

SPORT AS A SUBJECT OF GEOGRAPHIC STUDY AND RESEARCH

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The purpose of this paper is to consider how sports have become in our times a factor of territorial organization and how Geography, as an integrated and agglutinating science, can make significant contributions in order to better understand and to analyse this phenomenon, supplementing the contributions of other researchers (whether in the field of social sciences or in others). Sports should begin to occupy an important place amongst Geography's new concerns, given the human, economic and environmental relevance said activities have achieved, having gone from being mere leisure activities to acquiring considerable economic, commercial, political and environmental importance.

Despite the fact that research in this field faces a clear handicap, insofar as sport is not a traditional subject of geographic research, it nonetheless seems to have acquired scientific legitimacy in the field of Geography, not only due to the social relevance of the subject of research, but also because of the capacity of the discipline to contribute to a better understanding of the problem under analysis. Indeed, the generalisation of sports and the diversity of its geographical expression as a reflection of the essential traits of social organisation and hierarchies point to different possible areas of study, such as:

- Sports themselves, through the analysis of their geographic origins at different levels and of professional migrations, establishing differences between regions that «produce» athletes and others that consume them, all of it in a context of interaction amongst players based on fairly complex spatial strategies.
- Systems of cities and sport models – The problems caused by the limited spatial vision of sport policies suggest the possibility of carrying out studies to define territorial sport models in order to better understand the dynamics of the territories and the flows that regulate the relationships amongst the different elements that comprise the sport system (infrastructures, users, natural spaces, etc.).
- Landscapes produced or altered by sports – Since the transformation of the natural environment of Olympia as the setting of the Olympic Games of ancient Greece, there have been numerous examples of landscapes produced or altered by sports. In our days, in which sports have become a powerful global industry with the capacity

of generating major physical transformations of territories, geographers should contribute to the understanding of these landscapes, which John Bales has defined as «sportsapes».

- Urban planning and sports – This is the area of study that has been developed the most, in the line of locating sports facilities (as these can directly affect the dynamics of urban planning).
- Creation of sport-spatial models – The development of models in relation with the distribution of sports, the intensity and diversification of the practice of sports, etc., which would be extremely useful for the development of democratic and geographically balanced sport policies.
- An international current of geopolitical studies which analyse the relationships between nations in the sphere of sports. The study of olympism, of the results of different international competitions, etc., entails an ideal occasion to analyse a large number of geopolitical factors. In fact, sports have become an important political tool, as fully revealed in the Olympic movement, which is why this is a subject of great interest that should be researched by geographers.
- Geomarketing and sports – This subject has been greatly developed in recent years in the field of geography and is becoming increasingly prominent in studies of sports and territories; in fact, the topics generally considered in geomarketing can be applied to sports: decisions regarding commercial locations (for example, where to place sports facilities, (studies regarding spatial consumer behaviour (analysing the composition of the public, etc.), or promoting spatial strategies (for example, adapting sports supply to potential demand). The connections between sports and geomarketing are determined by the fact that sport is both a commercial activity and a geographic structure, and it is thus practical to develop geomarketing strategies applied to sport¹.
- Geographic space as a determining factor of the practice of sports – The deterministic role of the social and natural environment in respect to the practice of sports is a subject of interest to be dealt with from the point of view of aptitude and impact studies. Different studies have been carried out in this field, such as, for example, studies that have analysed the special and environmental impact of some mass sports, such as football (Bale, J.). At the level of local communities, however, there is a great variety of opportunities for research, given the large number of sports practiced and existing sports facilities.

An example of the aforementioned research possibilities is the proposal for spatial models at the national level in respect to federated sport activities. The interest in having information regarding said distribution is to be able to adjust sport policies to the requirements of users and groups in all the existing sport territories. Furthermore, thorough knowledge of the type of sport activities performed, of the diversification of said activities, of their spatial

1 Ravenel (2008) insists that there are two models for the geographic organisation of sport that link the concepts mentioned: -A banal activity, where sports locations are linked to the distribution of the population and its variations. Thus, demand is located, and then supply is adapted; - A specific activity, where sports locations are linked to the specific features of the territories. The practice of sports, the physical environment and the cultural features (historical, etc.) determine the interaction of players who determine that a supply be located, and then specific demand is generated.

distribution, etc., can help sport managers in the process of programming and planning activities and infrastructures.

In order to achieve this objective, the distribution of federated sports at the regional level was studied, together with the intensity and spatial diversification of the activities, etc., to try to determine «different types of sport spaces» in Spain. As an example, there is the work done by Robert Ferras, who in 1989 reconsidered the French sport atlas and drew up a series of graphic models which show geographic disparities depending on the intensities of different sport activities in France. In this study, the data of 56 single sport federations were combined and mapped on the basis of the number of licences and of a minimum coverage of the territory (in other words, where the number of licences occupied more than $\frac{3}{4}$ of a department), resulting in dividing France into five categories: *Southern France*, excluding the Cote d'Azur, is closely associated with sports considered southern (rugby, petanque), to open air activities; in rural areas, popular sports such as cycling and football are prominent, whereas the presence of activities considered «socially prestigious» is minimal; *Distinguished Urban France* comprises the departments to the west of Paris and the Cote d'Azur, and is characterised by a very high degree of individual sport activities with great social prestige and distinction value, such as golf, fencing, tennis, numerous martial arts, boxing and underwater sports. In this geographic area, there exists a strong link between the social-economic composition of the department and its sport affinities; *France of traditional sports* is an area in which popular sports predominate, with the development of the major group sports (above all football), athletics, gymnastics, cycling or certain racket sports like ping-pong or badminton; these departments of western and northern France engage in sports for masses with greater institutional legitimacy, due to the fact that the rural environment, in particular in the western area, favours these traditional sports, and to a high proportion of the working-class inhabitants; *Middle France* is a buffer area between the area of traditional sports and the southern trends; and the *Parisian Periphery* is a less rigid example of sports for «show» of western Paris.

In order to establish the typology of sport activities in Spain, problems of different types and degree have had to be resolved:

- The first one was of a documentary nature, given that the High Council for Sports [Consejo Superior de Deportes] only has statistical information regarding federative licences at a regional level, and each General Sport Directorate of the different autonomous communities is in charge of managing said data at the provincial level. After contacting the Directorates of regional communities which comprise more than one province, data was only obtained from four of them (Aragon, Community of Valencia, Catalonia and Andalusia). The other either did not have data divided by provinces, or did not provide it. In consequence, the study was carried out at a regional level, with fewer cases of analysis and ignoring the situation of the provinces, of great value to establish models. This means that the results are very biased and in future studies, the process should be reconsidered using provincial information, which would allow obtaining more precise results with a greater range of nuances.
- The second problem has to do with grouping the variables. Spain currently has a total of 64 national federations recognised by the High Council for Sports, each one being in charge of different sports. Working with all the data leads to conclusions that

make no sense, reason why it was decided to group the federations on the basis of homogeneous features of the sports practiced. On the basis of the first grouping, 10 typologies were established on the basis of physical-sport criteria (team sports, racket sports, water sports, sports for the handicapped, sports in a natural environment, sports with weapons, motor sports, athletic sports, combat sports and other sports). However, the results obtained did not provide any territorial consistency, and it was decided to group federated sports again on the basis of homogenous physical and socio-economic features. Once again 10 groups were obtained for the analysis (social distinction sports, sports identified as traditional, popular sports, non-traditional team sports, sports for the handicapped, nature sports, open-air sports with heavy equipment, individual technical sports, «recreational» sports in closed premises and combat sports).

- The third problem is how to use the data. Initially, it was decided to use absolute data (dealing with all of the federative licences). However, demographic weight could distort the analysis, and for this reason the rates of penetration of the sports (federative licences per 1000 inhabitants) and the degree of specialisation of each activity were also used, in addition to the absolute data.
- The fourth problem is connected to the selection of the method of analysis. Given the large number of variables (first 64 national sport federations, subsequently grouped into 10 categories), multivariate analysis was chosen to determine typologies. Specifically, the principal component factor analysis method was used, as it seemed the most appropriate to work with quantitative information. However, it took a long time and a great deal of work to finally determine the study technique to be used; other types of analysis were applied in the process, such as cluster analysis, with negative results.

Once the initial difficulties were overcome, work began on the analysis, based on all the federative licences per region (64), with the data grouped in the ten categories mentioned above. This data was subjected to factor analysis (factor extraction method: main components; rotation method: varimax) using the SPSS 14.0 programme to obtain a summary of the information and to look for major explanatory factors.

The results of the analysis were very positive (see attached table), consisting of two major factors (or axes) that summarise 86% of the total information. The first one (Factor 1) shows a close relationship amongst sports identified as traditional, popular sports, nature sports and open-air sports with large infrastructures; whereas Factor 2 correlates sports of social distinction, sports for the handicapped, technical-individual sports and combat sports.

These factors have been presented in a simple dispersion graph with the position of each Spanish region in respect to them, after which the areas were regrouped on the basis of the homogeneous classes they entailed.

On the basis of this grouping, the initial information was summarised in a map which cannot be considered as a substitute of an in-depth analysis of the federations and sport activity in our country, but is useful to propose major spatial structures.

The groups that have been established on the basis of the homogeneous factors of federated sport activities are the following:

- a) *Central area*: located in the province of Madrid. It is characterised by the very strong weight of sports of social distinction (golf, horseback riding, paddle tennis, etc.) and of sports that require very specific infrastructures (for example, technical-individual sports or sports for the handicapped) that are only found in very urban areas. In this case the urban component plays a very important role in determining this sport area. As a densely populated area, there are very individualised and technical disciplines (gymnastics, athletics, skating, etc.). Furthermore, the presence of Madrid as a large metropolis explains why the social categories involved consider sport as a means of social distinction.
- b) *Olympic Spain*: represented by Catalonia, a special region due to its great diversity. On the one hand, it reflects the influence of the Olympic Games of Barcelona of 1992, with numerous sport infrastructures linked to technical disciplines that favour the convergence and consolidation of «novel» sports (American football, softball, etc.). On the other, it has very high levels of traditional (pelota, fronton, petanque) and popular sport activity (football, handball, etc.), together with the presence of sports of social distinction (a reflection of both the rural environment and the Barcelona metropolis). At the same time there are high values for nature sports, due to the geographical diversity and multiple resources of the region (Pyrenees, Mediterranean, etc.). Nonetheless, there are huge differences between the model of the capital (Barcelona) and of the other provinces of the region (Lerida, Tarragona and Barcelona). (A dispersion graph is included as an example, showing the location of said sports in some Spanish provinces, including those of Catalonia).
- c) *Area of popular and traditional sports*: It consists of Andalusia, the Community of Valencia, Galicia and the Basque Country. In this area sports with a regional identity (for example, pelota in the Basque Country) and traditional sports (hunting and other sports with animals in the Community of Valencia and Andalusia) are important, revealing the weight of rural areas in these regions. However, the presence of large cities (Seville, Malaga, Valencia, Bilbao, etc.) also determines features that correspond to sport territories with a major urban component; for example, this area shows representative values in sports of social distinction (paddle tennis, tennis, sailing, water skiing) and in popular team sports (football, basketball, etc.). Finally, the area is also characterised by the importance of nature sports, linked to the great diversity of natural resources of these regions, in which it is possible to engage in such heterogeneous sport activities (underwater sports, mountain climbing, etc.).
- d) *Green Spain*: It comprises the regions of Cantabria, the Pyrenees, the archipelagos, Extremadura and Murcia. It is characterised by the strong presence of nature sports and certain popular sports. In these areas the levels of rurality imply a return to basic sports which are easily accessible to the majority of the population.
- e) *Middle Spain*: It consists of the two Castillas, and is a very diffuse area with some of the features of the so-called «Green Spain», together with the presence of highly traditional sports (hunting, petanque, etc.). The sports of social distinction, or those that are linked to very technical individual practices, corresponding to urban areas, are hardly representative.

- f) *Periphery*: It consists of Ceuta and Melilla, which have their own typology. Even though in absolute terms they have a very small number of licences in comparison with the national total, in demographic terms they have very high degrees of penetration in nature sports (underwater activities, etc.), individual sports (athletics, etc.) or team sports (for example, handball). This is due to the fact that the number of licences and clubs are much larger in both autonomous cities than the national average, and because of the large military population and number of police, who require constant physical training and sport activities.

These results indicate the existence of different sport areas due to the combination of spatial and social processes: the elements of the physical space are essential in the location and development of sports in nature; urban areas, characterised by high demographic densities, allow for the rise of very individualised and technical sport activities; in large cities and their areas of influence, sports are a means of social distinction for the different social categories; in rural areas, the weight of traditional and popular sports indicates the development of accessible sports that only require basic infrastructures; etc.

However, the areas suggested above are simply a proposal of combinations, in the context of the other possibilities. This interaction was analysed at a national level only on the basis of regional aspects; nonetheless, the processes involved should be analysed at a more detailed level, which would be very useful given that many complex local situations are generated which deserve multiple studies.

In conclusion, the example given indicates that knowledge of the different aspects of a territory is an essential requirement, not only for the development of an efficient sport policy, but also to ensure that use of the environment for sports is fair, both socially and spatially, in other words that its objective is to be sustainable. For this purpose, close collaboration with research centres and with the scientific, technical and professional spheres is needed, since they provide efficient tools and solutions to the different problems and difficulties faced in trying to reconcile the activities carried out, in this case physical-sport activities, with the principles of sustainability. This requires the transfer of the techniques, solutions and know-how acquired in other sectors that are easily applicable to the realm of sports, and necessary research and collaboration with different professionals must be fomented in order to develop new solutions adapted to each sport activity.

The aim of this paper was to consider sport from a territorial perspective, seeking to understand its dynamics, processes and relations with space.