Modern Environmental Science and Engineering (ISSN 2333-2581) January 2019, Volume 5, No. 1, pp. 95-103 Doi: 10.15341/mese(2333-2581)/01.05.2019/011 Academic Star Publishing Company, 2019



# Architecture for Grassroots Sport and Public Clients: A Comparative Analysis

Sara Giulia Troncone

www.academicstar.us

Politecnico di Milano, Department of Architecture, Built Environment and Construction Engineering, Italy

**Abstract:** This paper moves from a doctoral research, still underway, which studies the development of grassroots sports facilities since the post-war period till today with the aim of drawing-up an atlas for the design of facilities in contemporary city. During these period, it is possible to recognize contexts in which the theme of sports and leisure facilities has been tackled in a systematic way. The study does not focus on facilities specialized for competitions 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.

Two are the fundamental contexts of investigation:

- the English context of the post-war period: following some investigations (such as the Wolfenden report), the public administration recognizes the social role of sport. As a result of this conscience, in the context of post-war reconstruction (and related to the debate on Urban Planning), public administration invests in the construction of sports facilities as a logical component of the welfare state; the construction of civic centers where sport becomes an element of community life: the structures take on extraordinary dimensions where there is a high degree of activities combination;
- the Catalan context of the democratic reconstruction after the Franco regime: the neo-government is call to respond to respond to
  the request for spaces for the amateur sports practice promoted by the associative network born spontaneously during the last
  years of the regime. It's essential the role of the public administration in developing an investment strategy to provide the region
  with a basic network of services, and in the definition of models and regulations.

The outcomes of these two moments are very different: on the one hand (English case) there is the construction of civic centers, as places that define a centrality in the context in which they are located; on the other (Catalan case) the priority is to build minimum structures that can be placed in consolidated contexts. Regarding these contexts, a comparative analysis should be conducted with respect to three key factors: the role of public administration; the protagonists (politicians and architects); settlements and architectural experimentations.

 $\textbf{Key words:} \ grassroots \ sports \ facilities, \ sport \ in \ Britain, \ sport \ in \ Catalunya, \ reconstruction$ 

### 1. Introduction

Studying the role of sport phenomenon in contemporary society, two fundamental themes are pointed out: the role of grassroots sport as a vehicle of social inclusion; the "new" clients related to the experiences of Second Welfare. Starting from this evidence, the topic of grassroots sport is investigated in the Twentieth Century highlighting the relationship

between public and private, the cultural context and especially architectural issues as the variations of sport facilities, functional integration, figurative expression and the relationship shape-structure.

Compared to these issues, it was necessary to reach at a periodization of the sport phenomenon in Europe: in relation to time-spans, significant contexts have been identified for the construction of sports-for-all architectures. Especially two contexts have been examined in which the theme of reconstruction and the provision of grassroots services converge: the English context after the Second World War; the Spanish

**Corresponding author:** Sara Giulia Troncone, Ph.D. Student in Architecture; research areas/interests: urban and architectural composition; sports facilities. E-mail: saragiulia.troncone@gmail.it.

context in the post-Franco period. The Catalan region has been studied in depth in this last context.

#### 1.1 Periodization of the British Context

The deepening of the English context allowed a more precise temporal organization with respect to the first hypothesis that recognizes in the period 1945-1975 the State as main promoter of grassroots sport. The period has been divided into two time-spans:

1960-1972: characterized by the publication of two Reports (Albemarle Report and Wolfenden Report) that open the debate on the involvement of the state in the promotion of sporting activity. In parallel, the first researches and experiments in the field of building sports facilities begin and comprehensive schools are built as "community schools", with services open to all.

1972-1975: with the establishment of the Executive Sports Council in 1972, sport became part of services included in the Welfare State. During this period the increase of sports facilities is significant. In ten years, five hundred new pools and a thousand purpose-built sports centres are built. These centres are the physical representation of the shift from sport to leisure.

The roots of this experience are traceable in two antecedents that are placed in the immediate aftermath of the Second World War (1945-1965). They are: the public administration investments in the field of education leading to testing of structures built with prefabricated elements and which Hertfordshire City Council as an important application; the establishment and construction of the National Recreation Centres (among which the Crystal Palace National Recreation Centre by Leslie Martin is the most well-known) as places devoted to amateur sports by the Central Council of Physical Recreation, an organization that deals with the promotion of sport in England from 1935 (year of foundation) to 1972 (year in which the Sports Council is established).

#### 1.2 Periodization of the Catalan Context

The main periodization defined by the relationship

client-sport promotion-architecture identify the span 1975-1990 in which sports associationism is the main promoter of grassroots sport. The study of the Catalan context leads to a more detailed time organization.

1975-1979: association, spontaneously arise during the last year of dictatorship, promoted collective activities and events, including sports one. Following the death of General Franco, and the fall of the dictatorial regime (1975), the process of democratic transition begins by significant dates (1976 referendum for the political reform; 1977 general election; 1978 referendum on Democratic Constitution; 1979 municipal election and Statute of Autonomy of Catalonia).

1980-1988: following the establishment of *Generalitat de Catalunya* and the organization of the departments (as education and sports), promotion policies of grassroots sports shall be initiated. At this stage public administration cooperates with various institutions (clubs, associations, entities, etc.) that work in sport promotion.

Compared with issues raised by studying this time span, it is necessary referring to other periods of the Catalan history. Between 1916 and 1936 there are three fundamental issues: the role of Josep Goday, as the architect involved in the *Comissió de Cultura de l'Ajuntament* and as designer of the *Grups escolar* built in Barcelona in the same period; the drafting of the well-known project *Ciutat de Repós i Vacances* by GATCPAC; the rise of the associative network for the promotion of the grassroots sports that brings to the organization, in 1936, of the *Olimpiada Popular*.

## 2. Methodology and Case Studies

Case studies were the object of a synchronic and diachronic comparative analysis.

In the first instance it is important to note that sport-for-all is defined at European level in the first half of the seventies (the 1976 European Sport for All Charter is the first official document based on developing grassroots sport). Compared to this date the

English case is earlier, while the Catalan one is later.

Regarding the British context it is possible to identify two main peculiarities:

- the promotion of sport as a recreational factor: in the different building types (sports centres, sports halls, etc.) one of the dominant themes is that of "social amenities"; associative areas (refreshment areas, bars, club rooms, etc.) that are integrated into sports facilities and which are privileged places from which to watch who is practicing physical activity; moreover, the interest in recreation rather than in sports activity is demonstrated by the transition from the construction of sports centres to the construction of leisure centres where the theme of the leisure pool is dominant;
- experimentation of ways of aggregating different activities; whether it is a multi-sport center or a comprehensive school, the theme is that of the volumetric articulation and the architectural definition of a complex functional program in which the relationship with open spaces is important.

On the same line, it is possible to identify two main peculiarities of the Catalan architecture for sports. These have targeted research into specific topics:

- promoting physical activity as an educational factor: both through the construction of sports pavilions where there is no exclusivity of sport activity but it can also accommodate cultural and social events; both through the construction of school centres designed as integrated structures and nuclei of cultural life, experimenting the ways in which sport is integrated into the educational structure;
- the definition of an "urban" architectural typology for practicing sports: a program of minimum buildings that are located both within the consolidated city and on the outskirts in order to solve the relationship between the places of everyday life (home, work, study, etc.)

and those of sports practice.

It is important to consider that the British and Catalan governments have chosen two different strategies to promote the construction of sports facilities: the first has provided "indications", through the publication of official circulars, that local authorities had to decline according to the needs of the their population; the second one has instead stipulated a general plan for the construction of sports facilities throughout the territory.

# 3. Welfare and Leisure Architectures during the British Re-Construction of the Post-War Period (1960-1975)

# 3.1 The Gap as a Disparity to be Minded

To understand the development of sports services within welfare systems it is important to focus on two reports, both published in 1960.

The first *The Youth Service in England and Wales*, known as Albemarle Report, is the result of the work led by the committee chaired by Diana Keppel, Countess of Albemarle appointed in 1958 by the Minister of Education to study the contribution that the Youth Service can offer to young people aged between 14 and 20 with regard to out-of-school recreational activities [1].

The second *Sport & the community*, known as the Wolfenden Report, is the result of the work conducted by the committee chaired by John Wolfenden, commissioned in 1957 by the Central Council of Physical Recreation to study the state of the sport and elaborate "recommendations" addressed to the statutory or voluntary bodies, so that sport could be part of the services included in the welfare state system [2].

In the first report the analysis of the status of services aimed at young people leads to identify a serious gap. These is the gap between what is provided for the social and recreational life of young people, so long as they are in formal education, and what is provided thereafter; that is, the difference in opportunities to

develop a social life, having available leisure services for as long as you are part of a training program and what is offered instead of this.

The identification of this gap is particularly significant as it represents a further incentive to study how the school system offers these opportunities; with which figurative and settlement methods a series of services, including sports, are part of the educational buildings. These refer to the development of the comprehensive schools.

The second part of the text deals with topics to young people. These data include important data for physical activity. Arguments declared three fundamental reasons that prove the importance of physical education: sports and physical activities generally are a major leisure-time interest in the lives of the adolescent boy and girl; this interest is unrelated to academic ability or manual skill: it cuts across the stratification of society, the incidental effects of which we have deplored; work and their present leisure activities fail to satisfy the increased physical energies of many young people.

The contents of the report *Sport and the Community*, the second analyzed report, published a few weeks after the closing of the Olympic games in Rome, touch three fundamental questions: analyzing the situation of sport, especially the amateur; to introduce the function of a desired Sports Development Council as director of the national and international sports scene; indicate a series of recommendations for measures to be implemented over the short and long term so that sport can become an integral part of the general welfare of the community.

The status of sports facilities is an important chapter in the analysis conducted by the committee. In addition to outdoor equipment and swimming pools, the indoor practice and multi-sports centers are studied.

Indoor practice facilities are particularly lacking. Multi-sports centers are not widespread in England, where the single-activity club concept prevails. The commission, having also studied other European contexts, sees the potential of this type of structure whose characteristic is that of grouping different sports activities and is prefigured as a possible center of community life.

3.2 Sports Hall and Recreational Centre: Spaces for Socializing

Despite the great consensus that led to the publication of the Wolfenden Report by the sports lobbies with the recommendation of the establishment of a Sport Development Council, the conservative party of Winston Churchill remains skeptical in expanding the role of the state in the field of sport and volunteering. On the other hand, those in favor of welcoming the indications contained in the report are the members of the Labor party, Harold Wilson elected in 1964, establishing, adhering to the electoral manifesto, the Advisory Sports Council with the task of advising the government on matters relating to the development of amateur sport and physical recreation. Among the issues that the Council is called to give indications are: provide standards for sports facilities; coordinate the use of community resources; identify priorities for the development of sport [3].

Following the publication of the Abemarle Report and the Wolfenden Report, which underline the need for more and better sports facilities, the demand for information on modern sports facilities (modern sports halls and other indoor facilities) increases. The research aims to make up for the lack of existing information and the work was published in 1965 with the title *Community sports halls* [4].

The research is organized in three sections: the first in which the question of sporting practice is updated from a sociological point of view and the different scales of sports service planning are presented; the second one is dedicated to the definition of the sports halls; the third is composed of a series of attachments in which different issues such as existing types, sports centers and technical data sheets are dealt with. Regarding the planning of sports facilities, a "strategy" is presented to be implemented at the local level, that is, at the level that most involves users in the regular use of the structures. Future "Three-Tier" provision consists in identifying three concentric areas of a city in order to relate the increase in intensity of use with the increase in land value; closer to the city center, the greater the value of the land and the greater the intensity of use of sports facilities.

In the inner ring (Tier Three) the structures are located nearby, if not within the town center, and a high intensity of use is necessary for its placement to be justifiable. For this area two "obvious" structures are indicated: the sports halls and sports centers.

The sports halls are referred to as those structures that meet both the need to practice sports throughout the year, and the need for places with a certain degree of "sociability", or meeting. In analogy, sports centers are described in which different sports activities are grouped on an area of limited size and, in some cases, may form part of the civic center.

From the review conducted in the English specialized magazines (Architects' Journal, Architect and Building news, Architectural Review, etc.) of the years between 1950 and 1980 it was noted how the university sports facilities make an important contribution to the experimentation of the typology of the sports pavilion. Perrin himself, author of *Community sports halls*, recognizes this role to the universities.

University sports facilities built during this period added much to the total feedback of philosophical, practical and technical experience recorded, especially as University Grants Committee cost yardstick were sufficiently tolerant to permit experimentation in the field of structure and finishes [5].

Among these, the sports centers of the Liverpool and Hull universities set the theme of the double sports hall crossed by a central spine where the services and the spaces for the spectators are located. This type is the same used for the Sports hall at the Crystal Palace by Leslie Martin [6].

### 3.3 From Sport to Leisure

During the early seventies, the success of the work conducted by the Advisory Sports Council was also recognized by the newly elected Edward Heath, Prime Minister from 1970 and 1974 and leader of the Conservative Party. In 1972, in fact, the government stipulates the Royal Charter that recognizes the Sports Council an executive role. This act is significant because it marks the moment when sport becomes part of the welfare state system; the Sports Council works within a public service culture where service planning is a central issue for public administration.

The Sports Council has the responsibility, according to the Royal Charter, to develop and improve the knowledge and practice of sport and physical recreation in the interests of social welfare and the enjoyment of leisure among the public at large in Britain [7].

The priority is to increase the facilities by direct grants to projects submitted by local authorities. Although the first sports centres have been built since the end of the 1960s, it is in the decade 1970-1980 that there is a concrete increase in sports facilities; 500 swimming pools and 450 indoor sports centres are built [8]. This figure is important because it demonstrates government's commitment to increase opportunities to participate in sporting activities. Two reports are published to give evidence to the importance given to sport as a fundamental service for the welfare of a community: Sport and leisure, published in 1973 by the House of Lord Select Committee; Sport and recreation, published in 1975 by the Department of the Environment [9].

Both document endorsed the acceptance of sport and leisure as aspects of welfare provision and the broad quality of life of communities.

John Coghlan, who played a leading role in shaping sports development policies in England (as Secretary General of the Sports Council from 1976 until 1982 when he was elected as vice president) identifies a key text describing the social change brought about by the leisure boom: The Architects' Journal on January 1965, Fourth wave. The challenge of leisure edited by Michael Dower. Dower, at one time a member of the Sports Council (1971-1972), wrote that "three waves have broken across the face of Britain since 1800. First the sudden growth of dark industrial towns. Second the thrusting movement along far-flung railways. Third the sprawl of car-based suburbs. Now we see under the guise of a modest word, the surge of a fourth wave which could be more powerful than all the others. The modest word is leisure". Dower warned of how this wave would bring both immense pleasure to an increasing number of leisure-seekers, and a danger of damage and destruction to the very sources of that leisure. The demand by Dower for land, water, better housing, a better deal for young people, more creative use of city parks, the establishment of permanent leisure sites and attractions, regional parks, and more imaginative plans to cater for sport and long holidays was a blue-print from which those involved could derive inspiration and work to achieve [10].

As noted by John Coghlan this publication had a profound effect on sport and recreation policy-makers and providers, and stimulated both action and research. The conclusion, organized in twelve points, formed a blue-print for the early work of the research committee of the Sports Council.

The issue of leisure is investigated at three different scales: national, regional and urban. The cities, defined as "arid", must be equipped, according to Dower, with parks and buildings that must offer opportunities for recreation in which the emphasis is placed on family entertainment.

On these two fundamental questions, namely the entertainment of the family and the set of recreational activities as a fundamental element of the life of a community, leads to a new architectural experimentation: the leisure center.

Lance Wright, editor of The Architectural Review, commenting on a series of sports center projects, identifies the question of defining the leisure center as the dominant theme of the decade 1965-1975.

This is the era too 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. This era begins with Billingham Forum (started 1962, opened 1967) and is, of course, still in full blast. The achievement of this era will undoubtedly be seen in its attempt at a synthesis between "sport" and "life": the "leisure centre" is a place is a place for everyone, from infants to geriatrics [11].

# 4. Architecture for Grassroots Sport and Public Clients during the Democratisation Process of Catalonia (1975-1990)

#### 4.1 Public Administration and Sports Practice

1979 is a key date for the reorganization of the public administration: the *Estatut d'autonomia de Catalunya* (approved by the Ley Orgánica in 1979) establish, with the art. 9, the exclusive competence of the Generalitat in sporting matters; the Reial Decret 1668/1980 sets the condition of the transfer of competences in sport from the State to the Generalitat.

The following year is establish the *Direcció General* de *l'Esport* and four provincial delegations are institute to set up and coordinate on the territory the promotion and dissemination of physical culture (Barcellona, Girona, Lleida e Tarragona). The aim is to develop a plan of construction of public building and the promotion of sport in schools.

Es va prendre la decisió de posar els recursos, la capacitat de traball i l'autoritat moral de l'Ajuntament de Barcelona al servei d'un objectiu prioritari: rehabilitar, dignificar i potenciar el papel de l'educació física i l'esport a les escoles de Barcelona [12].

In the same year, the election of Narcís Serra as mayor of Barcelona marks a decisive point in the organization of sports development policies. Collateral is the publication of the "Manifesto", drawn up by the Asociaciones de Vecinos de Barcelona, which identifies the main problems of the city, including those related to sports practice.

Se debería obtener equipamientos deportivos, desprivatizando zonas deportivas, hasta las municipales, reordenando zonas libres para la construcción de nuevos equipamientos para la práctica de deportes. Importantísimo será coordinar actuaciones con los equipamientos escolares, culturales y deportivos [13].

Priorities for associations, and therefore for the public administration is that of *deporte-para-todos* (sport-for-all), in close relation with the the educational and cultural systems (functional integration). A series of *equipament public*, including sports equipment, are the hinges of the plans to *rehabilitar* the built city.

#### 4.2 Olympic Sport and Sport-for-All

The studied period of the Catalan context includes the nomination (1981) and the assignment (1986) to host the 1992 Olympic Games.

As highlighted, research focuses on a widespread and non-competitive practice of sport: for this reason, facilities designed to host high-level sports events (such as the Olympics) are not part of the field of investigation. Moreover, the matter of "Olympic Barcelona" has been the subject of numerous investigations [14].

It was therefore preferred to highlight the relationship between Olympic candidacy and the promotion of grassroots sport. The presence of both amateur and recreational activities with an elite practice of competitive sport is paramount to Enric Truñó. Enric Truñó was member of the Barcelona City Council since 1979 to 1998: in particular as Councillor for Youth and Sport in the Barcelona City Council (1979-1995) he collaborates with Narcís Serra, Mayor of Barcelona, and Josep Lluís Vilaseca, director general of Sport at the Generalitat, in the redaction of the dossier of the bid of Barcelona. Truñó in 1987,

when Barcelona has already been named the city hosting the 1992 Games, publishes the book *La ciutat de les anelles*. *L'esport a la Barcelona Olímpica* in which he analyzes the development of grassroots sports practice and actions for its promotion by the municipal administration and the Generalitat.

El govern de la ciutat era coscient en aquells moments que no es podia caure en la <u>contradicció</u> que hauria significat adreçar tots els esforços municipals cap a les tasques de promoció de la candidatura olímpica i, al mateix temps, oblidar les mancances de l'esport de base a la ciutat, començant pel deficient estat de l'esport escolar [15].

As Truñó points out, investments in building or adapting Olympic structures do not stop the work started by the Generalitat in the framework of grassroots sports facilities, but help to complete it according to a coordination and hierarchy criteria leading to an acceleration of that process.

Two fundamental elements make evidence of this acceleration: on one hand, the actual continuity in the construction of sports facilities not intended to host Olympic events (such as sports facilities linked to schools); on the other, the construction of a series of *Sala da Barrio*, which we will face later on, throughout Catalan territory to host "minor" Olympic events (such as qualifying races for the finals, uncommon sports competitions, etc.) [16].

4.3 Tools and Criteria for the Construction of Sports Facility: Types and Shapes

The public administration identifies the promotion of the *deporte escolar* a key factor in the spread of grassroots sports. In relation to this theme, attention was focused on school architecture to study the ways in which sport is "embedded" in the educational structures.

A second theme emerging from the study of the Catalan context is that of the sports pavilion (between 1980 and 1988 they built more than 34 of them). To introduce the theme of the pavilion is interesting to recall the consideration of Núria Puig Barata, professor

of sports sociology at the Intituto Nacional de Educación Física in Barcelona, on the adaptation of architectural structures to aspirations of sportsman. According to Núria Puig Barata in the *Salas da Barrio* (one of the three types of sports pavilion) there is a certain adaptation of the architectural model to the *modo de vida*, as the set of daily activities of individuals and groups of people. In this sense, the *Salas* are designed to accommodate sports events as well as activities of different type (e.g., local festivals) [17].

This character of *contenidor polivalente* combined with constraints of the sports practice brings the sports pavilion to be a structure of high *rendibilidad funcional*.

## 4.3.1 Clients: The "type unit"

The Fitxes Tècniques (data sheets) represent a guide for designer set up by the Generalidad with the technical needs of each sporting space:

- functional organization and area-dimension;
- project features (users and viewers path division, size of changing rooms, etc.);
- technical features (flooring materials, acoustic conditions, etc.);
- installations characteristics (temperature and air change, lighting, etc.)

The data sheets define the *mòduls tipus* of sports facilities. Instead of privileging a pre-figured choice of architectural solutions, administration decides to follow a case-by-case policy, entrusting the Sixties Generation with the experimentation of a variety of architectural solutions [18].

#### 4.3.2 Architect: Pluralism of a Generation

As already shown, the tools developed by Generalidad for the design of sports facilities are very precise with regard to the technical elements (surfaces, materials, air exchange) but do not give any indication of the architectural elements: looking at the panorama of the sport pavilion built there is in fact a diversification of the architectural solutions used.

On this topic, it is interesting the article written by

Ignacio Paricio *Más urbanos, más amplios, más fuertes*, in which he recognizes that the education received by a generation of architects has conditioned the sports architecture:

Las naturales limitaciones presupuestarias, la escasez dimensional -avalada por algunos modelos del Movimiento Moderno- y la ordenación abierta de los polígonos que hacían -o deshacían- la ciudad en aquel momento, formaban el marco del ejercicio de la arquitectura. Consecuentemente, el arquitecto se preocupaba por la distribución interior, el ajuste de las superficies al programa y la tipología organizativa de la agrupación. Unos accesos con galerías y patios que contribuyesen a la relación vecinal eran tan valorados [19].

The Sixties Generation shared the vision of an architecture that is *doméstica*, with few monumental ambitions, in agreement with the "Escuela de Barcelona" of Bohigas: a general attitude for which architecture is not a necessity for monumental creation, but the possibility of serving the collective interests with a coherent design method both in the program (in the case of sports architectures defined by the technical sheets) and in architectural choices [20].

These "domestic" character become the design themes of the sport pavilions: the organization of the paths, the use of patios and galleries are elements that make up the halls and determine their relationships with the surrounding.

In fact, looking at these works can be captured the "vocación por definir su entorno que se aprecia en la mayoría de estas obras como consecuencia de su carácter público".

To these elements is added the structural theme: how to cover the light of the sports hall. Even in this case, looking at the numerous buildings, there is a variety of solutions adopted. Covering beams (predominantly trusses) define the covering of the hall: they design the plant, define the rhythm, order it and govern the lightening [21].

The panorama of these works demonstrates a pluralistic declination of the theme proposed by the administrations. A framework of buildings that work

on a shared typology, the sports pavilion, and whose architectural elements are recognizable:

- organization of the paths: a continuity of external routes entering the building and distributing spectators and players on different levels;
- spectator spaces offer privileged points for viewing the playground such as balconies or small steps, and others, such as halls and patios, for the social life of the community;
- a hierarchy between the volume of the sports hall and the services: volumetrically and structurally a smaller structure is at the service of the main space, the sport hall;
- the structural elements of the sports hall are conceived as architectural elements: they define the interior space of the hall by drawing the section in which arise the coherence between form and structure.

#### References

- [1] AA.VV., *The Youth Service in England and Wales*, The Albemarle Report, Ministry of Education, London, 1960
- [2] AA.VV., *Sport and the Community*, The Wolfenden Report, Central Committee of Physical Recreation, London, 1960.
- [3] D. Howell, *Made in Birmingham: The Memoires of Denis Howell*, Queen Anne Press, London, 1990.
- [4] G. A. Perrin, Community Sports Halls, The report of a research project sponsored by the National Playing Fields Association and the Polytechnic, Regent Street, London, 1964
- [5] G. A. Perrin, Building for recreation: Will Britain catch up?, *RIBA Journal*, October, 1968.
- [6] Sports Centre at the Crystal Palace, London, The *Architects' Journal*, 2 December, 1954.
- [7] Sports hall and stadium, Crystal Palace, London, *The Architects' Journal*, 12 August, 1964.
- [8] J. F. Coghlan and I. M. Wenn, in Sport and British Politics Since 1960, Royal Charter is in Appendix 1, The Falmer Press, London, 1990

- [9] B. Houlihan and A. White, *The Politics of Sports Development: Development o Sport or Development Through Sport?*, Routledge, London, 2002.
- [10] AA.VV., *Sport and Leisure*, House of Lord Commettee, London, 1973.
- [11] AA.VV., *Sport and Recreation*, Department of Environment, London, 1975.
- [12] M. Dower, Fourth wave: The challenge of leisure, *The Architects' Journal*, 20 January, 1965.
- [13] L. Wright, Sports centres, *The Architectural Review*, October, 1974.
- [14] E. Truño, La ciutat de les anelles, L'esport a la Barcelona olímpica, Edicions 62, Barcelona, 1987.
- [15] Associació de Veïns de Sarrià, A tots els ciutadans. Sarrià, publicació de l'Assocació de Veïns, Barcelona, 1979.
- [16] AA.VV., Barcelona. La ciutat i el 92, Olimpíada Cultural, Barcelona, 1990.
- [17] M. Bianchi, E. Martera and P. Setti, Barcellona 1981-1992. Trasformazioni urbane e realizzazioni sportive, in: *XXV giochi olimpici*, Alinea editrice, Firenze, 1991;
- [18] J. Barril and F. Català-Roca, Barcelona: la conquista del espacio: arquitectura 1980-1992, Polígrafa, Barcelona, 1992.
- [19] J. M. Montaner, *Barcelona: ciudad y arquitectura*, Taschen, Köln, 1993.
- [20] E. Truño, La ciutat de les anelles. L'esport a la Barcelona olímpica, Edicions 62, Barcelona, 1987.
- [21] AA.VV., Vuit anys d'arquitectura per a l'esport, Generalitat de Catalunya, Barcelona, 1988.
- [22] N. P. Barata, 1984, Análisi y diagnóstico de los equipamientos deportivos, in: *CEUMT. La revista minicipal*, p. 71.
- [23] O. bohigas, La arquitectura deportiva en Cataluña, in Arquitectura y ciudad. 1980-1992, Gustavo Gili, Barcelona, 1990.
- [24] I. Paricio, Más urbanos, más amplios, más fuertes, Cultura física, A&V. Monografías de Arquitectura y Vivienda 33 (1992).
- [25] R. Moneo, La llamada "Escuela de Barcelona", DC Revista de crítica arquitectònica, n. 8, 2002.
- [26] La construcción de instalaciones deportivas en Catalunya 1980-87, *Instalaciones deportivas* XXXI (1988) 22.