PROCEEDINGS

of the

INTERNATIONAL CONFERENCE

on

CHANGING CITIES III

Spatial, Design, Landscape & Socio-economic Dimensions

Under the aegis of

The Department of Planning and Regional Development, University of Thessaly The Greek Ministry of Tourism

> Editor: **Professor Aspa Gospodini** University of Thessaly

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The conference is organised by the **Lab of Urban Morphology and Design**, Directed by Dr. Aspa Gospodini, Professor of Urban Planning & Design, Department of Planning & Regional Development, **University of Thessaly, Volos, Greece.**

In collaboration with:

- **The Department of Product & System Design Engineering**, University of the Aegean, Syros Island, Greece;
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FORWARD

The 1st international conference on 'Changing Cities', which was hosted on Skiathos island, 18-22 June 2013, had started as an idea in 2012. The initial concept was to organise an academic event creative, inspiring, stimulating, and above all, international. There had been a belief that such an academic event may contribute in revitalizing academia and promoting tourism in Greece - hit by the economic crisis of public debt in the Eurozone. Given that during the last years, both societies and cities in Greece have been dramatically changing, shrinking in economic, spatial and demographic terms, we have chosen Changing Cities as the main theme of this series of conferences. Our aspiration had been to provide an international forum for transaction of ideas on cities and bring together architects, urban designers, landscape designers, urban planners, urban geographers, urban economists, urban sociologists and demographers, to investigate new challenges. This goal became a reality since the 1st Changing Cities conference gained strong interest of academics and researchers from many countries and regions around the world; Greece and the Balkans, south Europe and Mediterranean countries, northwest Europe, Middle East and Asia, Far East, North America, Latin America and Africa. A total of about 460 abstracts and 320 papers had been submitted in the conference – most of them, about 60% from abroad.

The 2nd Changing Cities conference, Porto Heli, Peloponnese, Greece, 22-26 June 2015, was also fruitful academically since it attracted the attention of scholars, not only from Greece, the Balkans and Europe, but also from far-away countries like USA and Canada, Brazil, Chile, Colombia in Latin America, and China, Japan and Australia in the far-east. We received about 500 abstracts and more than 350 papers. Among the scholars participating, there were about 185 Greek academics and researchers. This indicated that despite shortage of research funds, salary cuts, and broken morale, university teachers and researchers in Greek state universities were trying hard to keep a high-level academic status. Besides, the number of contributions by scholars from abroad (63%) emphatically pointed the international character of the conference.

The results of the 3rd Changing Cities conference, Syros Island, Greece, 26-30 June 2017, points that the series of conferences on Changing Cities is getting established in the international academia as a significant bi-annual international forum. We have received 485 abstracts and 200 papers from many countries around the globe – honouring our efforts as Organising Committee. The contribution by Greek researchers and scholars is 27.42% while that of foreign academics reaches 72.58%; this indicates the international character of the conference. Regarding foreign academics, many of them are from neighbouring countries such as Italy (69), Turkey (37), Cyprus (11), and

Serbia (6); but also many are from distant countries such as Brazil (27), USA (16), UK (16), Poland (11), and Netherlands (10).

The strong interest for this conference by academic communities allows us to have thoughts about organising the 4th Changing Cities conferences in two years' time, spatially hosted in a different Greek sea resort – probably Santorini Island, or Crete.

I would like first to thank the Organising Committee, the keynote speakers, and the members of the international scientific board who supported enthusiastically the academic organization of this conference. I would especially like to thank those colleagues of the Scientific Committee who have also pre-organized special sessions in this conference. I would like to thank all the academic, political and scientific organisations which supported this conference in many different ways: University of Thessaly; The Municipal Authority of Syros Island; the Greek Ministry of Tourism; The Greek National Tourism Organisation (GNTO); Finally, I would like to thank the shipping companies 'Blue Star Ferries' and 'SuperFast Ferries' which sponsored sea travel to and from Syros Island.

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Public Space & Sustainable Regeneration



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Sport and leisure as elements for the regeneration of public spaces in the Catalan region

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Abstract

In the Catalan region, after the fall of the dictatorship, a process of democratization of the cities begun. Especially the research will focus on the process of democratization of public open spaces and the practice of sports. Sports facilities are considered to be part of a system of basic equipments, to be included in a plan of reconfiguration of outdoor spaces and services for the citizen in general. The experimentation on this issue in the Catalan region has led to the definition, on one hand, of the sports pavilion, and on the other to the integration of sports and school services.

Keywords: public space, leisure, Catalan region, sport-for-all, equipment

1. INTRODUCTION

The work presented in this article is part of the research conducted for the Ph.D. thesis with the title "Theoretical and practical aspects in the design of architecture for sports: functional integration and settlement strategies". The thesis studies the evolution of facilities for sport and leisure since the post-war years till today. Although this topic is already studied by historians, sociologists and geographers, the experimentation and construction of buildings for leisure has yet to be fully investigated by architectural research.

In the first phase of the research has been studied the contribution of several disciplines that had introduced new paradigms and themes about the typological and settlement characteristics of the sport spaces.

The study does not focus on facilities specialized for the competitions, as many publications on stadia and sport palaces are already edited, but it deals with multifunctional facilities facing with the urban scale, related with the context in which are located and with a high level of attractiveness. My research will focus on facilities related to this.

1.1 'De-sportification' of sport and new settlement forms

Since the end of the Sixties and during the Seventies appeared the phenomenon named by the sport historians as Jogging Revolution. This is the era of the switch from sport as a specialised activity to leisure in which sport figures as part of a new and better way of life.

In the Italian context, an important reference is the work of the sociologist Nicola Porro¹.

¹ Professor of Sociology at Facoltà di scienze motorie, Università di Cassino. He was president of the UISP association (Unione italiana sport per tutti) and of EASS (European Association of Sociology of Sport).

According to him, the expansion of the physical-motor practice, known in Italy in the last three decades of the Twentieth Century, brought back to a more general transformation of lifestyles which involved all the industrially mature societies. He notes, according with the theories of Inglehart and Knopp¹, a silent post-materialism revolution in which there was a simultaneous process of sportification of society and de-sportification of sport.

The outlines of the changing of the sport phenomenon given by sociologists and geographers introduce the issue of a transformation of the settlement forms of the spaces designed to the practice of sports. Running, as other sports, is no more performed exclusively in the specially fitted spaces (stadia, sport palaces, ecc.): sport is incorporated in the city² both by a more free use of open public spaces and by the construction of multifunctional facilities for leisure.

1.2 Peculiarities and invariants of the leisure centre: a comparative approach

It was useful for the research purpose to frame the theme of the leisure complex in a wider spectrum. In this way I worked to focus the relationship among architecture, functional organization and customer. In this three main factors were recognized the key elements in setting of sports space. Taking this line of work it is possible to identify five main time-spans:

- 1900-1920: patronage and mutual association of self-support play an essential role in the organizzation of leisure
- 1920-1940: authoritarian, patronising and relief structures organize leisure in a political and hierarchical system
- 1950-1970: spread of the welfare-state policy related to the democratization of leisure
- 1970-1990: the increase of associative experience based mostly on voluntary action 'take place' of the state organization
- 1990-2016: the beginning of the debate about the organization of a 'Second Welfare' promoted mainly by private system

This periodization helps to make evidence of the relationship among customer, uses and settlement's characters of spaces for sports practice. Based on this it a first hypothesis was drawing up about the selected context for the comparison (Figure 1):

- for the period 1950-1970 it considered the English case and the experimentation on multi-purpose buildings and civic centres. The leisure centre
- for the period 1970-1990 the Spanish case offers many suggestion, not only for the 'Barcelona model'³, but also for a range of architectural experiments on the issue of 'sport for all'. The district equipment
- for the period 1990-2016 the experience of the South/Central-American countries and the Brazilian Sesc⁴ that provides an interesting instances on the 'Second Welfare' opportunities. The second (welfare) opportunity

¹ Inglehart, R., 1996, *Modernization and Postmodernization. Cultural, Economic and Political change in 43 societies*, Princeton University Press, Princeton; de Knopp, P., 1998, *Sport, Turism: a State of the Art*, in "European Journal for Sport Management", vol. 5, 2, pp. 5-20.

² Porro N., 2001, *Lineamenti di sociologia dello sport*, Carocci, Roma

³ Related to the assignment of the 1992 Olympic games, it was being promoted a set of urban fabric renewal initiatives and had successfully developed the urban environment and its public spaces.

⁴ The *Serviço Social do Comércio* is a non-profit private institution, kept by businessmen in the trade of goods, services and tourism. It aimed primarily for the welfare of their employees and family but open to the general community.



Figure 1: London, Heamstead civic centre, Basil Spence, 1964; Barcelona, Perril sports centre, Bach-Mora, 1989; Monterrey, Community center San Bernabé, Agustín Landa Vértiz, 2011

2. METHODOLOGY AND CASE STUDY

Referring to the time-spans presented in the introduction the comparative work was organized among different contexts. The comparative analysis will be diachronic: cross-cutting through the identified spans, comparing different environments, Welare policies and the architectural and settlement's characters; synchronic: comparing case-studies studied in their peculiarities, with the aim to trace the experimentation on Welfare sport architectures in a specific geographical context and period of time.

The research aims to:

- clarify the relationship between "main issues" (as invariants) and architectural design
- assess the functional requirements and set out the architectural characters (interdependent variables) that are the constitutive elements of typology.
- codifying invariants and peculiarities of case-studies

2.1 Methodology

Compared to the overall goals this article aims to deepen the time span 1970-1990 and the Catalan case. In order to achieve the objectives it is preferred, after a brief introduction, focus on sport's architecture taken into consideration. Themselves will offer opportunities to a more general discussion on the Catalan architectural.

The analysis of this theme is based upon, at first, general texts on the architectural and urban matter of Barcelona. It was then examined the issue of the promotion of sport-for-all and its architecture in Catalonia. Than it was conducted an examination of journals at the Biblioteca de Catalunya and the library of the Col·legi d'Arquitectes de Catalunya.

The collected documentations has been indexed according to defined criteria (place, architect, typology, construction years) and organized interpretive profiling that summarize the settlement and architectural characters.

Through a redrawing of a selection of these architectures started the identification and comparison of the constituent architectural elements of the projects.

2.2 The Catalan case

The political change of the late 1970s was [...] the right time to believe that the age-long breach between culture and local government would be closed so that both sectors could work in harmony. The efforts made in this sense, both by the architects forming part of the government and by those others who, though not part of it, have contributed their design, began a new era of extraordinary vitality in Catalan architecture. Indeed, when compared with the rest of contemporary architecture in Europe, the present state of Catalan architecture is unique in regard to the amount of output and its wide scope. [...] Our particular contribution in response to this challenge lies in understanding and struggling for architecture as a necessity.

(Josep Lluis Mateo¹)

The development of sports practice is inherently commingled with the social and political conditions of the country. Sixte Abadia Naudi, the sport historian, compares the democratic transition of Spain to the dissemination of sports practice "*para todos*". In the first period, 1975-1979, sport associations are the main promoters of the indispensable² reorganization of leisure activities. From 1979 on, it is the charter of self-government which stated that sports policy would be the exclusive competence of the Generalitat, so for the first time during peacetime, this regional Catalan institution was able to organize sports.

In the same year the *Manifesto*, edited by Asociaciones de Vecinos de Barcelona, finds the main set of problems of the city, among which « *Sports equipment should be obtained*, *deprivatizing sports areas, to municipal ones, rearranging free zones for the construction of new equipment for the practice of sports. It will be extremely important to coordinate actions with school, cultural and sports facilities.*»³ This piece clarifies that the understanding of sport they are looking at is the one of "*de Vecinos*", of "*deporte para todos*", to be integrated with the educational and cultural ones.

Sport is considered to be part of a system of basic equipments, to be included in a plan of reconfiguration of outdoor spaces and squares⁴. Therefore it is important that it is reached a widespread diffusion of these facilities within the city and that they are linked to other services as well (for example, a civic centre or a school).

3. PAVILLIONS AND SCHOOLS: TWO POSSIBLE SPORT'S FACILITIES

Sports facility is currently, in a developed society, the base of the practice of sport. Today you can not talk about sports minimally qualified without talking about adequate facilities. It is clear that, understanding the social phenomenon of sport as a whole, there are many opportunities to develop physical, recreational and sporting activities without having conventional facilities, since the natural settlement (beaches, Collserola mountains, parks and the city port) can be used by citizens to do sports activities. However, it seems clear that the natural environment is insufficient to develop the quanti-qualitative levels of sport and any efficient sport's policy requires a good allocation of sport's installation.

(Enric Truñó⁵)

¹ in *Architecture and power*, in 'Quaderns d'arquitectura i urbanisme', n 164, 1985. Josep Lluís Mateo Ph.D. architect. Projects professor at ETSAB and professor of Architecture and Design at ETHZ since 2002. Editor for ten years of the journal Quaderns since 1981

² The investigation *El Espanol y el deporte: datos de una encuesta* conduced in 1975 by ICSA-Gallup pointed out a lack of facilities for sports claimed by people as a social need

³ Associació de Veïns de Sarrià. A tots els ciutadans. Sarrià, publicació de l'Assocació de Veïns, 1979

⁴ Reconstrucción de Barcelona by Oriol Bohigas was published in 1986 and that was determining for the drawing up of the 'Barcelona Model' and its successful nomination to host the Olympic Games

⁵ in *La ciutat de les anelles. L'esport a la Barcelona Olímpica*, edicions 62, Barcelona 1987. Enric Truñó was councilman of the City Council between 1979 and 1998, being the councilor responsible for the 1992 Summer Olympics. As Councilor for youth created the Department of Youth (1979-1997) to implement the youth policy of the council

According to Bohigas¹, Barcelona was a city already done² at the beginning of the eighties and has to be regenerated. Therefore projects have to resolve specific and situated problem that have a their own dynamics, within an existing possibilities.³ Sports facilities, for their public and popular nature, can include this dynamic force, but, using the words of Ignacio Paricio, *«the insertion of these specific buildings into a residential plot can hardly be done without traumas to the urban fabrics or to the functionalism of the installations»*⁴.

The theme of the relationship between specific dimensional necessities and grafting in a consolidated context is dealt with in the design of services facilities of a neighborhood: in particular, as mentioned, sports equipment is often combined with school facilities, both of which require a significant increase and should be in every neighborhood of the city. This issue has led to the development of an experiment on the school typology that incorporates sports services into its own structure.

A second settlement of sports facilities has been the definition of a specific type for indoor sports: the sports pavilion. These facilities are built in Barcelona as well as throughout the Catalan region to provide citizens with a sheltered place suitable for both smaller sporting events and different types of recreational activities.

The article therefore focuses on the study of the architectural character of the sports pavilion, on the other hand, and, on the other, on the recognition of peculiarities of some facilities built in Barcelona.

3.1 Sports pavilion: setting of a typology

The issue that concerns us, the sports building, is a frequent program on the boards that implies a type of public construction in which converge some of the characteristics of the new task. Particularly three of them are often present: the reference to the city, the importance of the structural component and the forecast of the intense and hard public use of the facilities. (Ignacio Paricio⁵)

The Real Decreto núm. 1668 /1980 of 31-7-1980 sets the transition of Physical Culture and Sports services from the State Government to the Government of Catalonia (Generalitat de Catalunya). The Direcció General de l'Esport was founded as a body that will directing sport in Catalonia.

¹ Oriol Bohigas was professor at ETSAB since 1964 and in 1977 was appointed director, a position he left in 1980 to become delegated of the urban area of the City Council until 1984. Since then he became minister of urban development council, a position from which he determined the urban policy of Barcelona.

² in *Diàlegs a Barcelona. Oriol Bohigas-Òscar Tusquets*, the two architects explain the town planning strategy adopted for Barcelona, a city that has no expansionist vocation, rather manifested a will to reconstruct the city already built.

³ Several studies have been published on the urban strategies implemented in Barcelona during the 1980s. At this stage, reference was made to Bohigas texts including: *Per una altra urbaitat*, in *Plans i projectes per a Barcelona. 1981/1982*, Ajuntament de Barcelona 1983; *Reconstrucció de Barcelona*, Edicions 62, Barcelona 1985

⁴ in *Más urbanos, más amplios, más fuertes. Los edificios del deporte*, in "A&V Monografías de Arquitectura y Vivienda", n. 33, 1992.

⁵ in Más urbanos, más amplios, más fuertes. Los edificios del deporte, in "A&V Monografías de Arquitectura y Vivienda", n. 33, 1992. Ignacio Paricio Obtains the title of architect at ETSAB, 1969. Since 1981 is professor of Construction at UPC. Main publication about his works are: Documentos de Arquitectura, Revista del Colegio de Arquitectos de Almería, n. 13, 1990; Construcciones. Lluis Clotet e Ignacio Paricio, in "A&V Monografías de Arquitectura y Vivienda", n. 43, 1993.

Eight years after its foundation the Direcció organizes the exhibition "Vuit anys d'arquitectura per a l'esport"¹ at the museum and research centre on sport "Dr. Melcior Colet". The catalog of this exhibition shows the work's path conducted in this time span that had the intention of *«minimally cover the entire region of Catalonia, helping to sport's frames, sort them, regulate them and try to place them in many cases at the level of the best sports structures in Europe regarding its functionality, services, pavements, hygiene, comfort, etc...»*².

This ambitious project sets at the basis three basic principles:

- facilities are at the service of sportsman rather than the spectator, in order to guarantee maximum functionality and comfort
- buildings have maximum performances at the lowest possible cost, which does not mean cost-effective constructive quality, but the actually constructed square meters are minimal in relation to their performance
- do not limit the space to a single sports practice, but design it suitable for as many uses as possible

In order to achieve this, and therefore the construction of hall for the practice of sports, in a high architectural quality at low cost the Direcció General de l'Esport sets a series of datasheets with the minimum requirements that define a "moduls tipus"³.

This datasheets specify both with short captions and with plan and section schemes an organization-type of spaces.

The datasheets are drawn up for different type of facilities: indoor and outdoor swimming pool, open air fields, athletics track, ect. For the indoor equipments are formulated three different classes of sports pavilion (Figure 2) : hall type S.E. (20x30m), S.M (22x44m), S.B. (27X45m).

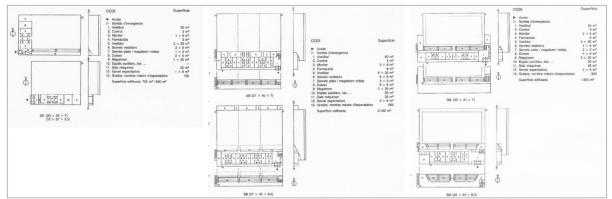


Figure 2: plan and section schemes taken from the datasheets: hall type S.E, S.M., S.B.

These directions provide the elements from which architects move in the design of the sports halls. For this typology indeed there is not an architectural tradition from which drawing on as, we will see later, it was for school.

¹ The catalog is published on the occasion of the exhibition with the title: *Vuit anys d'arquitectura per a l'esport*. *Catàleg de l'exposició*, Generalitat de Catalunya, Direcció General de l'Esport, Barcelona 1988

² Josep Lluis Vilaseca i Guasch, Director General de l'Esport de la Generalitat de Catalunya, in the Introduction to *Vuit anys d'arquitectura per a l'esport. Catàleg de l'exposició*

³ The sheets, still used, are a collection of documents that briefly outline the typological requirements and regulatory aspects established by the Catalan Sports Council for the basic network facilities.

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Studying some of these buildings, it is possible to recognize the architectural elements used to meet the technical and qualitative requirements. It has also been noted that despite the fact that pavilions refer to different classes, these elements remain constitutive design elements (Figure 3). These are:

- the relationship between the volume of the sports hall and the services one: the part containing services differ volumetrically and structurally from the main hall and retain their own figurative autonomy
- the organization of path: the paths for spectators and players are autonomous. The players' services are preferably located at the same level of the sports field and underneath the spectator's space, that is at a higher level to provide a good view of the playground through a balcony. Only some of the larger pavilions are equipped with stands
- the structural elements of the sorts hall: a sequence of reticular beams arranged orthogonal to the field represent the structural theme of the sports hall. The beams do not always have a symmetrical design: their profile is related to the internal organization of the spaces and the ways to bring in an indirect light. In turn it determines the volumetric shape of the sports hall

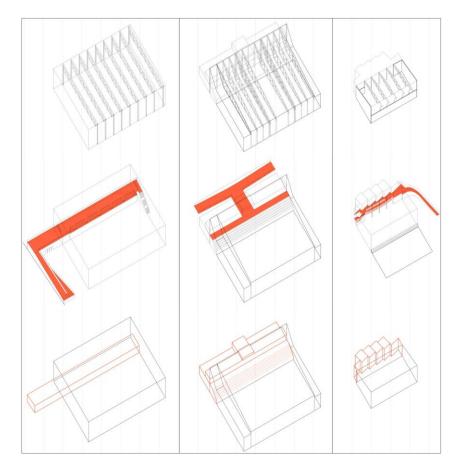


Figure 3: study of the architectural elements of three sports pavilion: relationship between volume of sports hall and services, organization of path, structural elements of sorts hall. Sports pavilion Raval, Jordi Farrando, 1989; Sports pavilion l'Escala, Llorens Geli i Batllori and Juan Luis Sancha, 1985, Sports pavilion La Floresta, Victor Rahola Aguade,1984.

3.2 School: vertical organisation of district services

Perhaps the interesting novelty of this current experience -beyond their scope- is the appearance, sometimes discreetly, other times more explicit, of a form of design that wants to explain what about public, and therefore what is centrally urban, can mean a schools equipment, especially when it appears in the already built city. [...] This work, which is not strictly educational nor pedagogical in a restrictive sense of the term, may become, however, a truly civic task.

(Ignasi de Solà-Morales¹)

When Manuel Brullet i Tenas in L'Arquitectura Escolar a Catalunya i la seva evolució² makes the evolution of architecture for schools presents the last span, 1977-1986, with the title L'escola com a equipament integrat. This slogan synthesize the way in which school are designed: not only the place of education but as a cultural and social center for the community living in a district. Its spaces have to be intended to offer different services during the all day. For this reason «must be defined clear architectural spaces, allowing use change and emphasise the unity and complexity of cultural relationships.»³

These words shape a cultural reorganization in which cultural and recreational organizations look at sport as an activity that can be integrated into their program. Architects called to design new schools, encouraged by school building sports development programs⁴, developed interesting solutions to integrate the spaces of sports into the school building.

In Barcelona this experimentation of school typology is measured with some antecedents called *Escoles Actives*⁵: schools built in the period 1957-1970 and conceived with a high degree of polyvalence of the common spaces that assumed a key role in the planimetric organization of the school. Until then it is mainly about private institutions. Examples are the ones designed by MBM arquitectes⁶: Escola Sant Jordi (Figure 4) where around a central collective place (square) are organized classrooms (private spaces) searching an analogy with the urban structure.⁷ Covering a range of terraces for the children recreation and a playground. These experiences have behind us an important season for Barcelona's school building. In 1916 was founded the Oficinas de la Comisión de la Cultura in which the advisory was the pedagogue Manuel Ainaud and Josep Goday was the architect of the Grups Escolars de Barcelona⁸. Among the built schools, eight in all, there is Escola Baixeras (Figure 5) in which *«classrooms (...) are grouped around a vestibule that humanizes and gives physiognomy to this central place that, on the other hand, is used for exercising, (...) for singing and for*

¹ in *El públic i el domèstic en l'Arquitectura escolar*, in *"Mostra d'Arquitectura escolar"*. Ignasi de Solà-Morales was an architect and a philosopher. In addition to his professional works, he was professor of Architectural Composition at ETSAB and a scholar on Catalan architecture.

² in "*Mostra d'arquitectura escolar*", Generalitat de Catalunya, 1986

³ David Mackay, *Funcionalisme?*, in "Mostra d'arquitectura escolar", Generalitat de Catalunya, 1986

⁴ 1982: Plans d'Instal·laciones Esportives Escolars; 1987: A l'escola més esport que mai

⁵ several schools, mostly private, are part of this group that follow a renewed pedagogical movement.

⁶ MBM arquitectes was founded in 1951 by Josep Martorell and Oriol Bohigas. In 1962 David Mackay was included.

⁷ This building refers to the pedagogical direction of Ramon Fuster i Rabés (1916-1976) author of *L'educació*, *problema social* (1965)

⁸ Les construccions escolars de Barcelona is a book that the Comisión de Cultura de la ciudad edited in 1922, as a summery of studies, projects and other examples to settle the problem of the dimension and the obsolescence of schools in Barcelona.

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music» 1 and rhe Escola de Mar «in which the ecological rhythms - and their sports derivations - were extolled as pedagogical bases»².

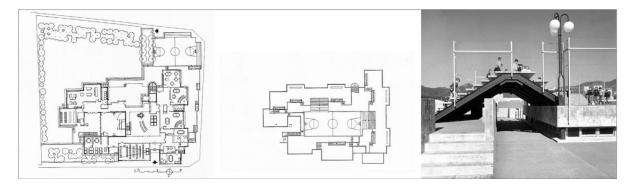


Figure 4: Barcelona, Escola Sant Jordi, MBM arquitectes, 1969

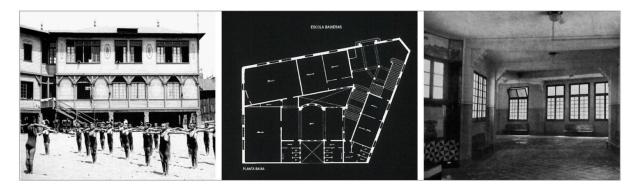


Figure 5: Barcelona, Escola de Mar, Josep Goday, 1922; Barcelona, Escola Baixeras, Josep Goday, 1917

These backgrounds provide some design ideas that are addressed and developed by architects during the 1970s and 1990s. The works of Jaume Bach and Gabriel Mora³ offer an interesting view on this subject.

In the Alzina School (Figure6,a), located in the Sant Andreu district in Barcelona, the architects organize the block in three areas: one is dedicated to outdoor recreation; the building of the primary school that is shaped like a three-story parallelepiped volume and brings to the cover two outdoor playing fields ; the secondary school building, taller than the first and volumetrically autonomous compared to this, of a trapezoidal shape to connect the first building with the back street. The patio with the accesses to the schools is among this two buildings.

¹ Josep Goday, *Rèplica documentada de l'Arquitecte Josep Goday i Casals als comentaris crítics inserits al número 9 de la revista AC*, in 'Arquitectura i urbanisme', n. 4, 1933

² Oriol Bohigas, La arquitectura deportiva en Cataluña, in Barcelona. Arquitectura y ciutat. 1980-1992, Gustavo Gili, Barcelona, 1990

³ Both graduated from ETSAB during the 1960s. In 1976 they founded Bach-Mora arquitectos. Several pubblications are about their works. Among these: Collens, D. L., Sola-Morales, I., *Bach-Mora arquitectos*, Gustavo Gili, Barcelona 1996; Savi, V., *Bach-Mora*, Gustavo Gili, Barcelona 1987

The J. M. Jujol School (Figure6,b) rebuilds the edge of the building curtain and opens with a big arc to the Placeta de Sant Miquel. From here you can enter the back patio: the portico designed by J. M. Jujiol that had hosted the Mañach laboratories and is recovered for student recreational activities and open the community after school time. Here again the school building roof provides additional equipment for the community hosting a open-air sports field.

Architects Bach-Mora again in the Gracia district faced with the development of a multi-sports building growing in height in a dense and consolidated urban context. (Figure6,c) The building rationally differentiates the functions: from minor to greater structural light, from minor to greater need for natural light, from major to lower turnout.

Ignasi de la Sola Morales, referring to the work of these architects, speaks of an elegant eclecticism that formally defines a precise typological choice and an efficient functional organization.

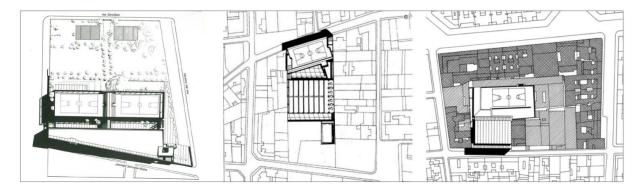


Figure 6: a, Alzina School; b, J. M. Jujol School, 1987; c, Sports center Perril, 1989. All works by Bach-Mora arquitectes.

4. CONCLUSIONS

This short review of projects shows how in the Catalan region the will to spread sport at different levels has been supported by a real investment in the construction of sports equipment. These buildings are not for the agonistic competitions, for the practice of high-level sport such as the facilities of Barcelona '92, but they are designed to provide a service to those who want to practice sports every day. Till now there is no literature that offers a systematic study of these buildings. This first study has shown how even these "minor" structures respond to settlements model and show clarity in the architectural composition of project elements. These projects can still provide useful elements for the design of sports facilities within the consolidated urban fabric of our cities.

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