Hybrid heritagescapes as urban commons in Mediterranean cities: accessing the deep-rooted spatial interfaces of cities

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Abstract - This Chapter presents the theoretical considerations, proceedings and practical outcomes of the training school that took place in Nicosia in the context of the COST Action CyberParks. The Chapter introduces the history of Nicosia, the last divided capital of Europe, through the development of its Venetian fortifications. It presents new approaches to the use of ICT for facilitating the re-appropriation of the moat of Nicosia's medieval fortifications from being used as parking space, and other fragmentary private uses, into a green belt that highlights the only shared heritage that unites the two sides of the divided city, that is, its Medieval Walls. It discusses about digital interfaces and interactive narratives, which contribute to the exploitation of heritage in Mediterranean cities for the reactivation of neglected urban green spaces through playful engagement, gamification, and storytelling. It argues that heritage can be used to influence positively the social cohesion of neighbourhoods as it can be promoted in such a way that, instead of provoking tensions and division, would offer spaces of inclusion, interesting everyday experiences and provide a sense of belonging to socially excluded communities. Two ICT-enabled proposals developed during the training school are presented: the first about the development of a digital platform for co-appropriation and co-management of the spaces into the moat by the inhabitants of the city in cooperation with the local authorities; and the second about the creation of spatially-distributed storytelling for the promotion of the history of the Medieval walls of the city by exploiting the software and communities of Geocaching. These actions will be contextualised by the preliminary results of a limited survey of users of the space under study, which informed the two proposals.

Keywords: Spatially distributed narratives; playful engagement of user communities; interdisciplinary digital methodologies; accessible tourism; Mediterranean historic cities

INTRODUCTION

This publication presents the discussions that took place during the International Training School "Hybrid Heritagescapes as Urban Commons in Mediterranean Cities: accessing the deep-rooted spatial interfaces of cities" convened at The Science and Technology in Archaeology Research Center of the Cyprus Institute, and co-organised within the Project CyberParks, between 30 October and 3 November 2017 in Nicosia, Cyprus. 20 graduates and 5 tutors from various disciplines, such as history, archaeology, architecture, landscape design, urban planning and computer science, and 10 European countries visited Nicosia, the last divided capital in Europe to explore how Information and Communication Technologies (ICT) and interactive narratives can contribute creative practices of using the built heritage of Mediterranean cities for the reactivation of neglected urban spaces through playful engagement and storytelling. The Training School has been aligned with the long-lasting research interest of the Science and Technology in Archaeology Research Center of the Cyprus Institute in the study of Mediterranean cities and the safeguarding of build heritage and cultural rights of the communities that inhabit the divided capital. The Chapter presents considerations of the training school regarding the capacity of ICT for learning and social interaction opportunities in territories of heritage (heritagescapes) that extend to include urban squares and parks. Overarching goal of this discussion is the exploration of new approaches to using ICT for promoting open air spaces in becoming part of the everyday life of a city, i.e. part of the network of its communal amenities and common resources, in order to contribute to the well-being and quality of life of citizens. The Chapter will conclude by contextualising this discussion in the safeguarding of built heritage and cultural rights of the communities that inhabit them.

THE MOAT OF HISTORIC NICOSIA

Built heritage can be used to influence positively the social cohesion of neighbourhoods as it could be promoted in such a way that, instead of provoking tensions and division, would offer spaces of inclusion,

interesting everyday experiences and provide a sense of belonging to socially excluded communities. The overarching goal of the Training School was to promote history-loaded open spaces in becoming part of the everyday life of a city, i.e. part of the network of its communal amenities and common resources, in order to contribute to the well-being and quality of life of citizens. During the Training School trainees learned about the rich history of Nicosia and were occupied with the design and exploration of ICT for promoting the moat of the medieval fortification of the old city as a public space that highlights one of the few legacies that unite the two sides of the divided city, that is, its Medieval Walls. Understanding the role of the moat and reflecting on its current use and level of integration in the public infrastructures of the city was at the centre of the conversations that took place during the event, due to the arguably compromised, and to a certain extend challenging operation of the moat as car park and other fragmentary private uses, (cf. section Documentations). Noticeably this conversation was framed in the context of well documented considerations and the numerous previous discussions in the literature about the subject, (Pilides and Alpha, 2012: 218).

Originally the Italian architect Giulio Savorgnan[1], who designed the 16th century Venetian Walls (1567-70), which were fortified by eleven heart-shaped bastions, designated the 80 metres wide moat as a clear flat space to expose anyone who would try to approach the city walls, the canonical design rule of medieval fortifications (Grivaud, 1992; Grivaud and Patapiou, 1996; Walsh, Coureas and Edbury, 2012). Since the city fell to the Ottomans after a 21 days-short siege, a few months after the construction of the walls had finished (1570), the walls had lost their function to fortify the city, as the Ottoman Empire experienced no real thread from enemies (Violaris, 2012). The lack of real need for fortification in conjunction with their material construction led to the disuse of the walls. They were built of mud brick, with their lower part only buttressed by stone, and thus their structural condition and integrity was limited by the time the British arrived on the island. Due to their undividable spatial structure and function, the walls and the moat share histories and should play a common role for the city. The moat acquired an important role for Nicosia when the city started expanding beyond the medieval footprint of the labyrinthine urban fabric of the historic core (Fig. 1), and only after George Jeffery, the first Director of the Department of Antiquities, during the British rule of the island pursued actively the conservation of the walls as he considered them an important heritage of the medieval city[2].

Since the beginning of the 20th century numerous activities and uses were hosted into the moat, from sporting events, livestock trade and markets to parades and leisure spaces, waste disposal and farming (Fig. 2). In every one of these cases the moat was treated as plains for discharging the outwards pressure of the life and need for expansion of the walled city. The conservation, promotion and re-identification of the Walls by Jeffery[3] offered a new opportunity for the moat, which beyond its use as an empty space now acquired a symbolic role, that of framing the city and being framed by the walls.

Despite the reinvented potential of the moat for foregrounding and highlighting the presence of the walls as Cypriot patrimony, after the war of 1974 and the division of the island, and consequently of Nicosia, the urgent and ever-growing needs of the city for empty plots to support its infrastructure and operation led to the fragmentation of the moat, as illustrated in Fig. 3. This new reality of the city was intensified by the lack of long term masterplan for the expansion of the built environment with clearly set targets that would preserve and safeguard the identity of the place and exploit the added value of the legacy of the city for social - and tourism - purposes. Today the city has reached plains located well outside the old core and it extends to a distance far beyond the 10 km (Fig. 4) having integrated in its infrastructural networks the various historic cores of what used to be a network of orbital villages. Also, the development of highly discussed and elaborated masterplans and urban planning strategies that have been devised by international groups of specialists are now a reality and were adopted by policy makers and the authorities. Then maybe the time has finally come to reflect on the current state of the moat and reconsider its identity and value for the city.

THE ROLE OF THE MOAT FOR THE CITY

There is arguably great value in restoring or preserving the moat in its original identity and appearance

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[1] www.nicosia.org.cy/en-GB/discover/sights/the-medieval-walls

[2] Pilides, Despina, (2009). *George Jeffery: His Diaries and the Ancient Monuments of Cyprus.* Nicosia: Department of Antiquities.

[3] www.archmap.org/britishcyprus

(Hobsbawm, 1990; Hobsbawm, 1983; Gurrieri, 1975; Violet-le-Duc, 1869)[4], as in numerous historic cities where the fortifications together with the old town have been preserved as a monument, e.g., Nicosia's alter ego, the city of Palmanova in Italy, which is a prime example of star-shaped fort of the Late Renaissance, built in 1593 by the Venetians. In these cases, the new parts of the city, which are those where the contemporary activity of the city is located (besides tourism), were developed in distance from the safeguarded monumentalized built environment of the historic town (Whitehand, 2005; Mumford, 1961), as it is the case also for the other walled city of Cyprus and unique example of Famagusta (Mason, 2012: 14). Distinct from those cities whose fortification constructions are today partially saved due to destructive historical events (e.g., Thessaloniki), or exemplary cases where fortification walls have been reconstructed based on an imposed hegemonic narrative for symbolic and political reasons (e.g., Rhodes), the moat of Nicosia was always used as a contemporary common resource of the city (Zesimou, 1998). Its structural and functional difference to the cases above is that the built environment on either side of the moat has been continuously used in history by the inhabitants of the city. In addition, the spatial difference of the moat of Nicosia to those cities mentioned earlier is that space is consumed by built developments outside the ring of the moat and therefore the newer parts of the city are in direct contact with what used to be the empty plains of the moat (Leventis, 2005).

REINVENTING THE MOAT

This apparent continuity in all aspects of the space (i.e. of usage and form), as it is clearly illustrated in the topographical section of this zone of the city , suggests that the moat could become a unique opportunity for the city and play the role of the central open air resource of Nicosia, where social interaction is nurtured together with history and nature in a contemporary approach to heritage in public space. In doing so the moat offers valuable free space to host various functions, stage social performances, serve the historic core and be appropriated collectively by the citizens and ephemeral users of Nicosia. In this context the moat is not a monument that captures and tries to preserve a static image of the past in order to communicate a hegemonic narrative that is imposed (top-down) to characterise the identity of the place, but rather becomes an active space of the everyday life of the inhabitants of the city.

Contributing to the effort, the Training School was occupied with the development of new strategies for the exploitation of ICT towards the more dynamic and holistic appropriation capacity of open-air public space which in turn will facilitate a more socially sustainable reintegration of the moat in the network of public spaces of the city. Through various activities presented below the participants of the Training School had the opportunity to understand spatial organization of the space and reflect on its needs and occupation patterns through the day. Through these activities the School explored the capacities of the concept of a hybrid heritage-scape as a new type of cultural landscape where the everyday of heritage in space and digital technologies of visualization, representation and interaction blend together to generate hybrid experiences and enhance quality of life of communities in the city. The two proposals that were developed through the proceedings of the School, INTA MOAT and Daphne's Diary, started with the premise of exploring the capacity of ICT for intercultural dialogue by way of intangible heritage, individuals' views and co-management of the space.

This approach is conceptually different to typical ICT products for smart tourism, e.g. mobile apps such as Detour and Guidekick, as the motive force of the latter is to provide an easily accessed gateway to relevant historical information and facilitate a visit to the space. These mobile app platforms and services that are already available on the market include: Detour[5] is a GPS-enabled audio guide that contains audio clips for historical or pop culture spots around the globe. It can sync with other smartphones that run the application so that many people experience the same audio tour at the same time; Guidekick[6] is built for the San Francisco Bay Area's top historical destinations with fully interactive 3D maps, music, and narrative clips. The Training School started with the consideration that the level of user engagement is typically low in these applications, and most importantly the information flow is largely single directional, as data are transmitted from the authors - who control and regulate the content - to consumers. In an effort to strengthen user engagement the School focused on exploring the capacity of the space, and of built heritage, for the development of new, more interactive, conditions for the appropriation of the moat as a common resource of the city. In order to contribute to this effort, participants had to be

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[4] http://whc.unesco.org/en/tentativelists/5855/

[5] https://www.detour.com/

[6] http://www.guidekick.co/

introduced to the history of the site under study, to encounter its contemporary conditions and real uses and, through series of discursive formations and a meshwork of hands-on and site-specific actions, to develop their personal vision for the moat. Public space in the walled city of Nicosia takes shape in the limited empty space left by the dense built environment that was formed by the successive layers of its history. This organic development shaped a system of public spaces that are operating at important nodes of the commercial streets and the network of small scale squares, which were formed historically around places of worship, markets, schools and other public buildings which gradually became landmarks and points of reference.

A short-term (sampling) survey was conducted by one of the teams. This sampling was necessary for the School to approach the everyday life of the site and allow for some anecdotal views of users and undocumented conditions of uses to be identified. The presentations and discussions that took place during the first couple of days of the School were complemented by opportunities for on-site observation by means of a few site visits, walking experiences along the moat as a practice of site analysis, as well as visits to the local cultural key-players such as the Leventis Municipal Museum[7].

The theoretical considerations that supported the conceptual design of new proposals by the participants defined public open space as commons and explored innovative ways for its management and sustainable development through the use of new information and communication technologies. They argued that hybrid conglomerates of space and technological interfaces provide this possibility and considered practices and technologies that can be used in order to enhance community identity, social interaction and user engagement in the governance of the public open space as a commons. The presentations concluded with some remarks on the conditions under which the hybrid of a public open space with ICT features could be approached as yet another kind of 'soft' type of common pool resource.

The political framework, theoretical considerations, historical information and practice-based methodologies of these specialists that were engaged in the event were complemented by two more discussions that were necessary to complete the knowledge of the topic of the training to be transferred to the participants of the School. The first of these discussions regarded the specifics of the methodological inquiry as to 'why' we are interested to bring technology and nature closer together, or in other words, what is the positive impact of investing on research about the urban landscape for the sustainable development of our cities.

The final set of considerations that was offered to the trainees before they started exploring their own ideas, regarded the technological means, i.e. the necessary digital tools and state-of-the-art ICT solutions for data visualization and user interaction in the context of urban space and the built environment. The participants were introduced to the long-lasting discourse about scientific visualization of the spatial conditions of urban environments and the limitations of state-of-the-art technological solutions of interaction with regards to visual perception and the human cognition. The participants were also introduced to the basics of computer graphics and the underlying technologies of virtual reality and motion tracking for the simulation of built heritage as well as intangible heritage applications in the context of the history of Nicosia. The technical discussion was enriched by hands-on demonstrations of the technical details and constraints, practical considerations and alternative solutions to the creation and implementation of real time 3D virtual environments for interaction, with tutorials on Unity3D[8] virtual reality software (Fig. 5). This second set of technological orientated discursive formations concluded on a more theoretical note with the ethical concerns in game-design and visualization for entertainment and education as analysed and exemplified through practical cases sourced from both architectural design and the video-gaming industry.

SITE ANALYSIS

The selection of focus and topics of the invited speakers were made on the grounds of setting up the scene for the development of a series of conversations that are relevant to the overarching goal of the Training School, and the practice-based outcomes the organisers of it as envisioned. In brief, the conversations that the School was structured around of included the following:

- Heritage as driver for urban regeneration and resilience in Mediterranean cities;
- Participation, co-creation and co-management of built heritage and historic sites;

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[7] www.leventismuseum.org.cy

[8] https://unity3d.com

- Civic interaction in public spaces;
- ICT, interactive storytelling, play and digital art in public space;
- New urban sites / integration of forgotten sites in the everyday of the city; and,
- Open air public space as a common pool resource.

The international group of presenters, tutors and participants of the Training School by discussing, working actively and reflecting about the aspects and challenges relevant to these thematic areas contributed to emerging discursive formations of these interdisciplinary inquiries that are crucial for the social sustainability of our future cities.

Through the various parallel conversations that were taking place during the first half of the event, presented above, participants were informed about the place and were motivated to make site-specific proposals through their on-site study of the everyday occupation and operation of several places along the moat (Fig. 6). The aim of their on-site observations involved the following inquiries:

- Identify spaces of interaction of communities;
- Identify spaces of historical continuity (Le Goff, 1988);
- Identify spaces of fragmentation and time breakdown;
- Identify neglected spaces;
- Map uses of space;
- Identify densities (of human activity; of built space);
- Identify dual / hybrid conditions of appropriation of the space, if any;
- Identify contested spaces or areas of competition for occupation between communities;
- Identify exercised identities;
- Analyse the relation of the moat with the Walls;
- Map economic activities; and,
- Identify any temporal activities that are associated with intangible cultural heritage.

BACK TO THE FUTURE: USE OF ICT FOR THE APPROPRIATION OF THE MOAT AS URBAN COMMONS

The outcomes of the Training School included a couple of project ideas, which were both positively assessed and awarded grants for a COST Action Short Scientific Mission[9] in order to further enrich the proposed concept with practical information from the space and its users, and initiate an advertisement campaign to the public. The first of these proposals has the title Daphne's Diary[10], which was developed based on the concept of engaging with the huge volume of latent historical material of Nicosia, and the potential richness of exposing hidden or unknown facets of its history. Nicosia is a city of a rich and heterogeneous history, replete with historical sites spanning millennia, that altogether, the tangible and immaterial, constitute the present form of the lived city. While excavations and research initiatives produce an ever-expanding volume of archaeological documentation, most of it, for various reasons, will never afford to escape the archive and be presented to the public. The initial aims of the project were to develop a structure requiring minimal resources and maintenance, one that would be open, accessible and easy to produce content for, in a crowd-sourced manner. Eventually, we utilized the existing Geocaching platform that has its own infrastructure (www.geocaching.com/), practices and community, and deals with alternative, treasure-hunt-like playful explorations of the public space. Geocaching invites users to hide small containers (caches) in public space, which are represented on a map accessible by a mobile application. Daphne's Diary, rather than conceiving history as a linear sequence of events, suggests a more complex and critical approach to historical narratives. Users of the space and inhabitants of the city are invited to historical narratives by contributing narrated walks that traverse semantically the urban fabric, mirroring therefore the city's palimpsest on the virtual layer introduced by the digital infrastructure on top of the city. The suggested richness of the project eventually depends on the density and diversity of these historically corroborated accounts of past events that propose history as a multiplicity (Deleuze and Guattari, 2013). These multiple self-intersecting micro-narratives (Lyotard, 1984) are laid on the actual context they took place, and they don't privilege confrontation events, but instead human activity and interaction, suggesting a people's history of the city, rather than a top-down distributed concept of history.

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[9] http://cyberparks-project.eu/stsm
[10] Cf. http://studioany.com/projects/daphnes-diary/

The adaptation of this practice, involved the creation of a platform over this infrastructure, for disposing sequences of caches, eventually functioning as location-triggered episodes to a story in real space (Fig. 7). The episodes comprising a given story will be distributed in caches at the actual locations their narration takes place, where they can be unlocked and accessed. The stories themselves can be both real, but also crafted through the dramatization of historical facts, and will be narrated from a first person and in context, rendering them more engaging than a dry quotation of historic sources. Additionally, the episodes will be in the form of audio narratives, which the authors consider to be a less-stimulating input compared to pictures or video. As a light form of augmented reality, this mechanism can encourage and more efficiently engage with the visitors' own imaginary capacities to think of how their current setting was in the past, and furthermore, from the perspective of another person. While encouraging visitors to explore and discover the city, these stories will also function as a public location-triggered pervasive game and as a historical based audio theatre. Daphne's Diary was the pilot story developed to test this concept, intended to show by example the intersection of historical research with various narrative mechanisms fused together through creative locative writing.

The Cyberparks Project has awarded Daphne's Diary a grant for a short-term scientific mission (STSM) in order to design an implementation to be adopted and hosted by bi-communal cultural organisations of Nicosia, in collaboration with the Cyprus Institute. The team intends to conduct a workshop for introducing the project to both communities, as well as minority groups of the area, and assist in the production of additional content from their perspective. The next project resulted from the Training School has the title INTA MOAT[11]. Its concept sets to facilitate the accommodation of community-managed ephemeral activities into the moat and the public spaces around the medieval walls in a legit, publicly visible and manageable way for everyone using the platform. It's a free digital service consisting of an online platform and mobile application that enables the organization by users of activities in the monument's public spaces, and allows public visibility of the activities for others to join in.

The platform is expected to promote the public usability of the space (Fig. 8), providing information such as: availability of the specific location, spatial parameters of it, "dos and don'ts", regulations in place. It will also provide information about the intangible heritage: historical and cultural characteristics of the space, localizing the information where possible. The project will provide a time and space management tool for each of the moat's public spaces, mapped and compiled as public locations. This will allow users to propose an activity to be held in a specific location, and to 'book' the location for the time of the activity. Users will undergo an identity verification process prior to gain access to the service. The platform will also include an enquiry tool that allows users to address requests to the municipality, and to streamline the permission request process. It will also feature another tool through which the public authority can monitor the activities being held is embedded.

The vision is for the moat to become an all-day-long available public open space for local communities, temporary visitors or commuters, and open to community-sourced proposals for activities (e.g., open-air yoga classes, outdoor education events, outdoor exhibitions of city's museums, night concerts, thematic gatherings, or other). A platform visualizing the opportunities of community-based activities, as opposed to private or exclusive activities in public space, might help in setting the case for a more open use of this monument as a public commons. Within the vision of the project is also to bring people from confrontational interest groups - citizens, visitors, authorities and private stakeholders - in open dialogue; and to provide an infrastructure that helps stimulating a negotiation about the public space in the city and the management of built heritage. By empowering local communities in the co-management of the monument, and keeping the tool open to diverse users' contributions, the municipality will hopefully gain a potentially large resource pool. This civic engagement could uncover needs and uses for specific public spaces, monitor the accessibility and usability, map neglected or underused spaces and, more generally highlight problems and opportunities of the public space. Ultimately, by enhancing the perception towards the citizens of an overall coherent public space, INTA MOAT attempts to re-establish the connection of the historical value of the monument with the city's contemporary social, physical and communal uses. Each small or large-scale activity performed publicly in the moat constantly revises its identity, be it inclusive sport facility, urban nature asset, open air learning space, built heritage, etc. At the same time, it is expected that each activity will confirm the vocation of the moat as a public open space where community activities are performed and shared.

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[11] Georgios Artopoulos (Ed.), *Hybrid Heritage-scapes as Urban Commons in Mediterranean Cities: essays on accessing the deep-rooted spatial interfaces of cities*, Cyprus, Nicosia: The Cyprus Institute, 2018.

FINAL REMARKS

Eventually the effort aimed at developing proposals for repurposing the moat from being used as parking space and other fragmentary private uses, into a green belt that highlights the only shared heritage that unites the two sides of the divided city - its Medieval Walls. Concluding this overview of the event, during the School trainees learned about the Mediterranean city and were occupied with re-engaging the moat of the medieval fortification of the historic city of Nicosia in its everyday life. Notably for many of the inquiries listed above the participants delved into the history of Nicosia and successfully identified current pressing needs of the Municipality (in serving its citizens) and the Leventis Municipal Museum (in reaching out of the bounds of the building of the Museum and into the public space of the city), and on this ground they established communication with both organisations. This initiative will hopefully enable the implementation of the outcomes of the School in collaboration with the local authorities which will certify for the sustainable dissemination of this COST Action educational activity and its contribution beyond the duration of the programme.

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Fig. 1: The moat was once an empty plain that encircled the medieval city. Photo by Félix Bonfils c.1875. Source: Bonato et al., 2011, p. 197.

Fig..2: During the British rule, in response to the development of the city outside the medieval Walls, the moat was used for functions of the city as a proto-public space, hosting parades, sports fields and animal fairs (1940s). Photographs of the moat of Nicosia, from Pilides and Alpha, 2012, ©Cyprus Department of Antiquities.

Fig. 3: Aerial view of the moat highlights its occupation by multiple uses (park parks, tennis courts, football fields and others). ©Google, 2017.

Fig. 4: The extent of Nicosia's urban sprawl impacts negatively the performance of its infrastructures and networks, threatens the coherence of its urban fabric and puts pressure to the development and management of public space. Aerial views of Nicosia © [top] Cyprus Land Survey Department; [bottom] ©Google, 2017.

Fig. 5: CyI's interactive model of Nicosia's historic centre helped the participants of the Training School to better understand the geometric characteristics of the urban fabric, and the transformation of the latter through time, by means of real-time immersive rendering opportunities that were offered to them by the organisers. Source: ©Georgios Artopoulos and the Cyprus Institute, 2016.

Fig. 6: View of the moat and the Venetian fortifications of the city near the Paphos Gate and next to the buffer zone. ©Georgios Artopoulos, 2015.

Fig. 7: Discovering a cache hidden in the medieval walls of the historic city of Nicosia during the Training School. ©Constantinos Miltiadis, Paul Schmidt, Aurimas Žemaitaitis, Tamás Tóth and Simonas Skarzauskas: (November 2017).

Fig. 8: Case scenario storyboard. ©Athanasia Panagiotidi