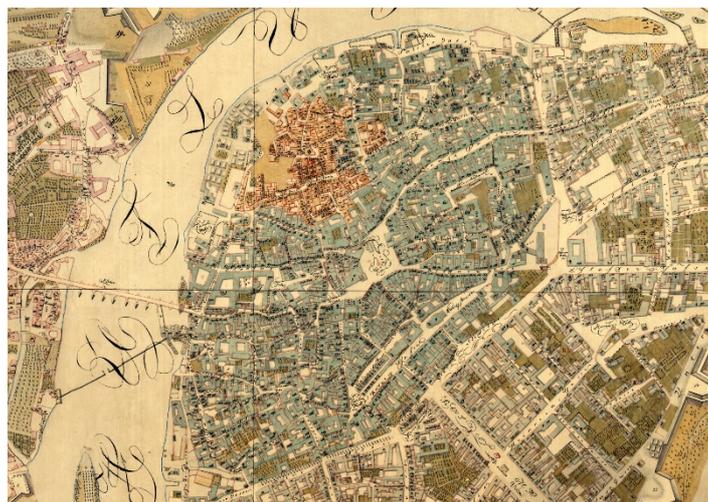


Figure 1. Prague City Plan by Jüttner. J, 1816 (Right: public domain) [5]

Ironically, Jews had survived as a closely-knit entity through seventeen centuries of Diaspora largely due to state-sanctioned persecution [6]. On the verge of industrialisation, the Old Town district was rebuilt and Jewish Quarter vanished. Hundreds of dwellings were demolished and replaced by spacious blocks, narrow streets eliminated and the contemporary network was stretched out. Singular architectural elements are preserved as a reminder of a bygone era of the Jewish Quarter of Prague.

Ghetto within the wider body of the city presented a segregated territory permanently affected by the cultural enclave through the centuries. This complex distinguished historic layer now buried under the contemporary urban fabric.

5.2. Warsaw. Case of structural integration

History of Jews of Polish lands covering centuries. Authorities were changing but the strategy towards the cultural minority maintained the same. The policy of the state was marked by loyalty, implied the involvement of the heterogeneous community in all aspects of social and cultural life. That would make

a positive contribution to the economic realm. Besides that, it would result in the piecemeal dissolution of Jews identity into local culture until disappearance.

However, Jews succeed in acceptance of cultural values of dominating social groups, translating the proposed norms through their beliefs [7]. This phenomenon brightly illustrates the case of Jewish integration into the Warsaw context.

The major investigation of Jewish inhabitants in the socio-cultural life of Warsaw city started in the eighteenth century (Figure 2). It is difficult to define the exact localisation of the community in the city. However, the major concentration of Jewish activity was over the left bank of Vistula river. Jewish ruts are evident among contemporary Muranów district covering the adjoining territories.

In the nineteenth century, Warsaw hosted the largest Jewish community in Europe, deeply integrated into the cultural life of the city [8]. Besides synagogues and praying houses, and educational institutions, the Jewish community of Warsaw established a corporation of manufactures, a centre of publishing, was active in arts and writing. Hence, they were attending the theatrical actions side by side with citizens of Polish origin, as the use of local language was widespread.



Figure 2. Warsaw City Plan by Clarke, W. B. Published under the superintendence of the Society for the Diffusion of Useful Knowledge by Baldwin & Cradock, 1831 (Right: public domain) [9]

Despite that: “The majority of Polish Jews who underwent this linguistic transition continued to regard themselves as Jewish, thereby creating a cultural and political space of “Jewish Polishness.” [10]. The urban fabric of Warsaw of those times was a reflection of complex and controversial Polish-Jewish relations represented by elements of mixed origin.

During the Second World War, the city of Warsaw was destroyed and only singular “islands” or dwellings survived. Ruins “...turned into signs – tend to function as indexes rather than as allegories. They measure events rather than symbolise the past.” [11].

If dramatic events of war turned the page of the history of the city and the ruins were the only narrative or times that have gone, then the rebuilding of the city in the late 20 century closed the book and remained Singular architectural facts are the only witnesses of the pre-war urban fabric.

crucial of understanding the complexity to any site. Therefore, the notion of the awareness of the transformations and modifications of the place, such as understanding the belonging of its culture, tradition, is defining the elements, materials that are evidence of contrast in the context of the argument that derived from the memory. Thus, it leads to a creation of new rules and collectiveness with the respect of the relationship to its context in a wider sense. As the memory is associated with the materials and places, it became an operational tool for architecture, in the connection of past present and future of the city's evolution and transformation.

The cruciality of it, we have seen through analysing the Jewish culture as a concept that defines the transformations and emphasises the role of memory inside and outside of post-traumatic circumstances. The cases of Jewish settlements in Central and Eastern Europe present the culture within a culture, architecture within architecture. However, the differences are significant and were presented through the presence or absence of structural integration, through the qualities of the significance of its elements, through the preserved memory in the physical form and its intangible memory.

Prague showed us a bright example of segregation, a cultural enclave. Through its long history, Jewish Town was always through a transformation that was a result of densification caused by segregation. However, it always kept the idea of a well-formed community until its final demolition in the nineteenth century. One can argue that the space was vanished and mutated. However, the memory of its structure with its architectural elements remained. Ghetto as a phenomenon is demolished but the spirit of its remnants is still alive. The important point here is that the memory of its physical structures can be retraced, ultimately, it can complete the gaps between the existing and absent ones. The preservation of memory is crucial, as only with the structures and the events that are describing and justifying its importance as a unique artefact, can depict the Ghetto's belonging to its time and space.

Warsaw presents the integration of structural integration that was mainly due to the cultural one. The memory of the cultural minority (the case of Jewish people) that inhabited the city and was well integrated is preserved in the city's singular architectural elements. This was initiated from the fact, that the localisation of Jewish people was absent through the city. The realm was mixed with Jewish and Polish people, which leads to an architectural integration however keeping their unique character and cultural differences. After the destruction of the city of Warsaw and the demolition of Jewish cultural artefacts, urban fabric presented in the form of islands, they were more depicting the pieces of spread memory rather than the reality of their mixed history. This complicated realm raises the issue of a wider analysis of the events made by elements of the urban structure. The emergency of the collection of the fragmented memory in its architectural forms can ensure the completeness of the city with its complex urban form.

Shtetl was a bright case of the absence of untouchable memory, separation in its own culture and history, which is critically important in the settlement to mark its belongingness and retrace its memory. The void of memory is symbolising the absence of time and place, the meaning of its structures. Shtetl resembles the vanished history of Jews, the utopia towards the completeness that makes the sites crucially contradicted, as from one hand, the structure remains but the event that describes it became a utopia. In this context, the physical memory can become meaningful and find itself through times with the retrieval of its untouchable memory.

The cases can be seen as the microscopic examples within the whole realm in Central and Eastern Europe, however, they describe the problem of the urban transformation and the memory signifying its rhetorical and can be applied to a wider analysis on this issue.

The value of memory as the collectiveness of the place can critically render the contrast to its elements to its form of architecture. Hence, the form and the evidence of it are inseparable. In this context, the memory is the ultimate tool of combining past and future with the awareness of reality.

References

- [1] L. Vaughan. *Mapping Society: The Spatial Dimensions of Social Cartography*. London: UCL Press, 2018.
- [2] A. Kühnel. *Zasady budowy miast małych i miasteczek*. Lviv: Wydawnictwo Polskiego Towarzystwa Politechnicznego we Lwowie, 1918.
- [3] Z. Gitelman, “Becoming Jewish in Russia and Ukraine.” In: Z. Gitelman, B. Kosmin, A. Kovács (eds.) *New Jewish identities*. Budapest: Central European University Press, p. 109, 2002.
- [4] R. Capdevila-Werning, “Constructing the Absent—Preservation and Restoration of Architecture,” *Proceedings of the European Society for Aesthetics*, vol. 5, pp. 163–177, 2013.
- [5] Wikimedia, *Prague City Plan by Jüttner. J, 1816*. [Online] 2011 [Accessed 14. 04. 2020] Available at: https://upload.wikimedia.org/wikipedia/commons/e/e3/Juttneruv_plan_Prahy.jpg?fbclid=IwAR1z6PI4ufBGiiqG90NvdJfDS5BmjA2Wt9VhiASHxr6KfwwBi0eG3e9mbxQ.
- [6] E. Valley. *The Great Jewish Cities of Central and Eastern Europe: A Travel Guide and Resource Book to Prague, Warsaw, Crakow, and Budapest*. Northvale NJ: Jason Aronson Inc. Publishers, pp. 1-55, 1999.
- [7] C. Daxelmiille, “Organizational Forms of Jewish Popular Culture since the Middle Ages.” In: I. Hsia, R. Po-chia, H. Lehmann (eds.). *In and Out of the Ghetto*. New York: Cambridge University Press, p. 30, 2002.
- [8] T. R. Weeks, “A city of three nations: ‘FIN-DE- SIÈCLE’ Warsaw,” *The Polish Review*, vol. 49, no. 2, pp. 747-766, 2004.
- [9] Harvard, *Warsaw City Plan by Clarke, W. B. Published under the superintendence of the Society for the Diffusion of Useful Knowledge by Baldwin & Cradock*, [Online] 1831 [Accessed 14. 04. 2020] Available at: <https://iif.lib.harvard.edu/manifests/view/ids:9538200?fbclid=IwAR0CaRFu53i35GIgJlvs3jtjUdsYK9AfNySTpGDxib1IJRXS9yEW3ShXKo>.
- [10] K. Steffen, “Contested Jewish Polishness: Language and Health as Markers for the Position of Jews in Polish Culture and Society in the Interwar Period.” In: A. Polonsky, H. Węgrzynek, A. Żbikowski (eds.) *New Directions in the History of the Jews in the Polish Lands*. Brighton: Academic Studies Press, p. 367, 2018.
- [11] D. Crowley, “Memory in Pieces: The Symbolism of the Ruins in Warsaw after 1944,” *Journal of Modern European History*, vol. 9, no. 3, p. 353, 2011.
- [12] Y. Petrovsky-Shtern. *The Golden Age Shtetl: A New History of Jewish Life in East Europe*. New Jersey: Princeton University Press, p. 25, 2014.
- [13] DBC, *The map of Mosciska. Image from the book: Kühnel, A. “Zasady budowy miast małych i miasteczek,” Lviv, p. 21*. [Online] 1918 [Accessed 14. 04. 2020] Available at: https://www.dbc.wroc.pl/dlibra/publication/9983/edition/8988/content?&meta-lang=pl&fbclid=IwAR3RbEInc2L1oucs5WGj_dRnwGGBnwBpov-GaHJQQ9ssqPcfVwSLDwb2yDnQ.