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The Olympic Village and the Olympic Urbanism: Perception and Expectations of Olympic Specialists

Il villaggio olimpico e l'urbanistica olimpica: Percezione e aspettative degli specialisti olimpici

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Abstract. The editions of the Olympic Games (OG) created a major urban transformation, which allowed for a new critical perspective on the new urban dimension of the Mega-Event, especially in the construction of the three main physical elements built: the athletics stadium, the swimming pool facilities and, above all, the “Olympic Village”. The study analyses the Winter and Summer Olympic Villages (OV) in a general way with a particular focus on the relationship between the OV and the urban fabric. The interdependence between the city and the OG has evolved through new models of development of the Olympic event that has marked the importance of the OV in the processes of city transformation. The lack of previous studies allows us to affirm the importance of the study for the academic debate on the future of the OV. The study will use quantitative analysis to analyse the different variables and responses of the Olympic specialists who participated in the sample. The study will make it possible to observe the perceptions and expectations of the interviewees through statistical analysis. Moreover, considering that only one symposium was organised in the Olympic history in 1996, the following survey is a solid basis for designing future OV in the candidate cities. The organisation of a new symposium almost thirty years after the 1996 one is of fundamental importance to discuss the territorial impact, organisational models, heritage, infrastructure, participation, housing, social change and territorial transformations.

Keywords: olympics games, olympic legacy, sustainability, urbanism, territorialisation approach.

Riassunto. Le edizioni dei Giochi Olimpici hanno dato vita a un'importante trasformazione urbana, che ha permesso di aprire una nuova prospettiva critica sulla nuova dimensione urbana dei Giochi, soprattutto nella costruzione dei tre principali elementi fisici realizzati: lo stadio di atletica, gli impianti natatori e, soprattutto, il “Villaggio Olimpico”. Lo studio analizza i Villaggi Olimpici invernali ed estivi in modo generale, con un focus particolare sul rapporto tra il Villaggio Olimpico e il tessuto urbano. Il rapporto di interdipendenza tra la città e i Giochi Olimpici si è evoluto attraverso nuovi modelli di sviluppo dell'evento olimpico che hanno segnato l'importanza del Villaggio Olimpico nei processi di trasformazione della città. La mancanza di studi precedenti ci permette di affermare l'importanza dello studio per il dibattito accademico

sul futuro del Villaggio Olimpico. Lo studio utilizzerà l'analisi quantitativa per analizzare le diverse variabili e le risposte degli specialisti olimpici che hanno partecipato al campione. Lo studio permetterà di osservare le percezioni e le aspettative degli intervistati attraverso l'analisi statistica. Inoltre, considerando che nella storia olimpica è stato organizzato un solo simposio nel 1996, la seguente indagine costituisce una solida base per la progettazione dei futuri villaggi olimpici nelle città candidate. L'organizzazione di un nuovo simposio a quasi trent'anni da quello del 1996 è di fondamentale importanza per discutere l'impatto territoriale, i modelli organizzativi, il patrimonio, le infrastrutture, la partecipazione, gli alloggi, i cambiamenti sociali e le trasformazioni territoriali.

Parole chiave: giochi olimpici, eredità olimpica, sostenibilità, urbanistica, approccio alla territorializzazione.

1. Introduction to the Olympic Urbanism

From the first edition of the modern Olympic Games in Athens in 1896 until Tokyo in 2020, 29 summer editions have been held, and 24 were organised in different cities in 17 nations. Meanwhile, the first edition of the Winter Games was held in Chamonix in 1924 and until Beijing 2022, 24 editions were organised in 21 different cities in 12 nations. For this reason, observing different projects in different socio-economic contexts allows us to observe the impact of the OG across multiple areas. Authors such as Andranovich, Burbank and Heying (2001), analysing urban impacts, identify spatial transformations as the most visible impact and one of the most important legacies in the post-event phase. Subsequently, authors such as Kasimati (2003; 2006) and Kassen-Noor (2013), identify infrastructure as the most perceptible and dangerous legacy for the future of candidate cities. In addition, editions such as Rome, Tokyo, Mexico, Munich, Barcelona, Sydney, Turin, Vancouver, and London allow us to observe how these mega-events remain an active and dynamic heritage of the host cities today. For this reason, the metamorphosis of urban space, and the transformation of roads and infrastructures, imply new strategies to establish synergies with pre-existing urban forms without compromising the future of citizens (Bale 2004; Arsen 1997; Auruskeviciene et al. 2010). Therefore, in consideration of the visibility of the urban impact and physical transformations in Olympic cities, through the contribution of Essex and Chalkley (1998), we observe the first classification concerning urban intensity:

- Low impact: Athens, 1896, Paris (1900); St. Louis (1904), London (1948), Mexico (1968), Los Angeles (1984).

- Games that have focused on the development of sports facilities: London 1908, Stockholm (1912), Los Angeles (1932), Berlin (1936), Helsinki (1952), Melbourne 1956, Atlanta 1996.
- Games that have transformed the city's urban identity: Rome 1960, Tokyo 1964, Munich 1972, Montreal 1976, Moscow 1980, Seoul 1988, Barcelona 1992, Sydney 2000

However, the following groups refer only to the summer edition of 2000. In the following table, the OG that have taken place up to the present day and which could not be observed at that time are added. Subsequently, table 1 shows a classification of the urban impact of the winter edition.

On the other hand, the winter editions require transformations of the mountain sites, specific facilities and finally, the revolution of the transport system, which shows that over time they have developed differently from the summer editions.

In the following table, we can see the different editions in three different groups based on the impact generated.

Therefore, urban transformation and the design of spaces acquire enormous importance in the social and economic aspects of the city. The planning and construction of new sports structures in mountain areas is a sensitive issue considering the natural context. In addition, the ski jumping structures and the bobsleigh track are two of the most problematic facilities, which continue to raise doubts and criticisms of the IOC. However, the transformation of the space should be integrated into a dynamic structure rooted in a long-term plan.

The authors Chalkley and Essex (1999), in agreement with Preuss (2004), underline the importance of effective design for facilities in the post-Olympic period which tend to favour the evolution of sporting practice and ensure accommodation for the poorest citizens (Chalkley, Essex 1999).

Table 1. Urban impact of the 2004-2028 Summer Olympics. Source: The following elaboration was provided by Essex and Chalkley in 1998.

| <i>Low impact</i> | Sports facilities | Urban transformation |
|---------------------------|-------------------|----------------------|
| <i>Paris 2024 *</i> | Beijing 2008 | London 2012 |
| <i>Los Angeles 2028**</i> | Rio 2016 | Athens 2004 |
| | | Tokyo 2020 |

* The Paris 2024 edition will have 95% temporary or existing structures.

** The 2028 edition of Los Angeles will be an event with 100% temporary or existing structures.

Table 2. Urban impact of the Winter Olympics 1924-2026. Source: Author's elaboration.

| <i>Low impact</i> | Sports facilities | Urban transformation |
|----------------------------|-------------------|----------------------|
| <i>Chamonix 1924</i> | Cortina 1956 | Oslo 1952 |
| <i>Saint Moritz 1928</i> | Squaw Valley 1960 | Innsbruck 1964 |
| <i>Lake Placid 1932</i> | Lake Placid 1980 | Grenoble 1968 |
| <i>Garmish 1936</i> | Sarajevo 1984 | Sapporo 1972 |
| <i>Saint Moritz 1948</i> | Lillehammer 1994 | Innsbruck 1976 |
| <i>Calgary 1988</i> | PyeongChang 2018 | Albertville 1992 |
| <i>Salt Lake 2002</i> | | Nagano 1998 |
| <i>Milano-Cortina 2026</i> | | Turin 2006 |
| | | Vancouver 2010 |
| | | Sochi 2014 |
| | | Beijing 2022 |

Subsequently, Hiller (2014), looking at mega-events in the urban process, has identified the following phenomena that can be realised in candidate cities:

- The catalyst for urban change.
- Land-use change in urban space.
- Stimulation of creativity in spatial planning.
- They mobilise funding (private and public).
- Support in projects is very ambitious or costly.
- Requires completion by the date of the event.
- Structural improvements in specific sectors (e.g., transport).
- It produces specific structures that redefine urban space and territory.

Urban transformations can have different impacts in different areas: socio-cultural, political, and economic. Moreover, since the Turin 2006 edition, the environmental impact has become a fundamental element in the choice of candidate cities. Subsequently, the transformation of the city's image through promoting the lifestyle can help increase national pride and have a socio-cultural impact on the host community. Meanwhile, Preuss, in his 2000 study, identifies tourism as the most relevant socio-economic impact on Olympic cities in the post-Olympic period. Furthermore, the international promotion of the Olympic city should motivate businesses and investors to visit the city, taking advantage of the new services developed for the post-Olympic future (Billings 2012). For example, Barcelona's post-Olympic planning was based on the organisation of new areas specifically for technological development, and therefore investments in telecommunications were included in the budget to offer companies new services of high technological value (Brunet 2005). While in Sydney, pre-Olympic planning was an example of a promotional campaign for international companies. City and State conducted tar-

geted campaigns to encourage international companies to hold conferences and events in the city that hosted the 2000 Olympics. The promotional activities enabled the city of Sydney to host ongoing events over four years. The following significant result was the inclusion of Sydney in the international conference, congress, and events market, which can be described as surprising or unprecedented¹.

Thus, it can be stated that the OG can guarantee a unique development only if the quality of management and planning borders on perfection (Essex, Chalkley 1998; Gratton 2002; Preuss 2000; 2004).

Why do cities want to host the OG? Over time, we have observed different political motivations vital to host states. In addition, in recent years, we have seen the bidding process completely transformed to being presented by the prime minister of each country². At the political level³, the Olympic event was often presented to favour the creation of new jobs and to improve the gross domestic product of each country (Matheson 2006; Matheson, Baade 2004; McDonogh 1991).

Roughly since 2000, the protest groups⁴ against the organisation of the Olympic event have increased drastically to become active movements⁵ and they force public administrations to withdraw their political candidacies (Heine 2018). However, the referendum phenomenon remains fundamental for recognising and affirming a shared development model among all *event stakeholders*.

2. Introduction to the Olympic Village

In the modern era, candidate cities discover mega sporting events and their potential. Over time, the host cities have used the event to promote their image in the world, accelerating the process of globalisation. According to Hiller (2000; 2003), from an urban perspective, any large-scale event can be considered a mega-event if it has a significant and permanent urbanistic effect on the urban fabric. Furthermore, if the event is considered a

¹ To achieve the following result, the Sydney Organising Committee involved the top experts in Olympic planning, ensuring a unique development for the entire community.

² In 2021, for the first time, Australia's Prime Minister presented the official Melbourne 2032 bid 11 years before the Olympic event.

³ Political interest focuses on the possibility of attracting new foreign investors and increasing the capital available to meet or attempt to meet the real needs of citizens.

⁴ For example, Munich 2018 was forced to withdraw its bid because citizens, through a popular referendum, did not want any events in those locations chosen by third parties.

⁵ The Olympics is recognised as one of the most active movements internationally.

new priority for the City Council, the urban agenda will inevitably be prioritised to include the Olympic project in an overall transformation plan. Future works involving a modification or alteration of space will be promoters of the urban heritage of the OG (Hiller 2014). According to Harvey, one of the critical elements of post-industrial cities is the city's revitalisation through gentrification, leisure, and entertainment (Harvey 1991). In addition, new urban entertainment structures will be created in the central space of the post-industrial city, developing new specific urban districts (LEDs) (Sorkin 1992). Therefore, mega-events change the priority in the intervention of regular urban processes. Mega-events require long-term preparation across different project scales.

Olympic urbanism in general and the OV, in consideration of the construction processes and the reuse of the OV, represent a specific case of urban transformation (Muñoz 1996). The OV is considered the centre of the Olympic project for its functionality during the event and, above all, for its use afterwards (Muñoz 1996). In such a way, the Olympic event helps us observe the host cities' urban evolution through renovating spaces and creating new urban areas in the urban fabric. However, the research of OV involves the study of cities, planning and processes of specific interventions for the temporary accommodation of athletes.

About the concept of the OV, it is fundamental to introduce the origin of the original thinking provided through the ideas of Baron Pierre de Coubertin. The idea of creating a new "Modern Olympia" was openly put forward to groups of architects as early as 1910 by the Baron (Muñoz 1996). The OV was a complex organised in different locations to celebrate the Olympic event, inspired by internationalism and the aspirations for world peace, characteristic of the thinking of the European bourgeoisie during the first half of the 20th century (Gresleri 1994). The Baron's idea was to create a territorial space through sport and education based on Thomas Arnold's philosophy of 1830. From this point of view, Coubertin's proposal had much in common with contemporary ones, such as the "international city" conceived by the architect Ernest Hébrard as early as 1910. If the international city was defined as the new capital of peace and thought, Coubertin's Olympic city could be defined as the capital of peace and sport (Muñoz 1996). Therefore, the concentration of athletes, officials and visitors was beginning to force the IOC to consider the issue of accommodation as a priority, considering the host cities and their availability. However, at that time, the IOC was undefined (Muñoz 1996), especially regarding the budgets of the different countries, so it was not easy to manage accommodation independently.

The first solutions adopted were allocating the event to cities with hotel availability and negotiating the price for all participants. The accommodation situation was characterised by total improvisation, to the extent that some countries used boats to transport and accommodation for their delegations⁶. Over time, the Organising Committee had to get involved in the search for other places that could be temporarily transformed into accommodation, such as hospitals, schools, military camps or renting boats. The first decade was characterised by the emergency of finding accommodation for participants.

However, the regulation of the event and the predisposition of the first OV in Paris 1924 provided an unmistakable signal for the debate about the situation regarding Olympic accommodation for future editions. Therefore, the first phenomenon observed in the first OV in Paris in 1924 was undoubtedly an emergency (Muñoz 2006). The temporary requirement to house the Olympic athletes meant that decisions had to be made in time to guarantee accommodation structures for the duration of the event. It is essential to point out that the Paris OV, proposed in the form of barracks in an unoccupied area near the Olympic Stadium and with the provision of some essential services, had few elements in common with the first OV built for the Los Angeles 1932 event. During the Berlin Congress in 1930, the IOC members initiated a debate for the promotion of a new accommodation solution, which Zack Farmer promised as a new way to solve the accommodation problem, providing a solution that included food for a cost of two dollars a day⁷. Subsequently, Berlin in 1936 moved forward with constructing a permanent OV, which began to take shape as a construction site with a tremendous physical impact on the territory. As seen in the Official Report of the 1936 OCOG, the wish of the Berlin Organising Committee was to replicate the OV of Los Angeles for the emphasis and replication of the modern city of Elis (OCOG 1936). Therefore, the Organising Committee proposed a permanent solution using the Döberitz military camp, some 21 km from the Olympic site. The women, however, as in Los Angeles in 1932, were accommodated separately. The Villas of Los Angeles and Berlin were the typologies that promoted and inspired a housing model to lay the foundations for the Villas throughout the century.

⁶ The issue of travel and accommodation costs for delegations will be one of the main topics of discussion in connection with the increase in the number of participants.

⁷ The American offer of accommodation, meals and use of local transport was hard to refuse, and therefore the Village of Los Angeles will become an inspirational model for future candidate cities.

From that moment, the housing defined a new image of the “Olympic city” by including sports facilities in its architectural ensemble. Thus, the conception of the Olympic residence as more than just a temporary place for Olympic accommodation. The OV began to evolve through the definition of new proposals for the realisation and redefinition of spaces beyond specifically sporting ones. Over time, the OV will become the fundamental element in sponsoring a structural modernisation of the city, which in some cases, has become a model of future development for the host cities. The observation of successful models such as Rome (1960), Munich (1972), Barcelona (1992), Sydney (2000), Vancouver (2010), and London (2012) forces future cities to shape themselves to acquire new roles in global city networks. In the summer edition, Olympic urban planning consists of the OV, the Olympic stadium and the swimming pool. Undoubtedly, the following structures form the physical heritage of the Olympics in the host city. An urban heritage that considers each host country’s cultural, social, political, economic and sporting history can become a crucial element in creating new socio-economic dynamics. However, the OG and the OV since Rome in 1960 will play a fundamental role in the restructuring of urban space, favouring a rethinking of the scale of the project for future interventions⁸. In Oslo, Rome, Mexico, Grenoble, Munich, Barcelona, Sydney, Turin, Vancouver, and London, we have seen how the OV remain an active and dynamic heritage that continues to be transformed by the structures of the cities and the morphology of the territory.

Therefore, the potential of the OV should not only be considered at the time of the creation of new accommodation and new projects in the cities but all the possibilities for the city’s future should be thoroughly evaluated. Consequently, the Olympic Village can be considered the cornerstone of the city renewal project through the OG. The urban style, the choice of materials, and the application of new building technologies, supported by infrastructural change, represent a unique possibility for the candidate cities. However, the possibilities should be considered regarding existing plans and the city’s future projects. As we will see in the following sections, the typology of OV adopted by candidate cities in Olympic history can be analysed through different permanent and temporary models. The construction of the Olympic Village cannot be considered valuable only to carry out the obligations of the Olym-

pic Committee. Cities should consider the OV as an integrating element of a new philosophy of urban development, which, through sport, can promote a healthy lifestyle. Only in consideration of the real needs of the citizens can the permanent project meet the expectations of the host community. Otherwise, temporary solutions represent the best measures to avoid compromising the long-term future of the candidate cities. For example, the OV in Athens, Turin, Sochi, Rio and Pyeongchang, to this day, continue to compromise the future of the host cities. The State of abandonment is the result of the choice of a permanent model that was not included in the post-Olympic planning of the accommodation. These abandoned structures allow us to reflect on the importance of Olympic urban planning in not permanently compromising land in host cities.

Over time, different projects involving the reuse or renovation of urban spaces have been observed. Awareness of the impact of the OV has introduced new mixed models for the realisation of accommodation. The construction of the OV in the main fabric of the cities will lead to changes in the services available and a rise in prices, accelerating the processes of gentrification in the new neighbourhood. Moreover, in some editions such as Sydney, Athens, Beijing, and Rio, the identification of land has led to a displacement of people for the construction of the OV. At the same time, the transformation of the areas in Beijing will cause a change in land value with the subsequent change of use in the post-Olympic phase (Zou 2015). In a long-term scheme, the OV will take a central role in the physical modifications of the spaces. On one hand, changes in the value of land use can lead to real estate speculation and gentrification. On the other hand, the organisation of the OG with multiple OVs will contribute to spatial changes in different areas of the territory.

3. Methodology

As mentioned above, due to the lack of previous studies and the limited knowledge of the opinion of the agents involved in the different dynamics regarding the development of the Olympic Villages, the research proposes a quantitative methodology by a questionnaire structured using 27 closed questions and one open question was also carried out to allow the qualified interviewees to propose a personal opinion on the specific subject of the study. The interviews are part of a doctoral quantitative methodology supported by an international co-tutorship between the Universidad Autónoma de Barcelona and the Politecnico di Torino (Della Sala 2022).

⁸ Rome in 1960 will be the first Olympic city to use the Olympic event as a catalyst for other urban and infrastructural transformations proposed by the city’s post-war reconstruction.

The questionnaire is structured in four parts: 1. profile; 2. introduction; 3. Olympic Village; 4. specific questions. The following contribution will only analyse those statistically significant questions for this contribution.

The interview subjects were selected about their direct or indirect involvement in planning the Olympic Games. Professors who have not been directly involved with the IOC but have contributed effectively to the academic development of Olympic Games research have also been chosen. This group of interviews guarantee a heterogeneity of the respondents.

The qualified testimonies were chosen to have had links with the Barcelona Olympic Studies Centre, the Institute for Sports Research, the Lausanne Olympic Studies Centre, the Sydney Olympic Studies Centre, the Ottawa Olympic Studies Centre, the Rio de Janeiro Olympic Studies Centre, OMERO Interdepartmental Research Centre for Urban Studies centre and various universities which, over the years, have collaborated directly in the research and planning of the Olympic Games.

In summary, the testimonies correspond to the following profiles:

- Members of the Olympic Studies Centre
- Managers of the research committees
- Professors who publish openly or with Olympic publishers on the subject of study.
- Those responsible for Olympic Games management or planning activities.

The results from the online questionnaire for collecting the quantitative research data are shown below. Eighty-five people answered the questionnaire. It should be noted that some questions allow for multiple responses to obtain more information. In addition, the spreadsheet containing the results obtained can be consulted in the annexes. The results will be explained through the frequency of the answers and by observing the correlations between the answers using SPSS software. Likewise, the quantitative analysis will be supported by an analytical phase that will allow us to observe whether there are correlations between the answers to the research hypotheses.

It should be noted that the quantitative interview was conducted in English. The analysis was conducted using nominal and ordinal questions. The survey questions were designed to be answered with the Likert scale, which allows us to observe the Pearson correlation of the calculated variables.

The research methods are increasingly qualitative to clarify human feelings, individual experiences, and social processes (Hay 2021).

However, quantitative research is used in different areas of human geography. Specifically, quantita-

tive research enables the elucidation of human environments and experiences within various conceptual frameworks. Quantitative research using statistical techniques must answer two fundamental questions. The first concerns the relationship between phenomena and places, and the second examines their differences. Therefore, the fundamental questions of human geographers concern the observation of social structures related to the individual's experiences within places. Statistical methods also raised the question of experimental design, how to formulate hypotheses and how to test them. Science is always open to new experiments to observe phenomena related to human experience. Geographical researchers can use quantitative analysis and subject the coded results to standard statistical analysis to determine frequencies, correlations, variations, etcetera. Therefore, the present study uses statistical analysis to determine the relevant correlations between the intensity and frequency of the observed phenomenon. In addition, the choice of actors interviewed allows for a heterogeneous observation of the phenomenon through the previous experience of geographers, urban planners and planners who contributed to stimulating the academy under study.

While the analysis of the data depends on three main factors: 1. The level of measurement of the variables; 2. The structure of the study hypotheses; 3. The analytical interest of the researcher (Sampieri 2014).

Bivariate correlation

The following correlations of the responses were measured through Pearson correlation coefficient (r), which allows us to measure the linear dependence between two quantitative random variables. This Pearson index helps us recognise and measure the relationship between two quantitative and continuous variables. The correlation coefficient can be interpreted through values ranging from +1 to -1. A value of 0 indicates no association between the two variables. A value greater than 0 indicates that there is a positive association. Positive association indicates that, as the value of one variable increases, the other variable also increases. A value less than 0 indicates a negative association.

- correlation less than zero: negative correlation, variables are inversely related;
- correlation greater than zero: perfect positive correlation. The variables are directly correlated;
- correlation equal to zero: no covariance can be determined.

Legend

In the following graphs, the values of the statistical analysis of the correlation between the variables of the quantitative interview can be observed. The observation of the Pearson correlation will be done through the values that are valid and statistically significant. Two values will indicate the confidence and reliability index of the model: (*) will indicate a confidence interval of 95%, and (**) will indicate a confidence interval of 99%. These two levels shall indicate only statistically significant and reliable values.

4. Results

The analysis of the results only considers questions administered to respondents where a statistically significant correlation is observed. Therefore, the questions analysed will be as follows:

- Question 12. Does the Olympic Village need to be planned through a specific strategy?
- Question 15. Do you think that the planning of the Olympic Village – to guarantee the long-term development of the city and the region – should be included in a territorial transformation project?
- Question 21. Can the construction of Olympic Winter Villages in mountain communities promote a process of territorial expansion by the host city?
- Question 22. Should the construction of the Olympic Village be carried out through two complementary strategies: a financing model for the construction period and a management model for the post-Olympic period?
- Question 24. In your experience, at the academic level, does the issue of Olympic urbanism need to be further explored through longitudinal and cross-sectional studies?
- Question 26. Today, the 1996 Symposium on Olympic Villages held by the IOC in Lausanne is the only academic conference that analysed the evolution of the Summer Olympic Villages over time in a transversal way. In your opinion, should a new symposium be held to reflect on the Winter Olympic Villages and to observe the new strategies carried out by the candidate cities?

From this question, we can see how the variable related to the planning of a specific strategy establishes correlations between other variables: questions 9, 13, 15, 17, 18, 21, 22, 24, and 26. We will only reflect on the variables with a reliability index of 99%, and the other variables can be found in the annexe of the quantitative

methodology. A correlation of 28.4% between questions 12 and 9 was observed earlier. Subsequently, a correlation of 31.10% is observed between the strategic planning of the OV and its definition as a unique instrument for the long-term development of the candidate cities (question 13). The definition of a specific OV strategy will guarantee its own identity over time in the candidate cities.

Meanwhile, a second correlation of 49.5% is observed between defining a specific OV strategy and its inclusion in a territorial transformation project (question 15). The definition of a specific strategy will inevitably be related to ensuring a long-term strategy for the host city. Subsequently, a correlation of 57.1% is observed between the definition of a specific strategy for the construction of the OV and its specific use in the post-Olympic period (question 17). The planning of the OV through a specific strategy is related to the definition of its post-Olympic use. These data allow us to affirm that the post-Olympic use should be included in a specific strategy planned in the pre-Olympic period to be exploited in the post-Olympic period. Subsequently, a correlation of 68.9% is observed between the variable relating to the specific strategy of the OV and the respect of the project for the real needs of the citizens (question 18). The definition of a specific strategy for planning the OV must consider the needs of citizens before being implemented in the city. A correlation of 54.7% is observed between the variable concerning the specific strategy for the OV and the definition of two specific strategies for the different Olympic construction and planning periods (question 22). The definition of a specific strategy for the development of the Olympic Village implies the definition of two different strategies for the period of the Olympic project. A strategy for financing the OV and a specific strategy for managing the Village in the post-Olympic period. Subsequently, a correlation of 29.3% can be observed between the variable relating to the specific strategy and the importance of furthering the theme through longitudinal and transversal studies (question 24). The definition of a specific strategy for planning the OV in the territory implies an increase in the interest and importance of studying the issue of Olympic urbanism in depth through longitudinal and transversal studies. Finally, a correlation of 30.7% is shown between the variable relating to the definition of a specific strategy for the development of the OV and the need to provide a new Olympic symposium to discuss the evolution of the OV issue (question 26). The definition of a specific strategy for planning the OV implies greater importance in reflecting on the evolution of the Olympic Village through the organisation of a new Olympic symposium

Question 12. Does the Olympic Village need to be planned through a specific strategy?

| | 2 | 3 | 7 | 9 | 12 | 13 | 15 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|---|--------|--------|-------|---------|----|---------|---------|---------|---------|------|-------|--------|---------|-------|---------|--------|---------|
| r | -0,049 | -0,045 | 0,203 | 0,284** | 1 | 0,310** | 0,493** | 0,571** | 0,689** | 0,18 | 0,201 | 0,219* | 0,547** | 0,199 | 0,293** | -0,015 | 0,307** |

Question 15. Do you think that the planning of the Olympic Village – to guarantee the long-term development of the city and the region – should be included in a territorial transformation project?

| | 2 | 3 | 7 | 9 | 12 | 13 | 15 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|---|--------|-------|-------|--------|--------|-------|----|--------|--------|--------|------|--------|--------|-------|-------|--------|--------|
| r | -0,105 | 0,007 | ,271* | ,393** | ,493** | ,270* | 1 | ,484** | ,382** | ,376** | 0,14 | ,312** | ,336** | 0,163 | ,259* | -0,144 | ,440** |

Question 21. Can the construction of Olympic Winter Villages in mountain communities promote a process of territorial expansion by the host city?

| | 2 | 3 | 7 | 9 | 12 | 13 | 15 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|---|------|-------|-------|-------|--------|-------|---------|-------|---------|---------|---------|----|---------|-------|---------|--------|--------|
| r | 0,02 | 0,033 | 0,032 | 0,139 | 0,219* | 0,077 | 0,312** | 0,213 | 0,316** | 0,414** | 0,415** | 1 | 0,297** | 0,019 | 0,323** | -0,014 | 0,259* |

* Correlation is significant at the 0.05 level (two-tailed).

** Correlation is significant at the 0.01 level (two-tailed).

to discuss and debate one theme of Olympic urbanism. In conclusion, it can be seen how the variable defined by question 12 is correlated with other variables that involve and influence the future development of Olympic cities. The definition and planning of a specific strategy for developing the OV will imply the involvement of other territorial relations and strategies.

From this question, we can observe how the variable related to the planning of the OV in a strategy of territorial transformation establishes correlations between other variables: questions 7, 9, 12, 13, 17, 18, 19, 21, 22, 24, and 26.

Only the variables with a reliability index of 99% will be reflected upon, and the other variables can be found in the annexe of the quantitative methodology. The correlation between questions 15 and questions 2, and 3, have been analysed previously. A correlation of 48.4% is observed between the inclusion of the OV in a territorial transformation strategy and its specific post-Olympic use (question 17). Including the OV in a long-term strategy must inevitably consider the definition of the specific use of the Olympic Village in the post-Olympic period. Meanwhile, a correlation of 38.2% is observed between the inclusion of the OV in a territorial transformation project and the consideration of the real needs of citizens (question 18). Therefore, the inclusion of the OV in a territorial transformation strategy must inevitably consider citizens and their needs. Thus, we observe a 37.6% correlation between the inclusion of the OV and its influence on promoting social change in the host city (question 19). Including the OV in a territorial

transformation project will inevitably contribute to promoting new social changes in the host city. A correlation of 31.2% is observed between the inclusion of the OV and its contribution to territorial expansion processes in mountain communities (question 21). Including the OV in a territorial transformation project can promote a territorial expansion process in mountain communities. A correlation of 33.6% is established between the inclusion of the OV and its complementary strategies in the different Olympic periods (question 22). To guarantee long-term development in Olympic cities, the inclusion of the OV in a territorial transformation project must necessarily be carried out through two complementary strategies: a financing model for the construction period and a post-Olympic management model. Finally, a correlation of 44.0% was observed between the inclusion of the OV and the importance of considering new territorial strategies through the organisation of a new Olympic symposium (question 26). Including the OV in a territorial transformation project implies a greater interest in studying them to consider future strategies for the host cities. In conclusion, the inclusion of the OV in a long-term territorial transformation strategy is directly related to other elements to consider when planning the OV in the territory.

Thanks to this question, we can see how the variable related to the promotion of a process of territorial expansion of the OV in mountain communities establishes correlations between other variables: question 12, question 15, question 18, question 19, question 20, question 22, question 24, question 26. We will only reflect on the vari-

Question 22. Should the construction of the Olympic Village be carried out through two complementary strategies: a financing model for the construction period and a management model for the post-Olympic period?

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|---|--------|--------|-------|--------|---------|--------|---------|---------|---------|---------|-------|---------|----|-------|---------|--------|--------|
| | 2 | 3 | 7 | 9 | 12 | 13 | 15 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| r | -0,147 | -0,154 | 0,175 | 0,231* | 0,547** | 0,222* | 0,336** | 0,391** | 0,569** | 0,376** | 0,139 | 0,297** | 1 | 0,111 | 0,387** | -0,105 | 0,239* |

Question 24. In your experience, at the academic level, does the issue of Olympic urbanism need to be further explored through longitudinal and cross-sectional studies?

| | | | | | | | | | | | | | | | | | |
|---|----------|--------|-------|--------|---------|-------|--------|-------|---------|---------|-------|---------|---------|-------|----|--------|---------|
| | 2 | 3 | 7 | 9 | 12 | 13 | 15 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| r | -0,306** | -0,147 | 0,094 | 0,226* | 0,293** | 0,138 | 0,259* | 0,187 | 0,349** | 0,458** | 0,043 | 0,323** | 0,387** | 0,167 | 1 | -0,067 | 0,468** |

Question 26. Today, the 1996 Symposium on Olympic Villages held by the IOC in Lausanne is the only academic conference that analysed the evolution of the Summer Olympic Villages over time in a transversal way. In your opinion, should a new symposium be held to reflect on the Winter Olympic Villages and to observe the new strategies carried out by the candidate cities?

| | | | | | | | | | | | | | | | | | |
|---|---------|--------|-------|---------|---------|--------|---------|---------|---------|---------|--------|--------|--------|-------|---------|--------|----|
| | 2 | 3 | 7 | 9 | 12 | 13 | 15 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| r | -0,244* | -0,183 | 0,139 | 0,344** | 0,307** | 0,235* | 0,440** | 0,329** | 0,426** | 0,426** | 0,256* | 0,259* | 0,239* | 0,195 | 0,468** | -0,076 | 1 |

* Correlation is significant at the 0.05 level (two-tailed).

** Correlation is significant at the 0.01 level (two-tailed).

ables with a 99% reliability index, and the other variables can be seen in the annexe of the quantitative methodology. The correlation between questions 21 and questions 12,15,18,19 and 20 was analysed earlier. Subsequently, a correlation of 29.7% is observed between the variable related to territorial expansion in mountain communities and the implementation of two different and complementary strategies for the operation of the OV over time (question 22). The definition of a financing model and a specific management model for each period of the Winter OV may be the promoter of a territorial expansion process in the post-Olympic period. Finally, a correlation of 32.3% was observed between the variable relating to territorial expansion in mountain communities and the need to study the subject of Olympic urban planning in greater depth at the academic level (question 24). The study and observation of Olympic urban planning through longitudinal and transversal studies will help understand the territorial expansion processes observed in the mountain communities where OV was built.

With this question, we observe how the variable related to the different complementary strategies for the exploitation of the OV establishes correlations between other variables: questions 9, 12, 13, 15, 17, 18, 19, 21, 24, and 26.

Only the variables with a reliability index of 99% will be considered, and the other variables can be found in the annexe of the quantitative methodology. The correlation between questions 22 and questions 9, 12, 13, 15,

17, 18, 19, and 21 has been noted above. Subsequently, a correlation of 38.7% is observed between the variable related to the different strategies and the requirement to study the subject of Olympic urbanism in depth through longitudinal and transversal studies (question 24). Through longitudinal and transversal studies, the study and academic research on the OG can help implement and execute complementary strategies for the OV's planning, financing and management over time.

From this question, we can see how the variable related to the need to deepen the theme of Olympic urbanism through longitudinal and transversal studies establishes correlations between other variables: question 2, question 9, question 12, question 15, question 18, question 19, question 21, question 22, question 26. Only the variables with a reliability index of 99% will be reflected upon, and the other variables can be found in the annexe of the quantitative methodology. The correlation between questions 24 and questions 2,3,9,12,15,18,19,21 and 22 was seen earlier. Subsequently, a correlation of 46.8% is observed between the variable relating to studies on the subject of Olympic urbanism and the need to provide a new symposium on OV (question 26). Over time, the study and academic research on Olympic urbanism need to be deepened and observed from different perspectives. The organisation of a new Olympic symposium is essential to reflect on the Winter OV, looking at the new strategies pursued by the candidate cities.

This last question allows us to observe how the variable related to the organisation of a new symposium establishes correlations between other variables: questions 2, 9, 12, 13, 15, 17, 18, 19, 20, 21, 22, and 24. Only the variables with a reliability index of 99% will be considered, and the other variables can be found in the annexe of the quantitative methodology. The correlation between questions 26 and questions 2, 9, 12, 13, 15, 17, 18, 19, 20, 21, 22, and 24 has been observed throughout the study. In conclusion, it can be observed that question 26 has the highest number of correlations (12) among all the variables considered. This data confirms with certainty that the organisation of a new Olympic symposium is of fundamental importance for the academic community's discussion, observation and reflection on the evolution of the spatial organisation models of the Olympic Winter Villages. Over the years, it has been possible to observe different models of the spatial organisation constantly evolving, which can help us understand the subject of Olympic urbanism globally. The 1996 Olympic Symposium proved to be the only institutional moment of academic debate and reflection in the scientific community. As we have been able to observe through the analysis of the correlations, the organisation of a new symposium almost thirty years after the 1996 symposium is of fundamental importance to discuss issues related to territorial impact, organisational models, heritage, legacy, infrastructures, participation, housing, social changes and territorial transformations.

5. The Future Development of the Olympic Village in the Candidate Cities

The contributions of the interviewees allow us to affirm that there are some common reflections on the theme of urban development, management models, accommodation, sustainability, and the implementation of the OV project. In addition, most interviewees stated that being a complex issue, it would need to be researched longitudinally to contribute effectively to developing the Olympic urbanism theme.

Firstly, it is interesting to note that most interviewees have stated that the OV should be thought of as a long-term plan and add the ordinary transformations of each Olympic city. In addition, some interviewees claim that the International Olympic Committee cannot interfere in the accommodation planning when the local community drives OV. This statement allows us to reflect on the urban development models of each city and each Olympic experience. Furthermore, inter-

viewees clearly stated that the local community must be included in the accommodation project.

Secondly, some interviewees state that the International Olympic Committee should reconsider the need to concentrate on constructing the OV in a central and crucial location. Over time, we have observed different cities in the post-Olympic period experiencing a rise in housing prices and property speculation caused by the Olympic event. Creating a new neighbourhood in a central location will inevitably lead to changes in the urban fabric, in the centrality of cities, becoming an added value for future citizens. The planning and identification of the location of the OV must be subject to the strictest analysis of social and economic equity. Some interviewees stated that it is necessary to balance the investment in housing, not to have athletes in one place. Through co-location, the environmental footprint and all the travel issues related to the mobility of Olympic athletes will be reduced. Thus, planning different OV in the territory will ensure a reduction of infrastructural works and modifications of the mobility systems of the cities.

Thirdly, the interviewees agree on the importance of defining a long-term plan that addresses the following issues: housing, integration, sustainability, and citizens' well-being. The focus of the project should be on citizens and their demands. In addition, some interviewees suggested that the planning process should include an active and shared planning phase so that new ideas and proposals become good practices for future cities and experiences. Promoting healthy lifestyles through shared planning can promote new ways of designing future cities in the long term. Moreover, it should be easier to compromise with the IOC to develop four, five, six or more OV rather than just one. The development of OV in the future should involve a hybrid approach, including diverse accommodation areas through new sustainable practices for the future of the cities. In addition, the possibility of using mixed housing models was chosen by only a part of the interviewees; the majority stated that the Olympic Village should provide popular housing and affordable residences in the future. The key problem of contemporary cities is the lack of social housing, environmental sustainability, and affordability. For this reason, the OV has a unique and intangible potential for candidate cities. The Olympic urbanism that finds its ultimate expression in the OV has the power to offer physical visions of the future of housing and urbanism for our future cities. The assembly of temporary facilities for athletes or competitions allows us to explore new construction and practices that could never be carried out in cities. Planning a temporary area that progres-

sively transforms into a public space will unequivocally improve the quality of life and the possibilities of neighbourhoods permanently. The interviewees agree on the importance of a multi-scale approach that can redefine OV internal and external spaces. As discussed by interviewees who studied or participated in the London 2012 and Sydney 2000 Games, we should reflect and consider the possible futures of OV. In general, the concept of environmental sustainability, as it is used today, needs to be studied through multidisciplinary analyses that consider the phenomenon from a holistic view. However, the concept of environmental impact needs to be considered within the new urban structural changes brought about by the OV. Fourthly, about the management and planning models of the OV of the future, some interviewees stated that there is no ideal model and that their management depends on the structure and finances of each specific city. In addition, most interviewees state that the management model should be provided through mixed housing that may include social housing, decreasing the possibility of displacement of citizens after the Olympic event. The planning of the OV should be strategically thought out to encompass the local communities' needs, desires, and objectives. As for the future of the OV, most interviewees say that it will continue to evolve as it does now because the idea of a community in an OV is fundamental to transmitting the values of Olympism.

Meanwhile, some interviewees stated that the Winter OV had received relatively little attention. The issue of the Winter OV about climate change, environmental impact and changing strategies in mountain communities is seen as fundamental to developing sustainable solutions over time. According to most interviewees' opinions, the issue is complex. For this reason, Olympic urban planning needs longitudinal studies to observe these added structures' total evolution over time in a territory sensitive to the whole ecosystem. Over the years, we have always observed that a solution for the OV in the post-Olympic period was to be integrated into the tourist circuits of the mountain communities. Today, the Turin, Vancouver, Sochi, PyeongChang and Milan-Cortina projects allow us to observe other forms of mixed management that can favour urbanisation in areas that are sensitive to the future of our world. It can be stated that the Olympic Village model has reached a territorial dimension that implies the construction of multiple Olympic Villages in a territory that can reach up to 200 km. However, if we consider the Olympic Villages in mountainous locations, it is argued that the provision of new accommodation can be the catalyst for future tourist exploitation of the competition areas.

According to some interviewees, OV should not be seen as a tool that can help solve chronic problems in cities. Building accommodations through public funding to be sold to private parties in the post-Olympic period will lead to lucrative projects that may develop different social problems. The construction of the OV through private funding will inevitably reduce the post-Olympic legacy possibilities for the host society. The OV has to be part of a whole infrastructural system developed to improve the host region's infra- and extra-territorial communications. Finally, about the management models of the OV, some interviewees stated that the most sustainable examples over time are those solutions that have integrated a university housing strategy. The type and size of housing required for the OV are best suited to university residences in cities with large universities, developing a unique legacy for universities. The construction and planning of a new neighbourhood nowadays must pay attention to the fulfilment of different environmental aspects that will be a priority for the community. Waste management, energy efficiency, public transport and public spaces. Planning the OV in future cities has become a more complex challenge than in the past.

In addition, planning a Winter Olympic event in a regional territory introduced new challenges that were not considered before and were never considered in other experiences. Considering the Winter and Summer OV as two distinct entities will be the first step to favour and stimulating longitudinal research on the specific topic. The interviewees' statements allow us to elucidate that the OV of the future should be planned through social housing strategies, infrastructural system integration, integrated planning and a mixed housing experience.

Moreover, if we look at the editions of Barcelona 1992, Turin 2006, Vancouver 2010, London 2012, Tokyo 2020 and Beijing 2022, the OV built in the main fabric of the cities has favoured the emergence of a new area which, in the post-event phase, could favour an expansion of the urban limits. However, the summer OV, if we take as a model a neighbourhood of 20,000 people, will have a different impact than its winter counterpart, as the latter will have to host some 5,000 athletes and officials. Therefore, based on the different forms, accommodation organisation models, size and distances of the areas of interest in each context, the OV can provoke the transformation of an urban area that, over time, can become a crucial element for the expansion of urban limits. Consequently, the role of the host community and citizens should be crucial in the organisation of the new housing. Including other elements and criteria in the evaluation process, such as the percentage of social hous-

ing or the number of green spaces, could decrease the chances of impacting the host territory and society. Then, organising a new Olympic symposium is essential to discuss research concerning Olympic urbanism and villages.

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