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**SYSTEMS FOR THE DEVELOPMENT OF ATHLETIC  
TALENT IN AUSTRALIA AND CHINA  
A COMPARATIVE ANALYSIS**

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**Submitted to satisfy the requirements for  
a Master of Arts  
Degree By Research**

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## CHAPTER I

### INTRODUCTION

#### Athletic Development Systems: An International Review

International sport in general, and the Olympic Games in particular, are receiving increasing amounts of exposure, and generating stronger influence in the world today. The successes of countries in international sport have been used to confirm their political, economic and scientific strength. International sporting competitions have been turned into contests among nations. For example, the modern Olympic Games have been utilised, not so much for the representation of international fair play, peace and understanding, but as a vehicle for the expression of national self interest and pride. Because of the social and political advantage that success in competitive sport can produce, many countries have put significant efforts into elite athlete development, particularly since the 1970s.

The success of a country in international sport depends on its athlete development system, and its capacity to produce high quality athletes. With rising world sport standards, the demands put upon the fitness, skill and motivation of athletes have been increased. As a result, the procedures for athletic development have become more complicated. This, in turn, creates a great challenge for the programs and services provided for athlete development to ensure a consistent progression of appropriately trained, high performance athletes.

There are two distinct types of athletic development systems. The first is represented by the socialist models of the Soviet Union and Eastern Europe (the eastern models). The second is represented by the capitalist models of the United States of America and other Western countries (the western models). These two systems have their respective strengths and weaknesses in aspects of both the organizational structure and management of athlete development. Each issue will be examined in the body of this paper. In keeping with their political and economic structures, Australia and China have followed the Western and Eastern models respectively. However, since the late 1970s, significant changes have occurred, in which both Western and Eastern countries have progressively developed mixed models in elite athlete development. For example, as a result of the success of the Eastern bloc in the field of early talent development and the provision of special nurturing environments for elite athletes, many Western countries have imitated the Eastern model and established elite athlete training centres. On the other hand, huge budget allocations by Eastern bloc governments to elite athlete development have created significant financial burdens. This has forced many eastern socialist countries to learn the western way of fund raising, i.e., to seek to attract additional funds from non-government sources.

It is this international elite athlete development background that has brought changes in the elite athlete development programs of both Australia and China. The most significant change in the Australia system was the establishment of the Australian Institute of Sport (AIS) in 1981, which moved Australia from an unorganized network of elite sport development, toward a more centralised and co-ordinated development. Changes in China began in 1980 after its re-entry into the International Olympic Federation in November, 1979. This initiative gave China the chance to engage in exchange programs with both eastern and western countries. Major changes occurred in the area of talented children development through the establishment of 'boarding' sports schools, and in the

development of fund raising programs involving both enterprise sponsors and sport businesses.

A cursory glance at the structure and practice of the Australian and Chinese systems would indicate that some of the different experiences in athlete development of each country could be 'borrowed' and put to good use. For example, the sport club system of Australia has advantages that the sport schools of China do not have. The former can accommodate more children being involved at the 'grass roots' level in sport. Conversely, the sport schools of China have better nurturing conditions for the development of talented children than the somewhat fragmented Australian system. As a result of some critical reviews, the issue of elite athlete development is receiving more attention in both Australia and China. After the 1988 Seoul Olympic Games, the Australian government established a House of Representatives Standing Committee to investigate elite sport funding and administration in Australia. All major national and state sporting organizations, the AIS, and the Australian Sports Commission, were invited to make submissions to this committee. In China, the design of appropriate strategies for elite sports programs and elite athlete development has been a major area of concern since the 1988 Seoul Olympic Games.

The following analysis on the elite athlete development in Australia and China aims to establish a information base on policy decisions, financial allocations, and management systems for elite sport development in both countries. It also aims to provide both sports administrators and government officials with a reference point from which they can formulate future sports development strategy.

### The Purpose of The Study

The purpose of the study was two-fold:

- (i) To analyse the effect of political, economic and historical factors on the structure and operation of the sport systems of Australia and China.
- (ii) To examine the athlete development systems' of Australia and China with the view to assessing the relative effectiveness of each system in producing internationally competitive athletes.

A significant proportion of the assembled information constitutes a descriptive analysis of the Australian and Chinese Athlete development systems, and therefore no formal hypotheses were established for this section. For the comparative analysis, the following hypotheses were tested:

- 1) The Chinese athletic development system will reflect the ideology and political structures of the wider society. It will be centrally controlled, bureaucratically structured, and paternalistic in its supportive activities. On the other hand the Australian athlete development system, in keeping with its federalist, British and capitalist traditions, will be loosely organised, independent of government control or support, with most of the decision making taken at the local level. Individual initiative, and not state support, will be the prime vehicle for improving athletic performance.
- 2) The Chinese athletic development system will, because of its systematic, co-ordinated and supportive structures, be better able to both identify young

talent, and subsequently bring them to international performance standing with minimum wastage and maximum effectiveness

On the other hand the Australian athlete development system will, because of its decentralised, club based approach, be able to maximise the 'pool' of young talented athletes.

### Limitations

1. A major limitation of the research project is that not all sports, or all sporting clubs in Australia, could be investigated. Similarly, only a few sports in China have been selected for the investigation. Nevertheless, it is anticipated that the information obtained from this cross section of sports will, by constituting a representative sample, be able to identify the key elements of each country's athlete development system.
2. The statistics about Chinese athlete development used in this research are from the Annual Statistics of China Sport Development, 1987. Annual Statistics of China Sport Development from 1988 and 1990 are not currently accessible.

### Delimitations

In conducting the study, the following delimitations were established:

1. The assessment of each country's athlete development system was considered in terms of its effectiveness in producing international standard Olympic elite athletes.



2. The research focused on those sporting organizations which are directly involved in athlete development such as sporting clubs, state sport institutes and the Australia Institute of Sport in Australia; and the sport school, Sport Technique Institute, and national team centres of China.
3. In analysing high performance athlete development at the AIS level, the emphasis was given to the Scholarship Program.

## CHAPTER II

### REVIEW OF LITERATURE

#### Introduction

The literature review which follows relates, first, to the political, cultural and economic forces that shape a country's athlete development system, and, second, the structures and practices of both the Australian and Chinese systems. It begins by identifying the importance of political ideology in creating a climate for sports development and establishing a structure by which elite athletes can attain athletic excellence. The Australian and Chinese systems are compared and contrasted. While they are seen to be different, they share a common characteristic in their use of sports as a vehicle for the expression of national sentiment. This is followed by noting the importance of affluence on the development of athlete development systems. The impact of traditional sports practices is then assessed. While Australia has a strong tradition of team and individual sports, and mass participation, China does not. This is followed by a review of the athlete development systems currently in place in Australia and China. In each case a number of weaknesses are identified. The review is categorized into the following sections:

- A. Sport and Politics
- B. Sport and Economics
- C. Sport History and Tradition
- D. The Structure and Operation of Sports Systems

## Sport and Politics

Politics has had a significant effect on sport development, which is reflected in the degree of government involvement in athlete development, financial support and administration. Bennett, Howell and Simri (1983) put forward the view that Sport and politics have always been linked in all societies. First, sport is an effective means of political socialisation. For example, athletes are always members of teams and a representative of an area, and therefore their success or failure is seen to reflect the performance of their affiliated organization. Second, sport is an important vehicle for the expression of national sentiment. National prestige can be enhanced by victories in the international sporting area. Each performance will reflect, or symbolise, a nation's image. The Communist countries, because they have an integrated social and political system, have been more successful than the west in overtly using sport as a political tool.

Espy (1979) has argued that the sport acts as a forum for both the expression of individual athletic talent and international diplomatic relations. According to Espy, the Olympic Games are frequently used as a diplomatic tool, since they have the advantage of being an essentially neutral activity, that is, providing for a cultural exchange. However, unlike a travelling art exhibition, the Olympics can express a nation's relative sense of political and economic strength, through its prowess as a competitor on the playing field.

It has been argued by Seffaren (1988) that the increasing dominance of the Olympic Games by the 'Eastern bloc' countries and China is the result of two developments. First, these countries came to recognise the games as an appropriate arena for the display of propaganda, and as a 'safe' battleground for the struggle toward hegemony in

world affairs. Second, and, most important, these countries were able to more easily coordinate their sporting resources in order to conduct an intensive assault on their Olympic rivals. Capitalist countries, in contrast, being pluralist, non-conformist, and lacking any central planning mechanism, were less able to mobilise their sporting resources and channel them into the Olympics. While capitalist countries were sufficiently achievement oriented to ensure appropriate motivation, their decentralised political and economic structures meant that sporting resources were spread through a wide variety of activities (eg., professional football, cricket and basketball).

Riordan (1984) has also reviewed the motives of East and West on elite sport. He provided an analysis of the ways in which Communist nations and Capitalist nations value sport. Communist nations emphasise the value of sports success in producing inspiration and patriotism, gaining recognition and prestige in the world, maintaining and reinforcing the unity of the communist countries, and demonstrating the advantage of the communist way of life. Capitalist nations emphasise the inspirational value of sports success. Riordan notes, however, that western sport, with its long traditions, now seems in transition from a traditional amateur-elitist to a commercial-professional ethos. Furthermore, the older Western nations, like Britain, do not seem to have the same drive or ambition as communist countries to use sporting success to gain recognition and prestige in the world.

Bedecki (1979) discussed the ways in which the political systems of countries and consequent governmental policies affect sport development philosophies and practices. In the constitutional democratic countries, the concern is for the individual. Health and enjoyment through sport, and recreation, are emphasised. Government involvement in sports administration is largely concerned with financial and moral encouragement. In the non-constitutional regimes, on the other hand, sport and recreation are conceived as a

great socializing function for the good and prestige of the nation. Government involves itself in the administration of sport development programs at all levels.

Baka (1984) reviewed the role of the Australia government since 1901, and found that there was little direct government participation up to 1972. He suggested that this can be partly attributed to the 'arms length' philosophy of Australia's British-based political institutions, and a consequent hesitation in becoming involved in an area traditionally administered by the private sector. Furthermore, he notes that for 20 years after the second world war, Australians succeeded admirably on the world sports area without government support. Baka suggests that the turning point came in 1972 with the election of the first LABOR government in 23 years. Sport was part of their social policy, which aimed to provide greater public access to community services and programs. According to Baka, as sport become an integral part of government's policy, it consequently developed an important national prestige function, through international sporting competitions.

The Australian government involvement in sport has also been reviewed by Semotiuk (1987). Prior to the 1970s government involvement in sport was minimal. The election of the Australian LABOR Party in 1972 represented the beginning of a new era in Australian sport by the creation of a Federal Ministry of Tourism and Recreation. Governments subsequently provided a great stimulus throughout the 1970s and 1980s to Australian sport development. Important initiatives involved the setting up of the AIS and the Australian Sport Commission.

In Australia, each of the major political parties has development policy statement on sports and athletic development. The Australian LABOR party Sport and Recreation Policy (1983) clearly stated the philosophy of the Australian government on sport: producing champions is not as important as having a nation of generally fit and healthy people.

The objectives of the Liberal and National Party Sport Policy (1988) identified Liberal and National Party sport policy as follows: First, encourage the greatest possible number of Australians to participate in sport; second, to assist leading sportsmen and women to reach the highest level of attainment to foster national pride and to set standards as an example; and third, to support Commonwealth involvement in the provision of sporting facilities of international standard.

The Circular of the Party Central Committee on Further Developing Sport (1984) precisely described the relationship between China's political ideology and sport. It revealed that sport was seen as means of winning national prestige, improving people's political consciousness and inspiring the patriotic enthusiasm of the nation.

### Sport and Economics

Shaw and Pooley (1984) examined the relationships between Olympic success and various socio-economic, political-military and educational factors for different groups of countries. For Western developed countries, population and Gross National Product (G.N.P.) are important factors affecting Olympic success. For Socialist countries, military expenditure and the number of Olympic sports have been shown to be important. For Third World countries, G.N.P., the number of Olympic sports taught in school and, in particular, military expenditure, have been shown to be important determinants of Olympic success.

Morrison (1976) explored the ways in which economic development affects sport development. He pointed out that economic conditions have an important influence on the human, technical, and material resources which can be allocated to physical education. In an economically advanced country more leisure time and better facilities will be

available, and spending on the consumption of sport will be greater than in undeveloped nations.

The Western Australian government (1987) produced a document on the economic importance of leisure. It concluded that an increase in technology leads to economic growth and this, in turn, provides increased leisure time, increased income, and greater expenditure on leisure.

While there appears to have been limited research on economic influences in Chinese sport, Lu (1982) examined the characteristic factors of undeveloped mass sport in China. He concluded that the budget allocation to mass sport was small; the number of sports facilities did not match the large population; not enough leisure time was provided; and, finally, the lower individual income limited people's expenditure on sport.

### Sport History and Tradition

Eyler (1975) examined the origins of contemporary sports practiced in English speaking countries and concluded that England and America were the original sites for most modern sports.

Dunstan (1976) examined the reasons for Australia's sporting obsession, and concluded that, first, the early settlers came from the most sports conscious nation on earth, Britain, second, that the climate was ideal and, finally, that there was never a shortage of space and playing fields.

Mandle (1985) explored the origins of early Australian sports. Horse racing, cricket, boxing, tennis, golf, rowing, athletics and swimming were imported from Britain and Ireland. Cricket, the most favored sport in Australia, was a typically English game,

which had been played in England since the eighteenth century. Rowing and athletics were well organised and highly competitive sports, and Australia achieved early international successes. The sport in which Australia produced its first world champion was rowing. In Athletics, in the first modern Olympic Games in 1896 in Athens. Australian athlete Edwin Flack won the 800 and 1500 metre running races. While Australia invented very few sports, the game of Australia's Rules Football, which started in Victoria in the late 1850s, became the dominant winter sport in southern Australia.

May (1984) recorded Australia Olympic results from 1896 to 1980, which indicated that Australia's achievements were high up to the 1960's. However, there was a significant fall in victories from 1972 to 1980.

Clumpner and Pendleton (1975) reviewed the introduction of modern sports in early China. From the late 19th century, China gained access to Japanese and German military training programs and gymnastics, which were applied to army training programs. In the early 20th century, modern sports such as basketball, baseball, athletics, table tennis and volleyball were introduced to China from America. However, they only developed at Western missionary schools. Diffusion into the wider community was limited. The Y.M.C.A. played an important part in developing modern sports in China by establishing sport organizations and promoting western sports.

Xu (1984) reviewed China's participation at the 1928, 1936 and 1948 Olympic Games. In these three Olympic Games, China sent few athletes and the level of performance was poor.



### The Structure and Operation of Sport Systems

Bennett, Howell and Simri (1983) suggest that one can only understand the role of sports in a society, and its organization, by analysing the wider macro system of society. In the case of the Soviet Union this means looking at sport in the context of its centralised, highly structured political and economic systems. They point out that all aspects of Soviet life are intimately related, directed, fostered and controlled by the communist party. Sport, therefore, is highly regulated, with a firmly controlled bureaucratic structure replicated at regional and local levels. The Soviet sports system can be described as "pyramidal" with specialised sports schools at the bottom, and the elite master of sport centres at the top.

Xiang (1986) compared the Soviet Union and U.S.A. system for elite athlete development. The U.S.A. system is centred around the university. While athletes obtain financial assistance and training at university, they are disadvantaged in that the system usually limits the period of athletic training to four years. An athlete therefore can not easily maintain his level of training intensity after leaving university. In most cases, however, the age of athletes is usually around the twenties. At this stage they still have the potential to continue developing their sporting excellence. On the other hand, the Soviet system can provide athletes with training, education and financial assistance until they finish their sporting careers.

Woodman (1988) compared the Australian system with West Germany, the USA and Eastern bloc systems. The common elements of the Western and Eastern systems include strong physical education and sport programs in the schools, coordinated by qualified professionals, highly educated coaches, and training programs which bring together the best athletes, coaches and facilities and applied sports research. According to Woodman, Australia made

the following improvements since the late 1970s. The Government has increased its involvement in sport, both in terms of funding and policy direction, and the professionalisation of sports. Administration moved from the kitchen table and the supper room of the local hall to the office desk of full-time managers (there are now a number of full-time administrators, coaches and development officers.), and the AIS was set up in the quest for excellence by Australian athletes in international sports.

Du (1983) compared the process of young athlete development in the sports schools of the Soviet Union and China. In the Soviet Union, athletics, swimming and gymnastics take a larger percentage of athletes in sports schools than team sports and non-Olympic sports, while in the sports schools of China, basketball, soccer and athletics take a larger percentage of athletes than other sports. The Soviet Union has more sports schools than China. Whereas the Soviet Union supports 6433 sports schools with 2,400,000 young athletes, China has 2249 sports schools with 180,000 athletes. The sports schools of the Soviet Union are managed by the Education Department of the government, while the sports schools of China are affiliated to the Physical Culture and Sports Committee of the government. Both the sports schools of the Soviet Union and China face problems, the major one being the difficulty in combining athletic training with academic study.

Daly (1985) argued that Australia's early sport success was due to its broad base of participation and fertile climate. The organization of sport in Australia began with the community single-sport club, which was able to produce successful sporting heroes and heroines up to the 1970s. When many Eastern and Western countries established formal, coordinated systems for high performance athlete development between the 1950s and in the 1970s, Australia's unorganized club system gradually lost its strength.

The Australian Commonwealth Government Standing Committee On Finance and Public

Administration (1989) conducted a detailed investigation into the funding management for Australian sport. The Standing Committee concluded that not only has Australian sport been inadequately funded, but also that the funding has been uncoordinated, and spread too thinly over many sports. The Committee recommended that future funding arrangements should be concentrated on those sports where Australia has established that it can be internationally competitive, and where there is widespread community support for those sports. The Committee identified basketball, canoeing, cycling, hockey, rowing, track and field and swimming as appropriate sports. The Committee also argued that in order to ensure a more coordinated approach to elite athlete development, the Australian Institute of Sport should be encouraged to establish nationwide talent identification programs in association with national sporting bodies and State Institutes of Sport. In turn, the Committee suggested that these programs should feed directly into national squads, and thus all national representative teams. The Committee also suggested a re-emphasis of roles for the Australian Institute of Sport. Instead of focusing its energies on research and long-term residential programs, it should allocate more of its resources to short-term residential programs for sports not in the AIS program, and assistance to individual coaches and athletes. Finally the Committee recommended that funding for junior development programs be increased. The Committee considered that the expansion of the modified games program ( eg., Aussie Sports) and the provision of professionally organised and physical activities in primary schools were essential for the creation of a pool of young, talented athletes.

Mckay (1983) reviewed sport involvement among the Australian population. He discussed how participation in, and attendance at sport, is influenced by religion, age, gender, education, income and marital status. He indicated that males had higher rates of involvement in sport than females, that single people had higher rates of involvement in sport than married people; and that people with a high income and a high level of education have a higher involvement of sport.

The AIS Strategic Plan of 1988-90 (1989) indicates the likely further development of Institute programs over the three years from January, 1988. It also reflects the government's intentions to rationalise Commonwealth sport policy, administration and funding of programs for elite athlete, and the effects of the merger of the administration of the ASC and AIS.

Daly( 1984) reviewed the background of the establishment of the AIS and its early performance. The Institute of Sport was a LABOR Party initiative although it was certainly made a reality through the unbounded enthusiasm of the then minister for Sport and Recreation, Mr. R. Ellicott, from the Liberal Party. The first suggestion in support of a sports institute had been made in the Bloomfield Report in 1973. The institute was seen to both provide an environment where athletes could work on improving their athletic performance, and act as a breeding ground for Australia's future champions. Daly considered that the AIS had subsequently fallen short of its expectations.

Sarno (1985) criticised the AIS for its failure to deliver on its gold medal promises. He cited a high turnover of coaches, athletes and directors; the introduction of non-Olympic and Commonwealth Games events such as cricket into the training curriculum, thus diluting the available funds and AIS programs; and the reluctance of some top athletes to join the Institutes, as its major weaknesses.

Posner (1988) explored the gymnastic developmental system of China. He divided the system into several development stages, the Initial Stage, the Intermediate Stage and the Advanced Stage. In each of these three stages, the age of athletes, training hours, and performance ranks had different requirements.

Bloomfield (1980) explained the value of talent identification and development for

improved sports performance. First, if young people develop their sports techniques early, they will reach high levels of performance by the time they graduate to senior ranks. Such high levels have considerable attraction and appeal, not only to the public at large, but also to young, potential sportsmen and women. The second advantage of talent identification is that athletes can be 'sorted out' and directed into the sports in which they can do best, or, alternatively, they can be devised so that even with superior training, they may not reach more than the district level of success.

Zhao (1988) revealed the problems of the Chinese athlete development system. The children at sports schools suffer from poor academic results and are discouraged to attend training at a Sports school by their parents. The sports schools lost many children who have real athletic potential. The high performance athletes at Sport Technique Institutes have limited employment choice after they end their athletic training. This situation ensures that some potential athletes do not chose sport as their career.

Chai (1986) reviewed the Olympic strategy on elite sport development of the Soviet Union, the USA, and East Germany. The Soviet Union and the USA were large, powerful countries which had the strength to develop Olympic sports. Both are very strong in most Olympic sports. East Germany, being a small country, decided to concentrate on a few individual sports, such as swimming, gymnastics and track and field.

## CHAPTER III

### METHODOLOGY

The following research methods and procedures were employed in the creation, collection, collation and subsequent analysis of information relevant to the research topic.

#### Literature Review

Documents, materials and publications were reviewed and then assembled into four general categories. They were:

1. Sport and Politics: The materials reviewed in this area were categorized under the following specific headings:
  - (i) the relationship between sport and politics,
  - (ii) Olympic Games and Politics,
  - (iii) political ideology on sport in Eastern and Western countries,
  - (iv) effect of a country's political structure on the sport system, and
  - (v) Australian and Chinese government involvement in sport and their respective sport policies.
2. Sport and Economics: This material reviewed the economic effect of mass sport development on sport facilities, and individual spending on sport and leisure time.
3. Sport History and Tradition: The origin of modern sports and sport history of both Australia and China were reviewed.

4. The Structure and Operation of Sport Systems: The materials reviewed in this area were the Eastern and Western athlete development system, the Australian and Chinese athlete development system, sport talent development, and strategies for Olympic athlete development.

### Sporting Organizations Surveyed

A number of related sporting structures within China and Australia were surveyed by accessing related documents and by interviews with administrators, business managers, coaches and athletes. Details of information sources and survey methods in both Australia and China are listed below.

#### Australia:

##### 1. Australian Institute of Sport (AIS)

Information on the evolution of AIS, its objectives, strategy, administration, scholarship program and budget was obtained through access to publications and documents of the AIS, eg., Sport, Information On Australian Institute of Sport; Australian Institute of Sport Strategic Plan 1988-90; 1989 Annual Report of Australian Institute of Sport, Information For Prospective Athletes of the AIS

Additional information on the AIS, in particular an evaluation of the scholarship program and the effectiveness of the AIS producing international competitive athletes were obtained by interviewing the AIS head women's gymnastic coach, Ms. Jieping Tian (Specific questions and answers are recorded in Appendix 1.)

## 2. State Institute of Sport (SIS)

The general information on the establishment, administration, sports assistance and general budgets of three State Institutes of Sport, ie., South Australia Sport Institute (SAIS), Western Australian Institute of Sport (WIS), and the Tasmania Institute of Sport (TIS) were investigated through telephone interviews with the administrators, Mr. Darel Hart of SAIS; Ms. Tania Sullivan of WAIS, and Ms.Elizabeth Jack of TIS. (Questions and information provided in Appendix 2.)

## 3. Sporting Clubs

Information on the organizational structure, finance and management of sporting clubs was obtained through interviews with administrators and players of sporting associations and sporting clubs. (For questions and information see Appendix 3.)

The following people were interviewed:

Mr.Dennis Galimberti, General manager, Footscray Football Club. Mr. Lindsay Gaze, Executive director, Victoria Basketball Association. Mr.Wayne Larkins, Captain, East Side Quit Spectres Basketball Club. Mr. Les Barcikowski, Head coach, Footscray Renegades Volleyball club. Miss Peggy Brown, Executive director, National Gymnastics Federation.Mr. Greg Jackson, Manager of Monty Gymnastics club. Mr. Len Willmer, Executive director, Victoria Swimming Association. Mr. Ross Goodrings, Coaching director, Victoria Athletics Association.



## CHINA

A survey on Chinese athlete development and its structural organization was conducted through access to the government document, the 1988 Annual Statistics of China Sport Development, and interviews with senior administrators and national coaches of the following sporting organizations.

Mr. Wu Mengxiong, Former director, China Olympic Sports School.

Mr. Liang Dalong, Director, Xuzhou Sports School.

Mr. Len Yianzhi, Former chairman, Beijing Physical Culture and Sport Committee.

Mr. Zhang Haitao, Former director, Jiangsu Sport Technique Institute.

Mr. Shi Shuyong, Head Athletics Coach, National Teams Centre.

(Samples of questions and information are provided in Appendix 4, Appendix 5, Appendix 6.)

### Interview Method

During interviews with administrators, coaches and athletes standard questions were asked. Responses to these questions were recorded on audio tapes which were later analysed for information which was pertinent to this research.

### Questions at Interview

Separate questions for each sporting organization were constructed. They were designed to elicit information concerning organizational structure, its financial position, the range of sporting activities supported, staffing arrangements and forms of assistance to athletes.

### Attendance at Public Hearings

The second Public Hearing of The Subcommittee Inquiring into the Funding and Administration of Sport in Australia on 25, November, 1988 in Melbourne provided information on the cooperation of sporting organizations, funding allocations and talented children development.

During the course of this hearing day the following people participated:

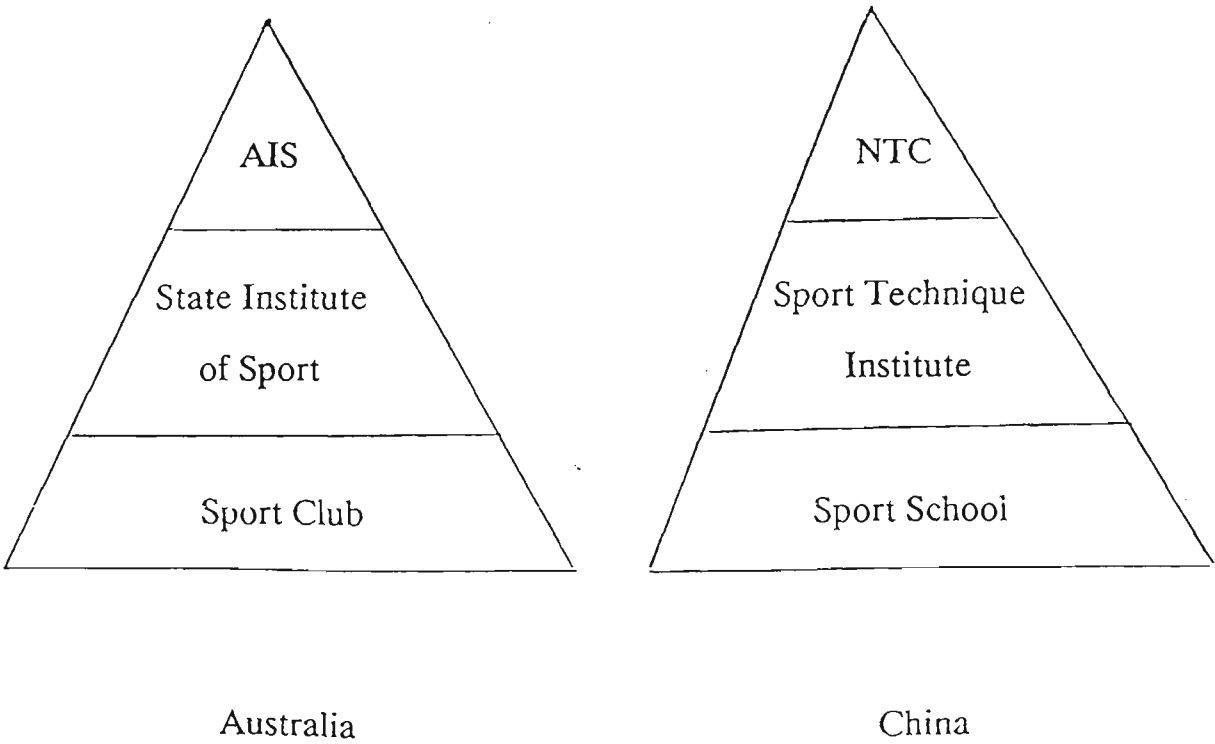
Mr. Bill Hoffman, Mr. Jack Howson and Mr. Geoff Henke from the Australian Olympic Federation; Mr. Jim Barry and Mr. Garry Daly from the Confederation of Australian Sport; Mr. Ken Oaten, Mr. Tom Forsyth and Mr. Russell Hopper from the Sports Federation of Victoria, Inc.; Mrs. Debbie Flintoff-King, 1988 Olympic Gold Medallist, and AIS head Athletics coach Mr. Phil King.

CHAPTER IV

THE STRUCTURE OF THE ATHLETE DEVELOPMENT  
SYSTEMS OF AUSTRALIAN AND CHINA

The athlete development structure of both Australia and China is basically divided into three levels. In Australia, the sports club is at the base level of athlete development, State Institutes of Sport (SIS) are located between Sports clubs and the AIS, which is the highest level of elite athlete development. In China, the Sports School, Sports Technique Institutes (STI) and the National Teams Centre (NTC) make up the structure of the elite athlete development system. (Figure 1.)

Figure 1.  
Australian and Chinese Athlete Development  
System Structure



## AUSTRALIA

### Sport Clubs

The sport club is an organization that caters for people participating in sport. Anyone can join and attend sport clubs. New members are usually graded on the basis of interest, age and standard. Sport clubs are divided into professional sport clubs and amateur sport clubs. The former are financially strong, employ full-time staff to run the club and players are paid for competing. These professional sports comprise the popular sports in Australia such as Australian football, cricket and rugby league. Each of these sports has a large participant base and attracts large groups of spectators. On the other hand, the amateur sport clubs mostly are run on limited budgets, and are managed by volunteers. Some sport clubs such as gymnastics clubs and swimming clubs utilize part-time coaches, who are usually employed on a voluntary basis. Members of the amateur sports clubs are usually required to pay fees, and to cover the expenses of training and competition themselves.

As far as athlete development programs are concerned, the differences of athlete development at club level can also be significant. Athlete development at club level is influenced by the social attractiveness of the sport, its popularity and performance standard. That is, young athletes will generally want to play those sports which receive community and media support. Athlete development in professional sports is very competitive. In the amateur sports it is relatively weaker.

Sports clubs, whether amateur or professional, play an important part in Australian high performance athlete development. They provide a large participation pool for producing athletic talent. The number of registered players for selected sports is listed on Table 2.

### State Institutes of Sport (SIS)

State Institutes of Sport (SIS) are state supported organizations, established for high performance athlete development. Unlike the Australian Institute of Sport(AIS), they do not have complex buildings and facilities for athletes' residential living and training. They provide financial assistance to talented athletes by providing access to qualified coaching and training conditions, sports science and sports medicine services, national and international competition. SIS employ a few full-time administrators who run SIS programs and full-time coaches who co-ordinate the training of athletes in the squad for national and international events. There are three established SIS: the South Australian Sport Institute (SASI) was established in 1982, the Western Australian Institute of Sport (WAIS) in 1984 and the Tasmania Institute of Sport (TIS) in 1987. The Victorian Institute of Sport has been structured and will implement programs as from June 1990.

### Australian Institute of Sport(AIS)

The AIS is the Commonwealth government sponsored elite training centre. It operates a Scholarship Program, and a Sports Talent Encouragement Plan,a National Sports Program, and the AIS Coaching Assistance Scheme. The program that directly relates to high performance athlete development is the scholarship program. It provides 434 scholarships covering 17 sports, which include basketball, gymnastics, netball, rowing, sculling, soccer, swimming, tennis, and water polo in Canberra; hockey in Perth, volleyball in Sydney; diving, squash and canoeing in Brisbane; and cycling and cricket in Adelaide. Rugby union scholarships are also available Australia-wide. Selection of the scholarship holders is based on the level of excellence and the development potential of each applicant. This varies between the different sports. For example, in basketball scholarships are awarded only to juniors, while in gymnastics, scholarships are awarded to both junior and senior athletes.

Athletes who are awarded scholarships receive:

- . full board and accommodation at the AIS
- . an educational allowance of up to \$250 per annum for secondary students and \$850 per annum for tertiary students.

Athletes participate in interstate and overseas competition as part of their institute programs. They also receive support services including sport science and medicine and administrative assistance.

All the athletes participate in full-or part-time educational programs, or are employed either full-or part-time during their scholarship year.

AIS possesses world standard research and training facilities, a sport information centre, and a sport science and medicine centre. The objectives of the AIS are reflected in its strategic plan for 1988-90:

1. To provide resources, services and facilities to enable Australians to pursue and achieve excellence in sport while also furthering their educational and vocational skills and other aspects of their personal development.
2. To improve the sporting abilities of Australians generally through the improvement of the standard of high level sports coaching.
3. To foster co-operation in sport between Australia and other countries through the provision of access to resources, services and facilities related to sport.

The AIS operates under the umbrella of the Australian Sport Commission, which in turn is funded by, and responsible to, the Commonwealth government.

## CHINA

### Sports Schools

The sports school is the training centre for young athletes who are chosen by a series of identification and selection processes. The children selected into a sports school are recommended by their physical education teachers and their parents. These selected children are subsequently sent to sports schools for physiological and biomechanical measurements, fitness and skill tests. After completion of these tests, and a few weeks' observation, only those who achieve the designated requirements are retained in sports schools.

Sport schools provide free accommodation and coverage of the expenses of training and competition. Coaches and administrators are employed full-time. Sports such as basketball, gymnastics, volleyball, soccer, swimming, diving, track and field, table tennis and weight training have been established in a sports schools. Children enrolled in sports schools are required to attend training after school. Usually, two to four hours a day, four to six days a week are spent on training, depending on the age of the children and the sport. Sports school also offer education courses for young athletes. The teachers are employed as full-time staff of the sports school. Every major city and town has a sport school which, in aggregate terms, means 3601 sport schools with 304,839 children. (Annual Statistics of China Sport Development, 1987). The sports school has played an important role in athlete development in China. Eighty-five percent of athletes selected to represent China in international competition have received training in sport schools. (Annual Statistics of China Sport Development, 1987).

### Sports Technique Institutes(STI)

Sports Technique Institutes, the elite training center for high performance athletes, are similar to the AIS in structure and function. Every province of China has one STI, together with one in the People's Liberation Army. Thus, there are a total of 30 STI with 20021 full-time high performance athletes in China. (Annual Statistics of China Sport Development, 1988). The athletes of the STI are chosen from sports schools by inter-sports school competition within local provinces. The athletes receive free accommodation and coverage of the expenses of training and competition. A subsidy allows them to undergo full-time training at STI without being employed.

The STI offer 30 to 35 sports, in which most Olympic sports are included. The sports offered in an STI can vary, and depend on the features of geography and the climate of local areas. Full-time administrators, coaches and academic teachers are employed at STI. STI offer courses at primary and secondary school level and a three year's physical education course. The athlete development at STI is divided into a junior and senior period by the age and performance level of athletes. The junior team is used as the "reserve" of the senior team. Most athletes of STI are employed as coaches, administrators, and physical education teachers after they finish their sport career.

### National Team Centre(NTC)

There is only one National Team Centre in China which caters for athletes who will represent China in international competition. These athletes are chosen from the STI by national competitions and national championships every year. The athletes who have been selected into the NTC still belong to their original STI. They will frequently come back to the STI after they finish at the NTC.



The structure and administration of the NTC is similar to that of the STI. Only fourteen sports have a resident status in the NTC. These 14 sports are athletics, basketball, badminton, cycling, fencing, gymnastics, soccer, shooting, swimming, table tennis, tennis, volleyball, weightlifting and diving. Other national sports teams reside at the NTC for short periods prior to major international competitions, like the AIS visiting program.

## CHAPTER V

### BACKGROUND TO, AND ANALYSIS OF, THE SHAPE OF THE ATHLETE DEVELOPMENT SYSTEMS OF AUSTRALIA AND CHINA

The athlete development systems of both Australia and China have been shaped by many factors such as politics, economics, and each country's historical and international background. For example, the extent to which sport and politics are connected, will be related to the political ideology and political system of a country. A different view on the proper place of sport in society, and its social utility, will be reflected in different levels of government involvement in sport. Similarly, the effect of economics on sport will be reflected in a country's economic conditions, and the leisure time that is provided for sport development. Furthermore, the sporting traditions of a country will influence the preference for, and popularity of, particular sports.

#### Political Background

Politics and sport cannot be separated. Sporting structures and practices will reflect a country's political ideology and its political structures. The sporting ideology of a country reflects its socio-political characteristics which can be divided into constitutional democracy and non-constitutional regime. Bedeck(1979) notes:

"A constitutional democracy is characterized by the allocation of a higher sanction to the basic laws than the immediate wishes of a ruler or the political party in power. The effective restraints on the group in power include free elections, the existence of legal political opposition which has some impact on decision-making, a politically neutral civil service and army, and the existence of rule of law" (p.139).

Australia is a constitutional democracy. Government is organised along party lines, and parliament is based on the British cabinet system. There are three major political parties in the federal sphere: the Labor Party, the Liberal Party and the National party. Elections are held in order to decide which party governs the country, both at national and state level.

China is a socialist regime country. Bedecki (1979) defines the characteristics of this type of country in the following way:

".....non-constitutional regimes are dictatorial in varying degrees; the government may be extremely totalitarian, in which total control is exercised not only over political institutions but over all details of social behaviour" (p.139).

The Chinese political system is a one political party system, which is ruled by the wishes of the party officials. Democratic processes are not included in this system.

The general basis of objectives for government involvement in sport is different between constitutional democracies and non-constitutional regimes. Bedecki (1979) noted:

"Among the constitutional democracies there is a basic concern for the individual, his health and his enjoyment through sport and recreation" (p.141).

The sport policy of Australia reflects these characteristics, which is identified in the statement of the the A.L.P. Sport and Recreation Policy (1983):

"The LABOR Party believes that sport and recreation provide enormous benefits for the individual in society, and that it can provide one of the key factors in the enhancement of personality" (p.20).

"Producing champions is not as important as having a nation of generally fit and healthy people. The broader the projects for fitness the more likely we are to produce champions. The Labor Party places particular emphasis on the importance of attracting and retaining the interest of young people in sport and physical fitness"(p.109)

A number of programs have been developed and established for this purpose. In Australia these programs include the Aussie Sport Program, the Women in Sport Program, Youth Sports, Veteran Sports, and assistance for Sport For The Disabled. All these programs are aimed at developing mass fitness.

China is a non-constitutional regime, and runs sport with a different ideology from Australia. Bedeck (1979) states:

The non-constitutional regimes, on the other hand, direct their objectives in a different direction. Sport and recreation are conceived as a great socializing function for the good and prestige of the nation. The term 'physical culture,' as it relates to the nation's total cultural picture, tends to obscure the individual (p.141).

The above features of non-constitutional regimes are reflected in the Chinese policy on sport in the Circular Of The Party Central Committee On Further Developing Sport (1984) which was issued after the Los Angeles Olympic Games:

"Sport is important for people's fitness, power and prosperity of the nation, and honour of the country. It plays an important part in improving people's political consciousness, achieving the goals of the party in the new development period, developing international exchanges and enhancing friendship with the people of the world, and strengthening national defence. Hence, the whole party and society should attach great importance to physical education and sport. The great achievements in sport have won prestige for our country and kindle national confidence and national pride, which have inspired the patriotic enthusiasm of overseas Chinese and extended the international influence of our country" (China Sport, Oct.15, 1984).

It is clear that sport in China is the vehicle for the expression of political ideology,

and therefore consequently has a political function.

Therefore, the different ideologies on sport in Australia and China directly influence the value that government places on elite sport which, in turn, determines the effort that the government will put into elite athlete development. China attaches importance to the political function of elite sport. As a result, there will be more financial investment and government involvement in high performance athlete development than there will be in Australia.

Political structures also affect sports system structures. Australia is a federal political system which is different from the unitary system of China. Bedeck (1979) defined a federal system as:

"....one in which the functions of government are shared between a central authority and regional authorities, both sets being autonomous in certain areas and deriving their respective powers from the constitution or interpretations of it, not from each other" (p.139).

In Australia, there are six States, each being independent and separately subject to the Crown of Great Britain, but living together under a federal system of government. In the federal system of Australia, the local and provincial authorities have independence and power in initiating their own programs and working with sports governing bodies. In general, local government accepts responsibility for funding of local sports facilities and local sporting clubs; states have generally accepted the major responsibility for funding state sports associations and assisting their respective athletes to reach a national standard. The elite performance level and support of national sporting

organisations are the responsibility of Commonwealth government.

In a unitary system like China, a central set of political institutions exercise legitimate authority. Local authorities obtain their powers from the central authority. As Bedeck (1979) described:

The central authority lies with the national government sport agency, regardless of the number of divisions within it. The government sports agency at the national level not only encourages and supports, levels. The government itself is the 'umbrella' sports organization (p.144).

Therefore, in China sports development at all levels is unified, and organized by the State Physical Culture and Sports Committee. Local authorities have no independent power. Policy decisions, program development, financial budget, and the administration at each level are unified and planned by the centralized Sports and Physical Culture Committee of government.

### Economic Background

An affluent, well developed country can support high performance athletes based on mass sport participation, while an underdeveloped economic country has to invest special financial and human resources on elite athlete development, if it is to generate superior athletic performance.

The effects of the economic development of Australia and China on mass sport development are reflected in individual income consumption in sport and leisure time. Australia and China have wide gaps in their level of economic development. Australia's average individual annual income in 1988 was US\$11,100; China's was US\$290. (World Development

Report 1989) These different economic conditions mean that Australia and China have significant differences in the condition for mass sport development.

In Australia, the people have the financial strength to support strong consumer demand for sport and recreation. As seen in Figure 2, in 1988 'recreation' alone totalled 11.5% of total household expenditure, and was the fourth largest household expenditure commodity group, after food, transport, and current housing costs. In China, the average household income can only maintain basic living needs, which includes a flat allocated by the government to live in, food and clothing needs. Most household utensils that are popular in Australia like dishwashers, microwaves, ovens, fridges, washing machines, colour TVs and videos are viewed as luxury goods by the Chinese. As far as sports participation is concerned, most people are attracted to those which do not need special facilities and equipment like jogging, wushu and taiqi (Chinese traditional sports), tug-of-war, table tennis, badminton, and those sports which are supported by low and medium cost facilities like basketball, volleyball and soccer. Sports such as gymnastics, swimming and tennis, which most Australians have the opportunity to participate in, are denied to many Chinese. They are seen as luxury sports. Many Australian popular water sports such as surfing, sailing, water skiing, yachting and rowing are even more elitist. Most Chinese have never been exposed to these activities.

Australians have more leisure time than the Chinese. Most people work a 38 hour, five-day week with many public holidays and annual leave. Over one-third of the average worker's annual calendar is a non-working day, which provides people with the leisure time to participate in sports. (Table 1.)

The shortage of capital resources in China means that production involves the extensive use of physical labour. The working time of a week is still longer than most developed

Figure 2.

Average Weekly Household Expenditure On Commodities and  
Services, Australia, July-December, 1988

	\$	%
Food and non-alcoholic beverages	94.66	18.7
Transport	76.20	15.0
Current housing costs	72.07	14.2
Recreation	58.42	11.5
Miscellaneous commodities and services	40.97	8.1
Household furnishings and equipment	40.08	7.9
Clothing and footwear	31.13	6.1
Household services and operation	24.07	4.7
Medical care and health expenses	21.22	4.2
Alcoholic beverages	17.21	3.4
Fuel and power	13.76	2.7
Personal care	10.70	2.1
Tobacco	6.38	1.3
Total	506.87	100.0

Source: Australian Bureau of Statistics 1989



Table 1. Non-working days for Australia and China in 1989

Non-working day	Australia	China
Weekend	104	52
Public holidays*	9	7
Annual leave	28	0
Total	141	59

\* All state public holidays

Source: 1989 Calender of Australia & China

countries, involving a six-day, 48 hour week. Even on Sunday, the only non-working day, most people have to do housework. China has fewer public holidays than Australia, and has no annual leave days. Little spare time is left, and it is therefore difficult for Chinese to construct the leisure time to go to sports, either as players or spectators.

The differences that exist in the level of economic development have created significant differences in mass sport participation levels between Australia and China. Australia can develop its elite sport from a base of well developed mass sport, which in turn benefits from its well developed economy and sporting tradition. The advantages that Australia possesses in developing athletic talent were succinctly identified by the North American sports commentator, Herbert Wind, in describing the reasons for Australian sport success in 1960s. When asked the question 'Why is there so much cream at the top of Australian sport?' his answers which is part of the solution, was 'because there is an enormous

amount of milk at the bottom.' (Daly, 1985.) This proposition supports the view that the reason Australia has produced many international champions in the 1950s and 1960s was because there was a large pool of participants who formed the basis of production of athletic talents.

In contrast, China's economic development level is less advanced. Sport facilities are limited, leisure time is restricted, and incomes are very low. It is very difficult to get mass sport well developed. It has no large participation pool for producing sport talents. The alternative for China was to invest in the establishment of a special 'nurturing athletic' environment, in order to produce athletic talent of international standard.

### Historical Background

The sport development and sport performances standards of the late nineteenth and early twentieth centuries have had significant influences on elite athlete development in Australia and China.

In Australia many sports were well developed and the performance standard was very competitive during this period. It was not necessary for government to become involved in, or to change, its sport system. In China, on the other hand, sports were very poorly developed up to the 1950s. The government became involved in sport development, and established a special system for high performance athletes, in order to improve sporting standards.

The early pattern of migration also assisted the development of Australian sport. Most nineteenth century migrants to Australia were from Britain, a country where sport was

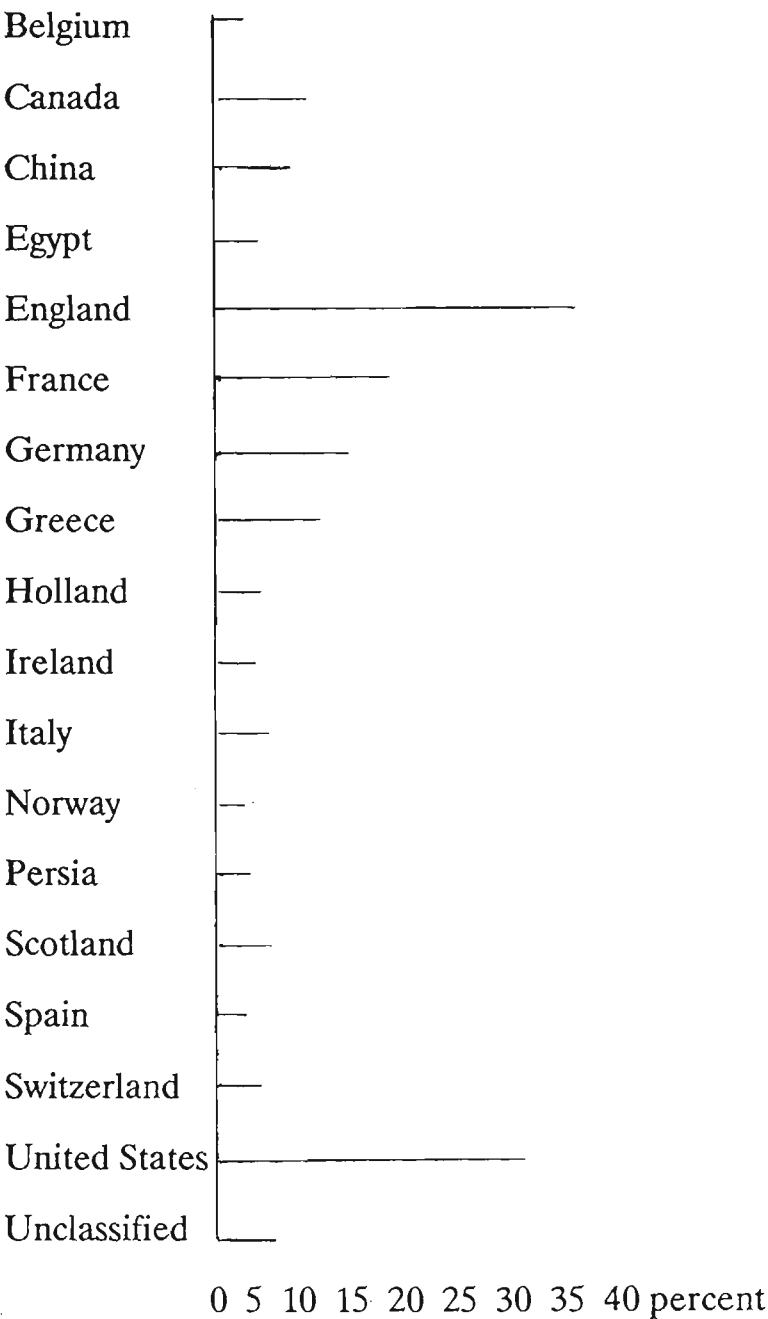
given a high priority. Britain was also an inventive country with respect to sport. It had the biggest percentage of 'birth' places for modern sports.(Figure 3.) The migrants brought with them not only English sports, but also the tradition of loving sport both for its own sake (eg.,fun) and for its instrumental value (eg., its character building qualities).

Australian sport was very competitive and well organised during the early days.It is one of only three countries which have competed in all the modern Olympic Games. It was also one of the first countries to codify and formalise its sport. The New South Wales Cricket Association, the Southern Rugby Union and New South Wales Amateur Athletic Association were formed in 1858, 1874 and 1887, respectively. Australia was for a long time dominant in a number of world sports up to the 1960s, including swimming, athletics, rowing, cycling, canoeing,and boxing. Ninety-six medals had been won from the first modern Olympic Games to the 1956 Olympic Games (May, 1984). The organizations for developing athletes were based on sports clubs which kept their strength until the 1960s. During that time, it was not necessary for the Australian government to involve itself in sport development. After the 1970s, the unorganized Australian club system lost its advantages compared to the organized system of other countries. After the comprehensive failure in the 1976 Montreal Olympic Games, the Australian government then decided to increase its involvement in elite athlete development. Paradoxically, the high performance standard of Australian sports up to the 1960s was a factor in maintaining the traditional sports structures in Australia. These structures, however, were shown to be inappropriate for the maintenance of international sporting competitiveness during the 1970's. There was seen to be no need for changes in the athlete development system until the late 1970's.

Chinese sports were undeveloped up to the 1950s. China had been a semi-feudal and

Figure 3.

Distribution of Place of Origin of Modern Sports



Source: A History of Physical Education & Sport  
in the United States and Canada.(Zeigler, 1975)

semi-colonial country from mid-19th century to the mid-20th century. Civil war and outside aggression occurred over several decades. The economic conditions were very backward and most people lived below normal living standards. Sports were not popular as most Chinese people had neither the time nor the income to participate in competitive sport.

Modern sports were introduced to China by the Young Men's Christian Association (Y.M.C.A.), which originated in Britain. The Y.M.C.A. established organizations in every big city of China. These organizations introduced and propagated modern sports among young people. The major sports which were introduced were athletics, basketball, volleyball, soccer, tennis and swimming. However, most of the modern sports were developed only in Christian universities which were established by western countries such as the USA, Britain and France. The young people of these schools not only accepted western education, but also modern western sports. While the Y.M.C.A. and Christian universities provided an impetus for the promotion of, and instruction in, international sports, its spread was limited. (Clumpner and Pendleton, 1975.)

The sport performance standard of China in international events in the early part of the twentieth century was not competitive. China's entry to the Olympic Games began in the 1930s and included the 1932, 1936 and 1948 Olympic Games, without any medal success. (Xu, 1984) With such a poor foundation of sport performance, it was impossible for China to develop an elite sports system similar to the Australia structure with its reliance on an unorganized but broad-based system. It had to establish a special system which concentrated financial resources on identifying and training young talents. Like nurturing programs for special talents in music, ballet and art, this was the best way for China to make rapid gains in its elite sport performance.

### International Background

The international background in elite athlete development has also significantly influenced the direction of elite athlete development in Australia and China. Before the 1950s, when elite athletes trained within an unorganized, decentralised environment, world sports were monopolised by western countries. The situation began to change when the Soviet Union and East Germany established systems for elite athlete development in the early 1950s. Due to the remarkable achievements arising out of the Soviet Union and the East Germany systems, other socialist countries like Cuba, Czechoslovakia, Yugoslavia, Hungary and China began to copy these arrangements.

China established a Sport School in 1953, in which the principles of structure and management were borrowed from the Soviet Union. Between 1952 and 1979, China was excluded from the International Olympic Federation (IOF) and had few opportunities to compete in international sport. As a result, during this period no achievements in elite athlete development were produced, although a co-ordinated system for athlete development did exist. After opening its diplomatic doors to the world in 1978 and re-establishing relations with the IOF in 1979, China began to participate in international sport, and exchanges were arranged with both eastern and western countries. In the late 1970s, when western countries and eastern blocs began to recognise the strengths of each other's sports systems, they learned from each other. Elite athlete development programs consequently adopted a mixed model. China followed this trend, and absorbed western ideas in athlete development which included independent fund raising and broad-based participation schemes.

Australia had been slow to react to the challenge resulting from the establishment of

sophisticated international sport development structures. It was one of the last advanced western countries to establish an elite training centre. As a result the amateur sport structure changed from a predominantly unorganized, unco-ordinated and decentralised club system to a semi-formal centralised system, in which there was government involvement in high performance athlete development. It constituted a response to the trend of most other western countries toward an eastern-type model. By the late 1970s, most western countries such as the U.S.A., Canada, France, West Germany and Austria had established elite training centres. Australia replicated this trend in 1981 when the Australian Institute of Sport was established. The background of, and rationale for the AIS establishment, is revealed in the AIS strategic plan for 1988-1990:

"The AIS evolved because elite athletes were not receiving sufficient opportunities in Australia to allow them to compete favourably with athletes overseas. In other countries, particularly in Europe and North America, the amateur approach to sport so evident in the 1950s had been transformed in the 1960s and 1970s to full time effort and professionalism"(p.6).

According to Daly(1984):

"By the seventies other nations had realised the value of sporting success as a form of foreign policy and a way of developing national pride and had begun competing in earnest. Australians found themselves amateurs in a world of professionals-possessing of sporting past but not a future" (p.1).

It is therefore clear that international developments in the field of elite athlete development had a significant impact on both the Australian and China athlete development systems.

## CHAPTER VI

### ANALYSIS OF THE OPERATION OF THE ATHLETE

#### DEVELOPMENT SYSTEMS OF AUSTRALIA AND CHINA

The high performance athlete development systems of Australia and China are each based around three levels: local, state and national and, in this respect, the systems are similar. However, the specific structures that have been set in place for each athlete development system are different. In Australia, athlete development at the club level is run privately and independently. Athlete development in Australia's favorite sports like cricket, football and tennis is very competitive and well organised, but is less comprehensive and poorer in less popular sports. At the state level, the potential athlete gets assistance from the State Institutes of Sport which is supported by the state government. The AIS is the elite training centre for high performance athletes and provides excellent facilities, coaching and sport science back-up. In China, on the other hand, the athlete development at each level is managed by the government sport agency. All talented children and athletes receive full financial support for athletic training and education. All coaches and administrators are employed full-time, and athlete development at each level is co-ordinated.

#### AUSTRALIA

##### Sports Club

Athlete development at the club level can vary between sports. The distinguishing features of the sports clubs at this level include the level of popularity, the breadth of the financial base and performance levels in competition events. Sports can



subsequently be divided into either the Non-Olympic sports, high performance Olympic sports and low performance Olympic sports. Non-Olympic sports include cricket, Australian football, rugby union, netball and squash. These sports are very popular and provide for the largest level of participation (Table 2). These sports have an important impact on the development of elite athletes in Australia, because they draw a large

Table 2.

## Selected Sports Registrations Of Australia: 1989

No. Sport	Registration	No.Sport	Registration
1.Tennis	560000	14.Gymnastics	42201
2.Cricket*	550000	15.Shooting	38738
3.Aussie Football*	474990	16.Table Tennis	28500
4.Soccer	360150	17.Athletics	19157
5.Netball*	359351	18.Water polo	17911
6.Rugby*	242060	19.Rowing	16373
7.Basketball	189732	20.Cycling	7563
8.Squash*	139061	21.Canoeing	6800
9.Hockey	132633	22.Boxing	5005
10.Yachting	96650	23.Wrestling	3010
11.Swimming	85372	24.Archery	2481
12.Volleyball	74000	25.Fencing	573
13.Weightlifting	46704	26.Handball	350

\* Non-Olympic Sports

Source: Information from Australia Sport Commission

percentage of participants who might have talents for other sports. For example, many top Australian football players may have talents in the track and field area and the netball players might have outstanding basketball talents. These mass participant, heavily funded sports have much more social influence and media exposure, as a vehicle for the development of national identity, and attract business sponsorship. Most Olympic sports, however, are not strong in these aspects. It should be noted, though, that these factors are important for the long term progress of sport in Australia.

High performance Olympic sports in Australia include swimming, athletics, hockey, rowing, canoeing, cycling and basketball. These are sports in which Australia performs relatively well at international level. These sports have provided Australia with most of its Olympic medals (Table 3).

Talent development in these sports is based upon "natural selection" in which the potential elite athletes are often "picked out" from a large number of participants by chance, unlike most eastern countries where talented children are selected from a "nurtured environment". As a result, the talent development procedure in these sports at club level is often unsystematic and erratic.

Low performance Olympic sports include gymnastics, volleyball, handball, shooting, wrestling, table tennis, soccer and archery. The performance of Australia in these sports is not competitive in the international arena. With the exception of soccer, most of these sports are not very popular and the participation numbers are small. These sports have a poor financial basis because of the low levels of international performance, and have difficulty in attracting business sponsorship. Because of these factors, it is very difficult for these sports to develop comprehensive and efficient sport talent identification programs at the club level.

Table 3.

## Australian Sports That Obtained Medals In Olympic Competition 1896-1988

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Sport	Gold	Silver	Bronze
Swimming	37	30	35
Athletics	17	17	20
Cycling	5	6	4
Rowing	3	4	5
Yachting	3	1	4
Equestrian	2	1	1
Archery*	1		
Diving*	1		
Weightlifting	1	1	1
Wrestling*		1	2
Canoeing		2	3
Boxing		2	3
Judo*			1
Shooting			1
Hockey	1	2	1
Basketball	Both men and women are 4th at Soeul Olympic Games.		

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\*Sports in which medals were won before the 1950s.

Source: (1) Gold, Gold, Gold, May, 1984

(2) Report Of The Olympic Games, 1984

Australian Olympic Federation

(3) The Olympian, December, 1988

Australian Olympic Federation

However, it must be conceded that athlete development at the club level will have a significant effect on the SIS and the AIS, which operate at the peak level of the athlete development pyramids. They depend upon the talent support from the sport clubs. Those sports which develop well at club level can provide highly qualified performance athletes to state and national level. Sports which do not develop competitively at the club level can not support a consistent supply of qualified athletes performers to the SIS and the AIS which, in turn, will have difficulty in producing internationally competitive athletes.

### State Institutes of Sport(SIS)

The SIS play an important role in the co-ordination of athlete development between the club level and the AIS. Athlete development at the club level is unorganized, many potential athletes have no financial assistance and no appropriate coaching is provided. The SIS can provide this form of assistance to the potential athletes of sport clubs. The SIS can play the following roles:

1) SIS can provide an opportunity for potential athletes who are not supported by AIS. Because the number of the AIS scholarships is limited, it is not possible to distribute them to all the potential and deserving athletes within Australia. Hence, the SIS can assist the local state athletes to develop their sport excellence by providing financial support, qualified coaching and competition.

2) SIS can provide assistance to those potential athletes who do not reside at the Australian Capital Territory or those who do not wish to leave their current studies or career path positions.

3) SIS can provide a chance of developing sport excellence to those athletes whose sports are not provided in the AIS scholarship program. In addition SIS can provide more sports than the AIS. For example, the South Australian Sports Institute supports 24 sports, in which there are seven Olympic sports not resident at the AIS(Table 4).

Table 4. Sports Supported By SASI 1988/89

1. Hockey	13. Surf Lifesaving*
2. Ice Skating*	14. Swimming
3. Judo*	15. Table Tennis*
4. Karate-Do*	16. Tennis
5. Lacrosse*	17. Track & Field
6. Netball	18. Trampolining*
7. Orienteering*	19. Volleyball
8. Powerlifting*	20. Water Skiing*
9. Rowing*	21. Water Polo
10. Shooting*	22. Weight Lifting*
11. Softball*	23. Yachting*
12. Squash	24. Wheelies

\*These sports are not included in the AIS program.

Source: Annual Report of SASI, 1988-1989

South Australian Sport Institute(SASI)

### The AIS Scholarship Program

The Scholarship Program is an important program, which directly relates to high performance athlete development. The financial investment on this program is significant.

There were 434 scholarship holders in 1990. Full-time employment of coaches, administrators and sport scientists are also provided for in this program. One of the major objectives of the AIS is to achieve excellence, with competitive international performance being the major criterion. However, from the sports that are offered in the AIS scholarship program it can be established that the potential of this program to produce competitive international sport athletes is limited.

The AIS has 17 residential sports with 434 scholarship holders (Table 5). Four non-Olympic sports (cricket, netball, rugby union and squash) take 121 scholarships; five Olympic team sports (basketball, hockey, soccer, volleyball and water polo) take 101 scholarships. The rest are allocated to individual sports. Canoeing, cycling, diving, gymnastics, rowing, swimming, tennis and athletics take 212 scholarships.

Sports like cricket, netball, rugby union and squash are not Olympic sports. However, they are popular and have significant social influence and community support in Australia. It is for these reasons that these sports reside in the AIS. The scholarship program of the AIS aims to cater for both parochial Australian sports and international sports. But it is clear that, under these arrangements, the scholarship capacity for producing medals in international competition is limited. The 121 scholarships of non-Olympic sports take nearly one-third of AIS scholarships. It is axiomatic that no Olympic medallist can be produced from these sports. Of the five Olympic team sports, basketball, hockey, soccer, volleyball and water polo account for 101 scholarships. Only basketball and hockey are Australia's high performance sports. The other three team sports are not internationally competitive.

Table 5 AIS Scholarships in 1990

Sport	Number	Sport	Number
Basketball	24	Rowing	29
Canoeing	27	Rugby Union	63
Cricket*	16	Soccer	20
Cycling	21	Squash*	22
Diving	14	Swimming	29
Gymnastics	29	Tennis	18
Hockey	42	Athletics	26
Netball*	20	Water Polo	15
Volleyball	19		

\*Non-Olympic Sports

Source: Information from the Australian Institute of Sport

Team sports have fewer medals and fewer medal prospects than individual sports. As can be seen, in the Olympic sports program (Table 6), team sports and individual sports generate significant differences in the number of possible medals that can be won. Six team sports (basketball, soccer, handball, hockey, water polo and volleyball, take only 10 of a total 239 medals. Each team sport requires more than 10 players to organize a team to compete for one medal. The individual sports involve one person competing for one or more medals. On the other hand, in sports such as athletics, gymnastics and swimming, one athlete can compete in at least four events. For example, the East German swimmer, Kristin Olto won six gold medals in swimming events at the 1988 Seoul Olympic Games. Therefore, the

Table 6.

## Total Medal Events In Olympic Sports Program, 1988.

Sport	Medal events	Sport	Medal events
Archery	4	Judo	7
Athletics	42	Modern	
Basketball	2	Pentathlon	2
Boxing	12	Rowing	14
Canoeing	12	Shooting	14
Cycling	9	Swimming	38
Equestrian	6	Water Polo	1
Fencing	8	Table Tennis	4
Soccer*	1	Tennis	4
Gymnastics	15	Volleyball	2
Handball*	2	Weightlifting	10
Hockey	2	Wrestling	20
		Yachting	8
Total			239

\*Team sports

Source: The Olympian, December, 1988

Australian Olympic Federation



potential of individual sports in producing more medals is larger than for team sports.

From this perspective the five team sports with 101 scholarships in the AIS scholarship program have a limited potential to produce Olympic medals. A re-allocation of scarce scholarship resources to individual sports would improve the medal winning capacity of AIS programs.

Furthermore, the decision to put basketball into the AIS scholarship program does not constitute a very effective use of resources. Basketball has been developing a very competitive edge at club level and is a semi-professional sport. The significant improvement of the basketball performance standard of Australia in international competition in recent years is, in large part, the result of its professional development. In general, if sport develops in a professional direction, the performance standard improves more quickly because of the commercialised development, better facilities for training and playing, the intensive inter-team rivalry, and increasing competition between players to obtain a place on the team.

As far as the individual sports of the AIS scholarship programs are concerned, most are Australia-strong sports, except for gymnastics and diving. At many international athletics, swimming, rowing, cycling and canoeing events, Australians consistently finish in the top eight in the world. Taking the results of Australian swimming in the Seoul Olympic Games as the example, 11 individual swimmers and two teams took one of the top 8 places in 19 events (Table 7). These sports also have a bigger number of medal events in the Olympic sport program. Athletics has 42 events, swimming has 38 events. The allocation of more effort and resources on these sports by Australian sports administrators and coaches would increase the potential for producing internationally competitive athletes.

Gymnastics and diving are not strong Australian sports. In the Seoul Olympic Games, Australia's three gymnasts finished in 65th, 75th and 80th places. In diving, Australia was placed no higher than 10th (The Olympian, 1988). Of these two sports, gymnastics receives 29 scholarships, and diving receives 14 scholarships in the AIS scholarship program. However there is little expectation that medals can be produced from these scholarship holders in the immediate future.

It is clear that the AIS scholarship program is inappropriately structured for producing international medallists. Because non-Olympic sports, low-performance Olympic sports, and team sports receive more than one-half of the scholarships in the AIS scholarship program, the high performance individual sports receive only 169 scholarships. This reduces the potential to produce international competitive athletes.

If Australia continues to provide assistance at the elite level to many non-Olympic sports and team sports, then its potential for producing additional Olympic medallists will be significantly reduced. A re-allocation of scholarship resources will be necessary if Australia wishes to maximise the level of international success from its AIS scholarship program. It should be remembered that the AIS was established precisely because of Australia's failure to win a gold medal at the Montreal Olympic games. The major effort should be concentrated on those sports where Australia has established it can be internationally competitive.

Table 7. Australian Swimming Achievement  
at the 1984 Seoul Olympic Games

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MEN: Andrew Baildon,	50 metres freestyle	8th
Andrew Baildon,	100 metres freestyle	6th
Duncan Armstrong,	200 metres freestyle	Gold
Duncan Armstrong,	400 metres freestyle	Silver
Jon Sieben,	100 metres butterfly	4th
David Wilson,	200 metres butterfly	6th
Robert Bruce,	200 metres individual medley	6th
Australia's 4x200 metres freestyle relay		4th
Australia's 4x100 metres medley relay		6th
WOMEN: Karen Van Wirdum,	50 metres freestyle	8th
Janelle Elford,	400 metres freestyle	5th
Janelle Elford,	800 metres freestyle	6th
Julie McDonald,	800 metres freestyle	Bronze
Nicole Livingstone,	100 metres backstroke	7th
Nicole Livingstone,	200 metres backstroke	5th
Jodie Clatworthy,	400 metres individual medley	6th
Donna Procter,	400 metres individual medley	8th
Jodie Clatworthy,	200 metres individual medley	4th
Australia's 4x100 metres medley relay		4th

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Source: The Olympian, December, 1988.

Australian Olympic Federation

CHINA

Sporting Standards Compared with Australia

The international sport performance standards of both China and Australia could be described as 'middle level'. China performed relatively more competitively than Australia in the two most recent Olympic Games (Table 8). Australia has strength in swimming, some events in track and field, hockey, basketball, canoeing, cycling and rowing. China is internationally competitive in diving, gymnastics, table tennis, women's volleyball, swimming and weightlifting(Table 9).

Table 8.

China & Australian at the 1984 And 1988  
Olympic Games: Achievement Comparison

	1984 Los Angeles			1988 Seoul		
	Gold	Silver	Bronze	Gold	Silver	Bronze
China	5	8	8	5	11	12
Australia	4	8	2	3	6	4

Source:   (1) Report Of The Olympic Games, 1984  
              (2) The Olympian, December, 1988  
              Australian Olympic Federation

When compared with the Australian elite sport system, China is more advanced in terms of talent identification, and in the conditions provided for young athlete development. However many weaknesses exist in the Chinese athlete development system.

Table 9.

## Chinese Medal Tally in the 1988 Seoul Olympic Games

Sports	Gold	Silver	Bronze
Athletics			1
Gymnastics	1		1
Rowing		1	1
Shooting		1	1
Swimming		3	1
Diving	2	3	1
Table Tennis	2	2	1
Volleyball			1
Weightlifting		1	4

Source: The Olympian, December, 1988.

Australian Olympic Federation

### Talented Children Development

China tends to regard talent in sport like talent in music, art and ballet as meriting special attention from an early age, and therefore has a systematic talent identification, selection and nurturing program. Compared with the 'natural selection' of talents traditionally adopted in Australia, the early talent identification of China provides significantly more support and direction for young athletes, and better assists them to reach high levels of performance by the time they graduate to senior ranks. The advantage of a systematic talent identification scheme is that athletes can be 'sorted

out' or filtered, and directed into the sports in which they can do best.

The "environment" of sports schools for nurturing sport talents in China is better than most sporting clubs in Australia. The children within sports schools in China are provided with financial assistance, professional coaching and opportunities for competition. Sporting clubs in Australia are unable to provide a similar level of assistance to young athletes. In modern elite athlete development, the availability of qualified coaching and financial assistance to talented children is important. First, the athletes who want to develop to a high performance level need to lay the basis of fitness and skill from early age. Only when qualified coaching and a certain level of financial assistance is provided, is it possible for talented children to develop their athletic potential. Second, the consistent production of high quality elite athletes requires a large pool of young talents to form the base. Only with a deep reserve of talent is it possible to produce many elite athletes.

While China's capacity to construct an effective talented selection and support system for its athletes is strong, its selection policy on athlete admission to sports schools constitutes a weakness. The number and sports background of athletes allocated in each sport of a sports school (Table 10) is not conducive to China maximising its production of internationally competitive athletes. Athletics, basketball and soccer usually comprise too high a percentage of the young athletes. These three sports are not strong sports in China, and have been dominated by America and Europe in international competition. The most internationally competitive sports in China are table tennis, diving and gymnastics. However, diving and gymnastics have a small number of registered, competing athletes. The former only has 631 children involved, while the latter has 5879 children participating at the competitive level.

Decisions taken on the number of athletes to be allocated to each sport category will impact on the strategy of athlete development. An inappropriate allocation of athletes in each sport not only fails to improve the sports standard of a country, but also means that the human and financial resource are wasted.

Table 10.        Number Of Athletes In Major Sports In Sports  
                     Schools In China.

Sports	Number	Sport	Number
Athletics	89302	Fencing	1147
Basketball	38364	Handball	986
Soccer	22046	Canoeing	904
Swimming	21777	Cycling	784
Table Tennis	18941	Tennis	659
Wushu	14600	Diving	631
Volleyball	13841	Archery	533
Shooting	10881	Water polo	519
Weightlifting	7473	Boxing	420
Gymnastics	5879	Rowing	415
Wrestling	4949	Hockey	96
Judo	2774	Yachting	39

Source: Annual Statistics of China Sport

Development, 1987

China State Physical Culture and Sport  
Committee

The major problem that young athletes face in China's sports schools is that athletic training can't be combined well with academic study. The training takes up much time of children, and constant competitions often make children miss academic classes. As a result, the children are discouraged from entering sports schools by their parents, who are concerned that their children will be unable to attend university in the future. (Zhao, 1988) Entering university means an opportunity of good career prospects. In China only a small percentages of school students have this opportunity. Entry is governed by a strict national examination, and most students of sports schools fail to achieve satisfactory academic results. Therefore many children who have athletic potential decide not to enter sports schools.

### High Performance Athlete Development

The pattern of high performance athlete development of the STI and the NTC in China is similar to that of the AIS in Australia. Athletes get financial support for full-time training, and qualified coaching and sport science services are provided. However the athletes' education and employment orientation differs between China and Australia. Australian athletes can be provided with opportunities to study any subject they like during their education, and have broad job options available to them. In China athletes can only take a three-year physical education study program. Furthermore, it must be taken during their sport career and after they finish primary and secondary education. Their future employment is therefore limited to the sports field. Many athletes who have done more than ten year's full-time athletic training, become disillusioned with sport. Upon completion of their athletic career, they no longer want to pursue a job related to sports. However, because of their narrow education base, their employment prospects are limited. Sport therefore does not constitute a good career prospect. This has become a major problem in Chinese high performance athlete development. (Zhao, 1988)



The Chinese athlete development system also has high wastage rate. More than three thousand athletes drop out of their training programs each year (Annual Statistics of China Sport Development, 1987). This constitutes a waste of human and financial resources, and creates social problems. Each athlete who drops out has had at least several year's training in a sports school and an STI and has incurred significant expenses in accomodation, training, competition, sport science services, plus a subsidy.

Athletes who discontinue their sports programs have to wait a long time to obtain employment, which is assigned by the government. Because so many athletes have dropped out, over recent years the capacity of sporting organizations to absorb them has been overreached. As a result, some enterprises which have been un-related to sport have been required to accept some athletes who have skills they do not require. These athletes have effectively become redundant. (Zhao, 1988)

The problem of balancing the athletic intake of various sports is also a problem faced by the Sport Technique Institute (Table II). The numbers in athletics, basketball and soccer are larger than other sports. However in each of these three sports it is difficult for China to achieve the standard of American and European countries. Diving is the best performed sport of China in international competition. However, it has only 174 high performce athletes. This small pool of talent diminishes the potential to produce elite athletes. It would be more rational if, at this level, more athletes could be accepted into swimming, table tennis, gymnastics and diving. The preferred strategy should be to emphasise those sports in which China is internationally competitive.

Table 11. Numbers Of High Performance Athletes In  
Major Sports In China

Sports	Number	Sports	Number
Athletics	1980	Handball	429
Soccer	1950	Rowing	398
Basketball	1608	Fencing	355
Volleyball	1054	Cycling	328
Shooting	907	Canoeing	276
Swimming	822	Hockey	259
Table Tennis	780	Tennis	223
Wrestling	759	Archery	198
Gymnastics	647	Water polo	178
Weightlifting	516	Diving	174
Judo	488	Yachting	91
Wushu	476	Boxing	31

Source: Annual Statistics Of China

Sport Development, 1987

China State Physical Culture and Sport Committee

### Disadvantages of the System

The Chinese athlete development system is a fully state-supported system. Each person involved in sport training requires financial support from the state. Because of the resources involved, this system has difficulty maintaining a large number of people to attend athletic training. Conversely, in Australia, which is based on private sporting clubs, participants have traditionally been expected to cover their own expenses, and because of their greater living standards, they usually do. The great advantage of the Australian sporting club system is that it can provide a large number of people with the opportunity to involve themselves in athletic training. The number of sporting club memberships of Australia significantly exceeds the number of competing athletes of China. Utilising gymnastics as the example, there are 42,201 children who participate in gymnastics at clubs in Australia (National Registration, 1989). In China there are only 5879 children involved in gymnastics at Sports Schools. and 647 gymnasts at Sport Technique Institutes. (Annual Statistics of China Sport Development, 1987). Due to its pool of participants in sport, Australia will have more potential than China to produce a continuous stream of talented athletes. Because more people are involved in sport, more talent can emerge from this large pool of participants.

Furthermore, the Chinese system for athlete development is much more expensive than Australia. There are 304,839 children at sports schools and 20,021 high performance athletes at sports institutes. (Annual Statistics of China Sport Development, 1987) They receive full financial support by being provided training and competition expenses, sport science services and subsidies. Also, there are additional costs in employing full-time coaching, administrative and technical staff. China has a large number of employees involved in the athlete development arena (Table 12). China has invested 450 million yuan (US\$100 million) (Annual Statistics of China Sport Development, 1987) on athlete

development a year. Australia spends less than half of this amount (Table 13). When this financial investment is compared to its international sporting achievement, the Chinese system is, from a government funding perspective, less efficient than the Australian system.

Table 12. Employees Related to the Athlete Development System In China

Employee	Amount
Coach	23724
Administrator	34951
Sport Scientist	1500
Medical Official	1116
Teacher	4457
Worker	28009
Total	93757

Source: Annual Statistics Of China  
Sport Development, 1987.

China State Physical Culture and Sport  
 Committee

Table 13. Assistance Provided By Federal, State and Territory  
Governments To Sport, 1989-90

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Federal Government to ASC and AIS	\$27,300,000
New South Wales	\$895,000
Victoria	\$3,155,755
Queensland	\$1,000,000
South Australia	\$2,400,000
West Australia	\$1,030,000
Tasmania	\$315,600
Northern Territory	\$35,000
Capital Territory	\$188,900
Total:	\$36,320,255

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Source: Information From Australian Sports Commission

## CHAPTER VII

### SUMMARY

1).The material presented and analysed in this research paper supports the view that the structure and practice of a country's sporting institutions can only be adequately understood and explained by reference to its cultural, political and economic framework.

In the case of China, its socialist ideology is mirrored in a sports development system which is centrally controlled, pyramidal in structure, and conducted in an environment which can be best described as nurturing.

In the case of Australia, its capitalist, federalist ideology is mirrored in a sports development system which, although theoretically pyramidal in structure, in practical terms, is at best, loosely organised, and at worst, poorly co-ordinated. Its supporting environment is in keeping with the Australian traditional values of individualism and opportunism, competition and Social Darwinism. Athletes rise to the top through individual initiative and natural selection.

2).The Australian system is egalitarian in the sense that it is appropriate for all prospective athletes to be 'given a go', and for participation to be encouraged. While this process facilitates the development of a large pool of young athletic talent, it is not sufficiently sophisticated to identify those athletes with the talent to reach international standards, and to ensure their retention in elite athlete training programs. While the Chinese system is more formal and regimented, it has the capacity to reliably identify talented young athletes, and through its comprehensive system of state support, provide a 'safety net' of emotional and financial support. However it is not

without its weaknesses. Its bureaucratic structure stifles individual initiative and creativity, and as a result motivational problems arise for athletes. Athletic 'burnout' is, therefore, a frequent occurrence. In addition, the Chinese system has not yet achieved an appropriate balance between training and education. At the moment, the emphasis is given to athletic training. The education of athletes, and the development of general employment skills, are given low priority.

3).Recent trends in athlete development systems indicate that there has been a convergence to a mixed model. The Australian Institute of Sport constitutes an example of moving toward an athletic development model that gives greater centralised control, and ensures a more systematic elite athletic training regime.

4).It has been demonstrated that the basic pattern of athlete development in Australia and China is related to each country's political, economic, historical and international backgrounds. While the Australian system is in part supported by government, it is the private sporting clubs which are at the base level of athlete development. Government involvement is mainly confined to high performance athlete development at state level and at the AIS level. In China, the situation is significantly different. The development of young athletes at Sports Schools, and that of high performance athletes at Sport Technique Institutes, and the National Team Centre, are wholly funded and controlled by the national government.

5).In so far as a few traditional, popular sports attract a dominant share of media attention and private corporate funding, there is unbalanced athlete development at the club level in Australia. The traditional sports are in the main, non-Olympic sports, and have consequently diverted resources away from the Olympic sports. On the other hand, the high performance Olympic sports of Australia have developed erratically due to

their talent development program being still being based on "natural selection". The low performance Olympic sports have additional difficulties in improving their standards, because of their small social impact, limited media support, weak financial base, and uncompetitive performance levels.

6).Although the Australian system generates a large pool of participating athletes, the strategies and procedures for identifying talented children for training to international standard is inefficient. Clubs frequently have difficulty in providing a large, continuous supply of talents to the SIS and the AIS.

7).At the same time, the number of AIS scholarships for high performance sports are limited, which restricts Australia's capacity to produce more internationally competitive athletes. In particular, the allocation of scholarships between sports is not consistent with the implicit national strategy of maximising the level of international performance in Olympic sports. Too many scholarships are provided for non-Olympic, and low performance Olympic sports, and too few to Olympic sports in which Australia has been traditionally successful.

8). It is apparent that the sports schools of China provide better talent identification, and a more nurturing environment for young athletes' development. However, on a pro-rata basis, the number of young athletes involved in sports school participation is well below the number of children involved in direct participation in Australia.

9).Research indicates that athletic training is not well combined with academic study in the sports schools in China. As a result, many talented children are discouraged by their parents from attending sports schools.



10). The peak of the Chinese athletic development pyramid appears, at first sight, to be an effective vehicle for elite athlete development. China has 31 STI, with a large and continuous supply of high performance young athletes, with a potential to produce mature elite athletes. However, in practice, there are impediments to the successful transition from raw, talented athletes to international standard performers. The research shows that the problems are centred on high drop-out rates as a result of 'burnout', and the limited employment prospects subsequent to the completion of an athletic career.

## RECOMMENDATIONS

1. Australia should attempt to strengthen its programs to identify talented children at the club level, and support their development especially in swimming, athletics, cycling, canoeing and rowing. These sports are not only Australia's high performance Olympic sports, but also are high medal Olympic sports. Well developed talents at the club level in these sports can provide potential elite athletes to support the SIS and the AIS.

2. Australia can learn from some of the experience of the Chinese system in supporting talented children in financial terms and with coaching. This can be achieved by providing financial assistance and qualified coaching to the highly competitive clubs which can provide a 'nurturing' environment similar to that of the sports schools of China for talented young athlete development.

3. At the AIS level, more scholarships should be provided to swimming, athletics, cycling, canoeing and rowing, which are strong sports for Australia in international competition. Some traditional Australian sports such as cricket and rugby and the semi-professional sport, basketball can be developed in other ways. For example, some financial assistance can be provided to both the national and state sporting organizations of these sports to conduct their own programs in the fields of skill development and general competition. In this way, additional scholarships can be 'freed up' and re-allocated away from the financially sound traditional sports, to the 'needy' high performance Olympic sports.

4. China should aim to establish some private sporting clubs which are not completely supported by government and which are quasi-independent. More children should be encouraged to attend sports development programs by utilising this club system. This can

broaden the number of children participating in sport, which can subsequently support sports schools by providing more young talented athletes.

5. The athletes of the STI & the NTC in China should be given more educational opportunities to broaden the athletes' employment prospects when they end their sporting career.

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## APPENDIX 1.

A question to interview AIS gymnastics head coach, Ms.Juping Tian on 19, July,1989.

Q. What do you think of the AIS scholarship program?

A. The AIS scholarship program is not very effective for Australia in producing international competitive athletes. First, scholarships are allocated on too many sports and are not concentrated on sports where Australia has the potential to produce competitive athletes. Secondly, the athletes of some sports involved in this scholarship program are junior athletes. After having been trained at the AIS,these athletes will be sent back to their sport club. From this point, It would say that AIS is an elite training centre rather than a "National Club". Third, the limilation for the age of athletes into AIS is not flexible. The athletes who go to AIS can not be younger than age 12. To gymnastics it is not suitable. I think gymnastists should be accepted into AIS from the age of 8.

## APPENDIX 2.

Sample Questions and answer to interview Mr. Darel Hart, administrator of South Australia Sport Institute (SASI); Ms. Tania Sullivan, administrator of Western Australian Institute of Sport(WAIS); Ms. Elizabeth Jack, administrator of Tasmania Institute of Sport(TIS), interviews were conducted on March 1990.

Q.(1). When was this state sport institute established?

Q.(2). How many sports get support in your sport institute?

Q.(3). How many athletes get assistance from your sport institute?

Q.(4). Which assistance is provided to athletes?

Q.(5). How many full-time administrators, coaches and sport scientists are employed in your sport institute?

Q.(6). How much budget support is provided by government?

Summary Of Information Answered:

Answer Q.(1). South Australian Sport Institute (SASI) was set up in 1982; Western Australian Institute of Sport (WAIS) in 1984; Tasmania Institute of Sport (TIS) in 1987.

Answer Q.(2). SAIS support 24 sports; WAIS support 25 sports; TIS support 16 sports;



Answer Q.(3). SAIS have 297 athletes receiving assistance; WAIS has 206 athletes; TIS has 112 athletes.

Answer Q.(4). The assistance provided to athletes include financial assistance; access to qualified coaching; sport science and sports medicine services; national and international competition.

Answer Q.(5). The full-time staff at SASI is 12 administrators, 20 coaches and 4 sport scientists; WAIS has 4 administrators, 9 coaches and 1 sport scientist. TIS has 2 administrators, 1 sport scientist, no coaches are employed.

Answer Q.(6). The SAIS is supported for \$2.3 million by the state government; the WAIS receives one million from state government and TIS is funded to \$150,000 from the state government.

### APPENDIX 3.

Sample Questions and answer to interview Mr. Dennis Galimberti, manager of Footscray Football Club; Mr. Lindsay Gaze, executive director, Victoria Basketball Association; Mr. Wayne Larkins, Captain of East SIE Quit Spectres Basketball Club; Mr. Les Barcikowski, coach of Footscray Renegades Volleyball club; Miss Peggy Brown, executive director of National Gymnastics Federation; Mr. Greg Jackson, manager of Monty Gymnastics club; Mr. Len Willmer, executive director of Victoria Swimming Association; Mr. Ross Goodrings, Coaching director of Victoria Athletics Association, interviews were conducted from March to May 1989.

Q.(1). Are the clubs of this sport run by full-time, part-time or voluntary people?

Q.(2). Are coaches employed on a full-time, part-time or voluntary basis?

Q.(3). How is the financial situation of the sporting clubs in general?

Q.(4). What is the fee and incidental expenses paid by members of the clubs?

#### Summary of Information Answered:

Answer Q.(1). a). Football is a professional sport. A number of full-time staff are employed including the general manager, business manager, promotion manager, marketing officers, accounts and secretaries. b). Basketball is a semi-professional sport. The clubs within the National League are professional clubs where full-time people are employed to run the club similar to the football clubs. Those clubs which are not in National League are amateur clubs which are run by voluntary staff. c). Clubs involved in

volleyball, athletics and swimming are run by voluntary staff. d). Most gymnastic clubs are basically run by volunteers, only a few big clubs are run by a full-time administrator.

Answer Q.(2). Football clubs and professional basketball clubs employ full-time and part-time coaches. Gymnastic clubs and swimming clubs employ part-time coaches. Amateur basketball clubs, volleyball, and athletics' club were voluntary coaches .

Answer Q.(3). Football clubs and professional basketball clubs are run as big business and have significant financial strength. These clubs can attract big business sponsorships. Not only full-time paid people are employed, the players also get income from their clubs. Amateur basketball clubs, volleyball, gymnastics, athletics and swimming have a poorer financial situation. These sporting clubs attract very little sponsorship. Their financial sources are based on the fee the members pay and fund raising by selling goods, tickets and other services.

Answer Q.(4). Football and professional basketball players do not need to pay any fees. All the expenses are covered by their clubs. The players in amateur basketball, volleyball, gymnastics, athletics and swimming need to pay fees to their clubs and cover their own expenses of training and competition.

#### APPENDIX 4.

Sample Questions and answer to interview Mr.Wu Mengxiong, former director of China Olympic Sports School; Mr. Liang Dalong, director of Xuzhou Sports School. July, 1988. China.

Q.(1). What is the organizational structure of the sports schools?

Q.(2). How many sports are offered in the sports school?

Q.(3). How are children identified and selected?

Q.(4). How many hour's athletic training per week in the sports school?

Q.(5). What is the range of children's ages?

Q.(6). What support is provided to children in the sports school?

Q.(7). How is athletic training combined with academic training  
in the sports school?

#### Summary Of Information Answered:

Answer Q.(1). The organizational structure of the sports school consists of a director, a deputy director, a few administrative officers, coaches and academic teachers. All the staff are employed on a full-time basis.

Answer Q.(2). Athletics, basketball, gymnastics, soccer, swimming, table tennis, volleyball, weight training and wushu (Chinese traditional sport) are the sports offered in most sports schools. Other sports depend on the financial condition, coaching provided and facilities of sports schools.

Answer Q.(3). The children who have athletic potential are recommended by their physical education teachers or their parents. The coaches of sports schools also go to inter-school competitions for mass screenings. Then, the selected children are sent to a sports school for physiological measurements, fitness and skill tests. For example, for basketball selection, the children have their height, weight, length of arms and legs, X-ray measurements of the wrist joint for estimating potential height and pulse and blood pressure measured; tests of fitness include short and long distance running, jumping, push-ups and sit-ups; basketball skill tests include passing, dribbling and shooting. Through the above tests and a few week's observation, those who achieve the highest are kept in the sports school.

Answer Q.(4). The athletic training at a sports school is 2 to 4 hours, 4 to 6 days a week, dependent on the age, sports and performance level of children.

Answer Q.(5). The children in sports schools are from age 5 to 17. Gymnastics, swimming and wushu accept children younger than most other sports and start at age 5. Table tennis is age 7; basketball, volleyball, soccer and weight training are at age 12.

Answer Q.(6). Sports schools provide the children free accommodation, cover the expenses of training and competition and also provide a small subsidy.

Answer Q.(7). Academic study is a major problem in the sports schools. The children of

the sports school have poorer academic standards than children of normal schools. The athletic training takes much time and competitions often make children miss classes. They will miss the chance to go to university because of their poor academics if they are not qualified to be selected to a Sport Technique Institute when they finish in the sports school.

## APPENDIX 5.

Sample Questions and answer to the interview of Mr. Len Yianzhi, former Chairman of Beijing Physical Culture and Sport Committee and Mr. Zhang Haitao, former director of Jiangsu Sport Technique Institute, July, 1988. China.

Q.(1). How many sports are resident in an STI? Are the Olympic sports first considered?

Q.(2). How are athletes selected to an STI?

Q.(3). What support is provided to athletes of an STI?

Q.(4). What academic courses are offered in an STI?

Q.(5). Where do the athletes go after they end their sporting career?

Summary Of Information Answered:

Answer Q. (1). Each STI can offer thirty to thirty-five sports, most Olympic sports are offered. Also, local geography, climate and sporting tradition are considered in choosing STI sports. For example, the northern parts of China are colder and more mountainous. Winter sports are popular in these areas and are offered in the STI of these provinces. The southern parts of China are warmer with more river, water sports are popular and offered in the STI of these areas.

Answer Q. (2). Athletes are selected from inter-sports school competition of the local province. Athletes selected from sports schools go to the junior team of the STI first.

Answer Q. (3). Support provided to athletes at an STI includes free accommodation plus wages, qualified coaching, sport science and medical service. Expenses in training and competition are covered by the STI.

Answer Q.(4). Primary and secondary school courses and three year physical education courses are offered at the STI. The academic teachers are full-time staff of the STI.

Answer Q.(5). The career orientation after athletes games; some elite athletes are kept in an STI as coaches, some are chosen to be administrators in an STI. Most go to sports schools as coaches and administrators. A few undertake studies while others enter schools as physical education teachers.



## APPENDIX 6.

Questions and answer to interview Mr. Shi Shuyong, Head Athletics Coach of the China National Team Centre; July, 1988, China.

Q.1. What is the objective of an NTC?

Q.2. Where do the athletes selected for an NTC come from?

Q.3. Are the NTC is the same as the STI in organizational structure and administration?

Q.4. How many sports resided in NTC?

Summary Of Information Answered:

Answer Q.1. Athletes of an NTC aim at success in international competition. All the athletes of an NTC are the national team athletes who represent China in international competition.

Answer Q.2. The athletes of the NTC are selected from STI by national championship or national competition. The athletes who have been selected into a NTC still belong to their original STI where they will return after they finish in NTC.

Answer Q.3. The NTC is the same as a STI in structure and administration. Full-time administrators are employed to run an NTC. The best coaches in China are employed to give athletes qualified coaching. The athletes get free accommodation plus a subsidy; coverage of the expenses of training and competition; sport science and medical service.

Answer Q.4. There are fourteen sports residing in an NTC. They are athletics, basketball, badminton, cycling, diving, fencing, gymnastics, soccer, shooting, swimming, table tennis, tennis, volleyball and weightlifting.