Future Trends in Sport Psychology and Sport Sciences

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Introduction

On the occasion of the fifth annual meeting of the society of sport psychology of a smaller country, let's call it "Atlantis", the president delivered an impressing report: In the first year ten members belonged to the Atlantis society, in the second year 20, in the third year 40,in the fourth year 80 and in the fifth year 160. Extrapolating this apparent trend of annual duplication, the president predicted that his society would have 5.120 members in ten years, and on the 20th anniversary there would be 5.242.880 members and a corresponding income of membership fees of more than 50 million Dollars a year. In spite of the promising prognosis this president was not re-elected.

Why is it so difficult to predict the future?

An almost trivial answer is that most of us do not really try to do it. We are more or less slaves of our daily demands. The present circumstances determine our life styles and activities, and, above all, our value orientations and modes of thinking more than we are aware of.

A second reason seems to be paradoxical: Predicting the future is understanding the history. We cannot appropriately decide about where to go when we don't know where we come from. This is valid for developments of society and sport and sport psychology as well.

A third reason is that we usually tend to restrict our considerations to a few isolated variables or a single scientific discipline, neglecting that development takes place in a complex context of manifold influences. On the other hand, complexity itself is often taken as an argument that our predictions remain deficient. I believe, that the real problem is not the complexity of reality, but the simplicity of our concepts of reality.

Finally, there are several statistical procedures for the retrospective analysis of quantitative trends available, but up to now we have no elaborated strategies to predict qualitative trends.

Beside these general reasons we must take into account some special aspects with respect to our present topic.

Each part of the title "Future Trends in Sport Psychology and Sport Science" proves to be ambiguous. In particular, the understanding of what means "sport", "sport science" and

"sport psychology" is neither clear-cut and generally shared nor invariant over time since the days of the early sport psychologists Schulte, Griffith and Puni. That is, both the real object of the trend prognosis and our definition of this object are changing.

Additionally, the situation of and the trends in society, sport, sport science and sport psychology are not the same and not synchronous in different countries, in particular not in industrial countries compared with countries of the third world.

Last but not least, we are missing an international comparative survey of the present situation in different areas of sport and sport science, and we are missing a common understanding of what we should expect from future and from ourselves to realize it.

Undoubtedly, we cannot deduce predictions on a complex matter, which cover a long-term perspective and are detailed and valid as well. However, this is no reason for making no predictions at all. In spite of their deficiencies, they are important, because they provide a basis for preparing for future eventualities and for strengthening desirable and preventing unfavorable developments.

In this sense, I am going to dare some speculations without any notes on their statistical significance, reclaiming the basic human right of error.

I believe that the development of sport science and sport psychology can only be appropriately understood on the background of interdependent changes in society, science and sport. Therefore, my first step of analysis is dealing with such background changes. Then, in a second step specific trends and perspectives in sport, sport science and sport psychology will be outlined.

Background Trends in Society, Science and Sport

The scientific-technological development since the 19th century results in continuous changes of our living and working conditions and our value orientations, which in turn have a strong impact on science and sport. There are two main trends in almost all aspects of our life. The first one is acceleration concerning the amount and speed of change; the second one rationalization concerning the direction of change.

Acceleration

Alvin Toffler (1971) showed in his fascinating book "The Future-Shock" that one of the most important trends is a tremendous acceleration of mobility, growth and progress. The Olympic motto "citius, altius, fortius" (faster, higher, stronger) is an expression and a symbol of this trend. The reverse of the medal is that we have to cope with three serious problems: The mass, flooding or over-load problem, the problem of transitoriness, and, as a consequence, the problem of mastering expanding side-effects and accumulating residues.

Within one life span the world population tends to triplicate from 2 milliards in 1930 up to about 6 milliard at the end of the current century. In sports there is a gigantic increase of the

number of active participants, spectators and events.[1] At the first Olympic Games 1886 in Athens 13 nations and 311 competitors participated in 43 sports events. 1968 in Mexico City the program included 176 sports events; for the first time more than 100 nations and about 5.500 athletes participated. At the past Olympic Games 1988 in Seoul the numbers increased up to 160 nations, about 10.000 athletes (for the first time more than 2.000 females) and 239 sports events! A similar trend is noticeable in mass sports. For example, in 1949 in the Federal Republic of Germany about 3 million members were organized in about 20.000 sport clubs. In 1989 the German Sports Association (DSB) has about 21 million members in more than 65.000 clubs. These numbers illustrate that sport has gone far beyond a private activity; it is a public affair highly connected to politics, economics and the socio-cultural life.

According to Toffler (1971) 90 percent of all scientists mankind has produced live in our time. All over the world the scientific and technological literature shows an increase of about 60 million printed pages a year (Toffler, 1971, 133). Even in our special fields of interest there are more publications than we are able to read. Therefore, succeeding to the computer-assisted literature documentation system, the next challenge will be to develop concepts for the integration of research results in the sense of advanced expert-systems.

However, acceleration includes more than the problem of managing huge numbers. Within a few decades we are experiencing the development from the first electronic computing machine to information technology, from the first jet to space travel, from the Crick and Watson model of desoxyribonucleinacid (DNA) to gene technology, and last but not least, from the empirical studies in sport psychology to a progressing field of research, education and application. To keep pace with scientific progress we must permanently revise our stock of knowledge; therefore, new concepts of graduate education and advanced training are needed. To keep the progress under control we must take care of long-term science politics and ethical guidelines more than ever before. Beyond this, it would be of some interest to analyse in detail how we try to cope with the acceleration problem in science, and how our coping strategies influence our research activity, for example, by clinging to traditional concepts and methods, retreating in the ghetto of specialism or by "surf-riding", jumping from one scientific wave to the next one.

The sister of acceleration is transitoriness (see Toffler, 1971). Our social contacts, professional activities, scientific topics, merits and records are becoming short-lived. Our cars, clothes, sport equipment and computers are going out of fashion just after having bought them. The organizational structures on all levels of society are permanently reorganized. We are changing our residences and our ideals and values; and managers, coaches, athletes and sport psychologists are exchanged according to the slogan "hire and fire". Many scientific results are already antiquated, just after having been published. I have the impression that we often are spending more time to become familiar with new methods and technologies than to produce substantial results. According to the motto of progress "The new one is the better one" we tend to neglect that what appears to be new, depends on taking into account what has been done and thought before.

[1] According to Kamper (1972) and Prof. Dr. Manfred Lämmer, Head of the Institute of Sport History, German Sport University Cologne.

Finally, we are confronted with the increasing exploitation and destruction of our natural environment, which is in part also a consequence of expanding sports activities. Getting rid of the waste products of industry, consumption and even sports events is one of the central problems of our time. In a figurative meaning this is even true for science. It seems to take more effort and time to abandon old theories than to create new ones.

Rationalization

The second background trend, rationalization, is referred to as the basic principle of industrialization, which in turn has revolutionarily changed our life, our values and our styles of thinking (Volpert, 1987). The core of industrialization is mass production. Its guidelines were formulated in 1911 by Frederick W. Taylor's epoch-making book "The principles of scientific management".

Based on the philosophical position of rationalism, which believes in the omnipotence of human reasoning, the leading idea is as follows: All processes are determined by an inherent logic; we are able to analyse and to understand this logic, and what we understand we can systematically influence based on planning. The main criterion of rational planning is efficiency, that is, maximizing the effect and minimizing the effort. Applied to industrial production process, that means maximizing the production rate at the lowest rate of time and costs. Maximal efficiency in the sense of mass production can be attained by applying four interrelated strategies: centralization, standardization, specialization and mechanization.

Centralization includes the concentration of working power, production aims, equipment and facilities, the concentration of production funds and a hierarchically structured management and administration. Some of the manifestations are urbanization, centralized areas of big industries, determination by others and expanding bureaucracy. These phenomena are characteristic in a very similar way for the conditions of industrial work, our school systems and the organization of science and sport. The hierarchical structures of sport organizations, the centralization and the treatment of young gymnasts in sport boarding-schools may illustrate this.

Standardization means restricting undesired variability by detailed prescriptions of the products, operations and time schedules, thus lowering the degrees of freedom of the individual on the one hand and increasing the predictability of activities and their results on the other hand. Examples for standardization are the assembly-lines in industrial work, concepts of stereotyped training in sport, neglecting individual peculiarities, and above all, an extending external regimentation of our everyday behaviour.

A special aspect refers to the fact that time rules the content in a sometimes very critical way. For example, the moment we present our research work is more and more determined not by finishing pour studies and considerations but by fixed dates like congress dates. The consequence is that we tend to report old things again and again or just preliminary results thus contributing to the flood of publications, but not to a substantial scientific progress. According to the motto "publish or perish" standardized mass production has priority in promoting one's professional career in science. In consequence, we are attempted to be satisfied with

more or less simple standard concepts and methods which are facilitating the rapid production of a lot of data and the stereotyped application of statistical routines.

Specialization is related to the division of labour. The scope of tasks, demands and responsibilities is split up, thus reducing us to experts who are perfect in details and disorientated, incompetent and irresponsible with respect to the whole. This is true for industrial work, administration, science and sport and even our daily social relations. We are communicating not with other persons, but with aspects of persons, e.g. with students, butchers, waiters, policemen, athletes and sometimes with our sweethearts. Medical doctors are not treating ill persons, but stomachs, adrenals, hearts or bone fractures.

Athletes are becoming more and more puppets on the strings of a team of training experts and officials. Furthermore, specialization is illustrated by the division of school subjects and isolated scientific disciplines and research fields with highly specific models, methods and terminologies. Some of the most problematic consequences are the following ones: According to the "pars pro toto" principle we are tending to make our special fields, e.g. cognition or mental training, and specific indicators, e.g. lactic acid, to the core of the world instead of looking for complex interrelations. Our thinking is ruled by the "black and white" principle of classification, dividing people in athletes and non-athletes, extraverts and introverts, high-anxious and low anxious relative to a single parameter.

Mechanization means the progressive transfer of human functions to machines. Both activities and progress in science and sport depend on progress in technology. In this context, the question arises: How far do we really apply our technical equipment to attain primary goals in research and training, or do we only use the equipment to legitimate its expensive acquisition?

From a more general point of view, mechanization in particular and rationalization in total result in the following overall trends with characteristic effects on sport: Reduction of the physical demands of work and everyday life, and increase of free time. Above all, we experience a revolutionary shift from exploiting and mastering nature towards creating nature in the sense of a "synthetic world". We are living in artificial environments and are performing artificial activities. We are running on artificial grounds, skiing on artificial snow, applauding to artificial results in sports and consuming artificial experiences provided by the simulated world of computer games. Sports activities are often understood as ritualizations and symbolizations of activities coming from everyday life or from traditional movement culture. Nowadays, many movement patterns in sport are basically new ones, partly synthesized by the assistance of computer simulation. One of the main conclusions we have to draw for sport psychology is that we should explicitly deal with the technological and synthetic aspects of the word of sport.

Last but not least, we ourselves are more and more becoming artificial creatures. Illustrating keywords beyond cosmetic and body styling are prothetics, transplantation of organs, application of drugs and gene manipulation.

All these trends are based on or supported by characteristic *value orientations* which emphasize performance, duty, utility and material prosperity. Referred to the value of utility, science and sport are asked to primarily fulfill useful purposes with regard to the demands of

society, and they are evaluated and supported under this aspect. Then, the traditional positions of independent science and autonomous sport are not valid any more.

Corresponding to these value orientations is the understanding of humans as production machines, and especially the understanding of athletes as biological competition machines. In this sense, behavior in sport is in danger to be reduced to the activity of muscles and organs, and training then becomes identical with the improvement of their functioning.

The picture given before is valid for the present situation of industrial countries on the one hand and more or less for the future development of those countries, which are at the beginning of industrialization, on the other hand. However, following the first industrial revolution, occurs a second one, based on the progress of information technology, prosperity and fundamental criticism relative to the ecological and inhuman by-effects of industrialization and its underlying value orientation (Lenk, 1975; Volpert, 1987). Now, the new slogans are decentralization, pluralism and humanization. Examples for decentralistic trends are semi-autonomous working groups and the establishment of working places at home, based on tele-communication (Ulich, 1985). In total, Toffler (1971) predicts the decay of centralistically, hierarchically structured and more and more inefficient administration and bureaucracy. Pluralistic trends are taking place on all levels of society, among others leading to the small, but integrated worlds of manifold subcultures. The new humanism shifts the attention from the product back to the producer, emphasizing self-determination and self-realization. Consequently, our understanding of health is changing. Health is not reduced any longer to physical aspects and related to fitness for work, but represents a separate value of life.

Finally, we can observe a shift in the accents of goals and goods of production, which is also of high relevance for the development of sport. In a first phase the emphasis was laid on those goods and services, which satisfied our basic needs and material desires. In a second phase those goods and services got priority which protected our health. In a third phase those goods and services are high-ranged which provide manifold experiences. These main streams, productions industry, health industry and, in the notion of Toffler (1971), "experience industry", are impressingly reflected in the arguments product advertisement uses.

On the basis of these background trends I am going to summarize some specific trends and perspectives in sport, sport science and sport psychology.

Specific Trends in Sport

In 1987 a very interesting congress with the general theme "Humans in Sport 2000" took place in Berlin, which was organized by the German Sports Association (DSB) to discuss the future of sport (Deutscher Sportbund, 1986; Gieseler, Grupe & Heinemann, 1988)[2] The main theses, shared by most of the congress speakers, were the following ones:

[2] Dr. August Kirsch, President of the International Council of Sport Science and Physical Education (ICSSPE), provided some additional background information in an interview given to the author on April 5th, 1989.

1. The values underlying sports activities are basically changing.

2. According to these changes in value orientation, the individual and social functions of sport are changing.

3. As a main consequence, the organizational structures and manifestations of sports activity are changing.

Changes in Basic Values

In respect of the first point, value changes, it was stated that the traditional values performance, competition, record, duty, training and asceticism dominating competitive sport were more and more replaced by values like fun, adventure, self-experience, self-determination, self-realization and solidarity (Digel, 1986; Kurz 1986).

I don't believe, that this is strictly true. Undoubtedly, increasing prosperity, increasing free time, new groups entering the field of sport have favoured new orientations. This trend was strongly supported by the criticism on inhuman side-effects of a one-sided performance orientation in society and sport, leading to the provocative slogan mentioned by Kurz (1986): "Abolish sport, because it is extending or stabilizing the evils of this society". In my opinion, this did not really lead to an abandonment of performance values in total, but to an additional branch of sport emphasizing the quality of life.

Changes in Functions of Sport

The second thesis, changes in functions of sport, assumes in particular that sport has become more than a private activity or a means to reproduce the fitness for work (Güldenpfennig, 1974; Kurz, 1986). With regard to the increasing number of people actively or passively involved in sport, sport has become an important market for industrial products, product advertisement and a main subject of growing health industry. Beyond this, sport is an expanding field of experience industry and entertainment industry which provide sensations and experience we are more and more missing in work and everyday life. On the other hand, the costs of sport equipment and facilities, the costs of organizing sports events for a huge number of participants and the cost for athletes, who must spend more time for training than ever before and neglect their personal career, expand. That is, sport depends on the financial support of government and economy and thus is increasingly becoming a matter of economic interests (Heinemann, 1986). Therefore, it is increasingly in danger to be dominated by economic rules and to loose its autonomy. Competition and presentation times are determined by television companies, thus influencing in turn the popularity and the financial support of sports disciplines (Muckenhaupt, 1988). Dependent on the economic interests of sponsors, a sport circus is organized and the frequency of contests increased in various sports.

The thesis of changes in the functional meaning of sport includes an additional important point. The reduction of working time provides a considerable time budget which is not completely necessary to recover from work. Free time is becoming a separate field of activity

with its own values, functions and design. In conjunction with this development, the functions of sport are extended. An important role plays the fact that the physical demands of working and everyday life are decreasing. Consequently, the term "sport" is more and more becoming synonymous to all kinds of systematically performed physical activity.

Changes in Organizational Structures and manifestations of Sports Activity

The third thesis, changes in organizational structures and manifestations of sports activity, is based on the two theses mentioned before and on the fact that new groups with different abilities and interests, e.g. women, elder people, members of different social classes, handicapped and various groups of patients, have entered the field of sport. Each part of the question, which we can apply to describe human activity, namely "Who is performing which activity how under which circumstances for what purposes with what effect?", leads to a lot of different answers. The understanding of sport has extended to a scope, which includes competitive sport, mass sport, leisure time sport and rehabilitative sport; furthermore, sport for kindergarden kids and elder people, sport organized in clubs and fitness centres as well as private sports activities; finally, Olympic Games and iron man contests, high jumping, juggling and dancing, free climbing and some meditative techniques. In this sense, sport has lost its distinctiveness (Digel, 1986, 35) in favour of a pluralistic orientation. Therefore, it is not astonishing that there is no internationally accepted taxonomy of the whole field of sport available which goes beyond the traditional sports disciplines of competitive sport.

The pluralistic trend in sport has an important consequence, in particular for sport sociology and sport psychology. There is a strong tendency to establish subcultures around different sports activities with their own values, norms, behavior patterns and languages. In this sense, sport has become a factory for life styles. Therefore, we should pay more attention to the "world of soccer players", the "world of joggers", the "world of surf-riders" and the "world of Kung Fu" in our future investigations instead of looking at single traits, motives and demands.

Consequences for the Understanding of Sports Activity

Let me summarize my understanding of sport. According to what I have outlined before, there are three basic thematic aspects of sport: performance, health and quality of life (fig. 1). These thematic aspects can be considered in three functional perspectives, each of them comprising two subclasses, as it is illustrated by the cube in fig. 2.

The first perspective includes *purposes* and *effects* of sports activity. In this sense, performance, health or quality of life may be a purpose and/or an effect of sports activities. For example, health may be intended by sports activities. For example, health may be improved without having this effect explicitly intended.

The second perspective is related to the fact, that all human actions involve *realizing* something and *presenting* ourselves in what and how we are doing it. The main purpose of some activities may be to actually improve health or to present oneself as healthy and fit in the sense of impression management. In this context, distinctions like self-realization and self-

presentation, real competence and demonstrated competence, performance sport and show sport are important.

The third perspective refers to the involvement of the *individual* and the *society* in the respective activity. That is, performance, health or quality of life may be seen relative to the interests of the individual and/or the society, emphasizing realization or presentation.

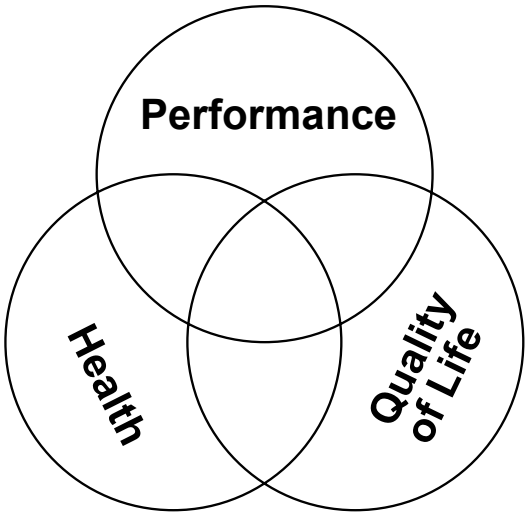

Figure 1. Thematic aspects of sport activities.

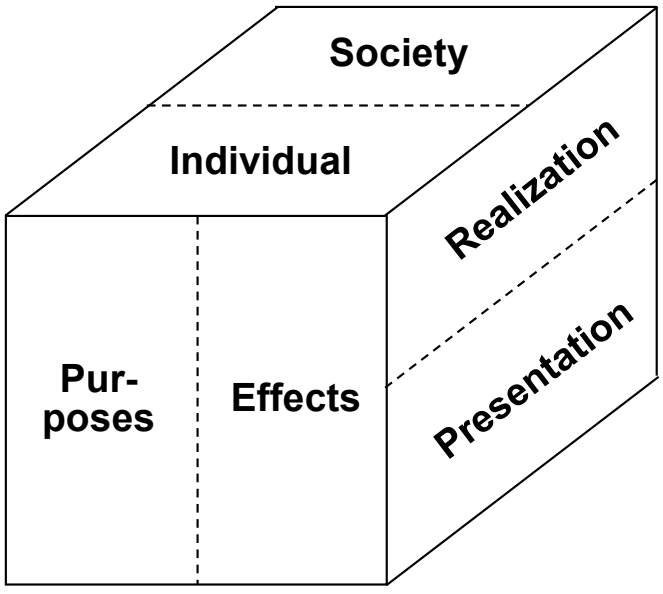

Figure 2. Functional perspectives of sport activity.

In conclusion, sports activities should be analyzed under all of these thematic aspects and functional perspectives to gain a complete picture. Furthermore, this provides a basis to look for structural conflicts and deficits and to identify predominating aspects and perspectives.

Specific Trends in Sport Science

Some of the most important trends in sport science[3] are at least implicitly mentioned before. Therefore, I will add only a few aspects, which are directly or in analogy relevant to sport psychology.

At the first view, there is an obvious *change in the discipline structure* of sport science. Some disciplines, in particular sport pedagogy, are going to loose their former importance. Other disciplines are newly established or gain more influence in education and research, like sport economics, sport management and administration, sport law, sport journalism and sport ecology.

A second trend is that sport science is more or less turning from basic research to *application*. In this context, an old question requires new sport specific answers: Should we really do what we are able to do? Up to now, we are still missing clear-cut ethical guidelines for the professional activity of sport scientists, sport psychologists included.

A third trend depends on the fact that the increasing costs of wide-ranged research at different institutions can no longer be covered by the short resources available. This requires a thematic *concentration* in sport scientific research and the specialization of different institutions and universities.

A fourth trend refers to the fact that further progress in research and application depends on *interdisciplinary cooperation*, including the reorganization of the traditional discipline-oriented university structures. Sport psychology is required to cooperate with regard to several central problems, e.g. aptitude testing, health education, prevention of sport accidents and psychosocial effects of physical training. Special fields of common interests are, relative to research in biomechanics, the translation of biomechanical measurements into appropriate instructions and feedback information for the athlete. Sport medicine is increasingly interested in the investigation of the effects of the opioide peptides of the brain on mental performance and well-being. Furthermore, immunological effects of sports activity, e.g. relevant for the treatment of cancer, are of increasing interest and are considered to include important psychological aspects.

Finally, a fifth trend refers to *graduate education* in sport science. The underlying problem is impressingly outlined by Hollmann or the medical service in the Federal Republic of Germany. On the one hand, more than 21 million are actively participating in organized sports. On the other hand, only about 9.000 or 5 percent of medical doctors are specially trained in sport medicine. This problem of medical services in mass sport may be additionally illustrated by the fact that in only one winter season in the European Alpes about 100.000 accidents occur in skiing, which require surgical operation (Hollmann, 1988, 236).

[3] Prof. Dr. Wildor Hollmann, president of the International Association of Sport Medicine (FIMS), provided some background information in an interview given to the author on June 6th, 1989; see also Grupe (1986).

Trends and Perspectives in Sport Psychology

To outline trends and perspectives in sport psychology (see also Kunath, 1983; Nideffer, 1984; Landers, Boutcher & Wang, 1986; Rejeski & Brawley, 1988; Unestahl, 1988; Williams & Straub, 1986), we can start with three basic questions:

1. What is sport psychology? (Problem of definition)

2. Who is a sport psychologist? (Problem of qualification)

3. What is a sport psychologist doing? (Problem of research and application)

Definition of Sport Psychology

In a general sense, most of us would agree that sport psychology deals with the interaction of internal processes and external behaviour within the specific socio-ecological context of sport. However, with regard to the understanding of internal or psychological processes on the one hand and sport on the other hand, more or less fundamental discrepancies appear. I got the impression that there are almost as many definitions of sport psychology as sport psychologists.

According to what I have outlined before, I want to characterize my understanding of sport psychology by a few theses:

1. Constitutive for sport psychology is a frame of reference which is built up by the *triangle of psychology, sport science and sport* (fig. 3). Such an embedding of sport psychology must have some consequences. Sport psychology - concerning its topics, its methodological approaches and its orientation on scientific standards and practical demands - is not to be restricted either to a special field of applied psychology or to a subdiscipline of sport science or to a more service field in sport. Sport psychology must realize all these aspects. The future of sport psychology depends on managing this task.

   Obviously, this is - as Heckhausen (1979, 46) once stated - "a somewhat uncomfortable situation". I believe that sport psychology is well on the way to arrange this situation in a constructive manner after a period of some one-sided orientations. The connections with the three reference fields are principally established both with regard to organizational and professional collaboration. However, the different fields of psychology, sport science and sport are only sporadically taken into account up to now. The orientation to performance sport dominates; but this is no reasonable argument to keep this traditional position in the future, thus restricting sport psychology to a psychology of competitive sport.

2. According to the first point, sport psychology is not a distinctive scientific discipline in the strict sense of having its own specific topics, methods and tasks. An understanding of *sport psychology as a cross-sectional science* seems to be more appropriate. In this perspective, research and application are centred on the psychological aspects of physical activity in terms of all aspects of the three reference fields mentioned before.

3. Sport psychology is obviously becoming an important matter of scientific interest in many countries, but it is not really an *international science* up to now. One main barrier is the language problem (Marx, 1989; Traxel, 1979). I experienced it very hard in preparing my paper in a language which is not my mother language. Undoubtedly, English is becoming the common language of sport psychologists. However, it is not the fact and time of mere translation which results in problems. The point is that we must not only write, but think in a foreign language. In respect of the various cultural backgrounds and traditions in terminology and science, this is the real problem of communication and acceptance. As L.W. Brandt once resumed (cited by Marx, 1989, 91), "There is no English language market for foreign research that does not fit into the American way of life." One consequence is that we should initiate more international *co-authorships* for the mutual adaptation and the common development of our ideas and terminologies.

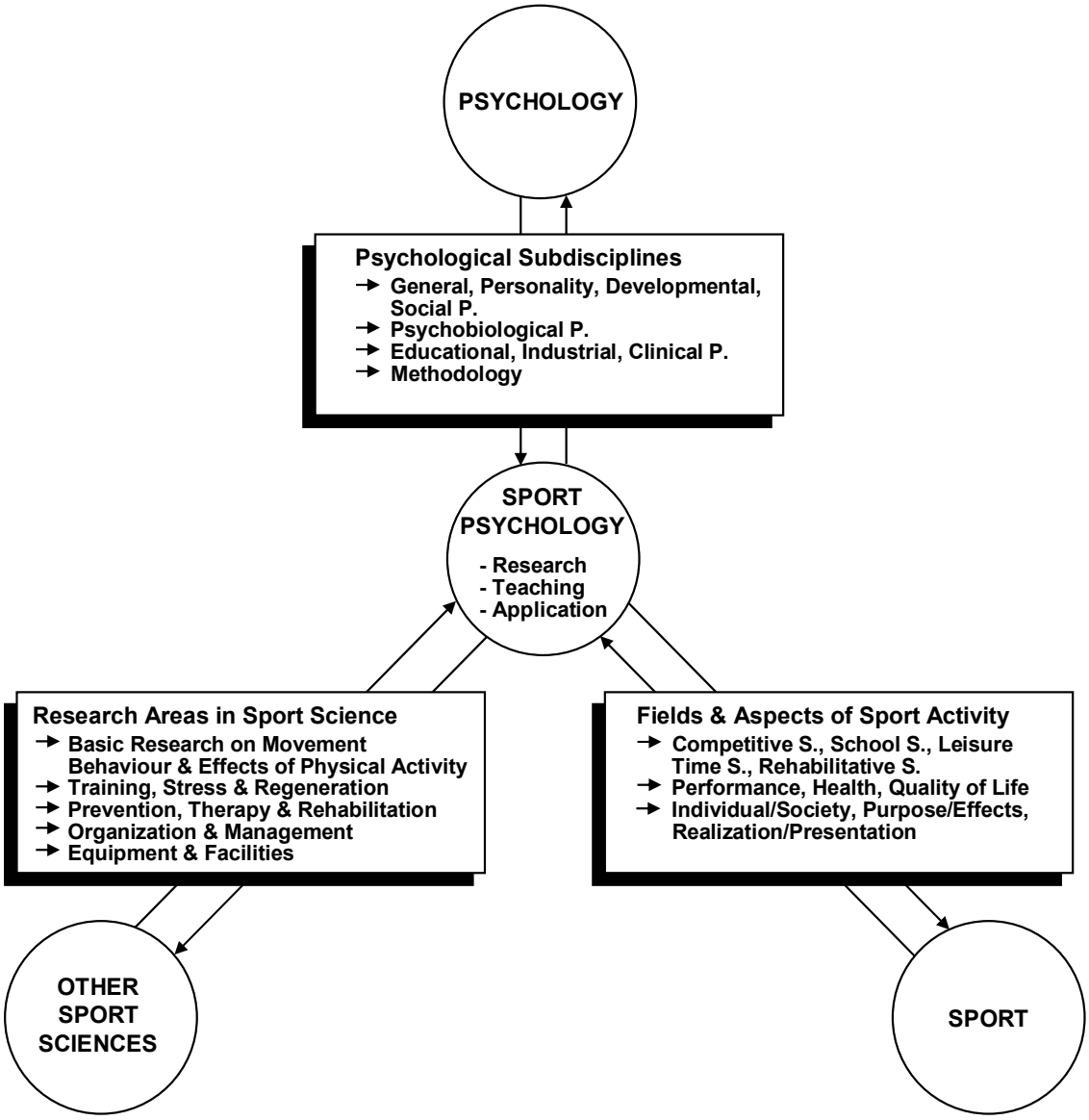

Figure 3. The frame of reference of sport psychology.

Qualification in Sport Psychology

With regard to the question "Who is a sport psychologist?" the present situation can be summarized in one sentence: Everybody and no one is a sport psychologist. As far as I can see, there don't exist clear-cut qualification criteria based on a systematic education in sport psychology, neither on any national nor on international level. This is not a matter of craze for titles. The point is to guarantee high standards in research and professional practice and to prevent charlatanism. Therefore, we should intensively deal with concepts of education and graduate education in sport psychology. In 1986 the national society of sport psychology in the FRG (ASP) in collaboration with the Association of German Psychologists (BDP) realized a curriculum for graduate education in sport psychology including 270 lessons in total. Similar programs are needed for basic education in sport psychology both for students in sport science and coaches. This may also become a substantial task of the ISSP in the future.

Research in Sport Psychology

With regard to research, we could check the state of the art relative to specific topics of investigation. For example, do we sufficiently know how decisions in sports games are made? Do we understand in detail why top athletes sometimes produce unexpected errors? Can we really be satisfied by attributing these errors to a lack of concentration; if so, what is concentration? What are the main psycho-social effects of long-term physical activity – changes of personality traits or changes in self-presentation? Where is a conclusive taxonomy of psycho-social demands related to different kinds of sports activities? Are there any investigations explicitly dealing with secondary gains of errors, failures and accidents in sport? Could it be that the motto of elite sport "Winning is not one thing, but the only thing!" is too much predominant in our thinking in sport psychology? Can we provide valid explanations of some phenomena in sport which look like maniacal passions, for example in triathlon or extreme mountain climbing? What do we actually know about the influence of various physical states on cognitive strategies in decision-making? What is the psychological basis of subjective time estimation and time structuring? Do we really know enough about the functional role of emotions in movement control?

Many additional questions could be derived from the frame of reference of sport psychology mentioned before. I don't want to follow these questions in detail. Instead, I would like to point out some basic problems which result from the present situation of sport psychological research and which may be of some relevance for further development.

1. We must intensify *basic research*, if we want to progress in application. Of course, isolated basic research may ask the wrong questions. However, application separated from basic research will result in wrong or insufficient answers.

2. We must consider the whole to really understand the details. That is, we must intensify our efforts to develop *complex functional models*.

   Up to now, we are missing conclusive and comprehensive sport-related conceptions of performance psychology and health psychology. The same is true for a field of re-

search and application, which I would like to call a "psychology of quality of life". Action psychology may provide a promising theoretical basis for further progress (Nitsch, 1986). To elaborate and to test complex functional models, computer simulation will be one of the most important methodological approaches we must deal with in the future.

3. We have to go into *details*, if we don't want to provide nothing but trivial things. To say it metaphorically, we must give up our attempts to catch the fish by hands. To really understand the psychological processes underlying action regulation and to not merely describe, but to explain intraindividual changes and interindividual differences with regard to these, we should go far beyond global concepts of personality and movement behavior usually applied in the past. Therefore, we have to abandon simple classification models which are based on dichotomous distinctions like introversion/extroversion, fear of failure/hope for success, action-orientation/state-orientation, centred attention/distributive attention, open-loop control/closed-loop control, etc. Such global distinctions neglect dynamic processes, complex interrelations and the time perspective.

   For example, cognitions and emotions are neither mutually independent nor long-term states. They are often changing within a few seconds dependent on rapidly changing demands of motor control. This leads to a change in the perspective of sport psychological investigations. The primary question is not "Who is a good basketball player?" or "What are the overall demands of playing basketball?" The question is "What is a basketball player feeling and thinking at any moment of the motor process?".

4. We have to be fair with our subjects if we want to attain *ecologically valid results* of investigation. Let me illustrate this idea by an example. Investigating the effects of high- and low-anxiousness on performance we must select tasks and conditions which provide the same chance for both traits to show their particular advantages. This is usually not the case, thus resulting in an ecological bias. In most of those studies the applied tasks are functional relative to low-anxiousness and dysfunctional relative to high-anxiousness. That is, high-anxious people don't get any chance to show that they may perform better in tasks emphasizing prevention, long-term preparation, defensiveness or safety.

   Moreover, these distinctions like low- and high-anxiousness point at a critical problem of psychological classification. Descriptive and evaluative or normative aspects are often confounded in the sense that there is not "type A" and "type B", but a "good one" and a "bad one". This leads to a final point.

5. To critically evaluate our scientific models and results, we must deal with the concepts and thoughts they are based on. That is, we must become aware of our *implicit understanding of life, society and man* and our *styles of thinking* as well, which are influencing our perspectives in research and application.

Applied Sport Psychology

With regard to application, I want to point at three main problems we should deal with in the future.

1. Great *confusion in terminology* seems to come up. Almost the same contents are covered by different labels like "inner training", "mental training", "psycho-regulative training", "concentration training", etc. Marketing interests tend to dominate scientific distinctiveness. Therefore, an internationally accepted taxonomy of psychological training procedures is badly needed.

2. The development and application of psychological training programs are obviously not in pace with careful scientific *evaluation*.

3. We need *ethical guidelines* to explicate the requirements and responsibility of professional practice. Last but not least, they are also necessary to protect us against demands we should not try to fulfill even if we could.

   To put it in a word attributed to the mathematician Carl Friedrich Gauss: "Science is a friend of practice, but not its slave."

References

Deutscher Sportbund (Hrsg.). (1986). *Die Zukunft des Sports. Materialien zum Kongreß "Menschen im Sport 2000"*. Schorndorf: Hofmann.

Digel, H. (1986). Über den Wandel der Werte in Gesellschaft, Freizeit und Sport. In Deutscher Sportbund (Hrsg.), *Die Zukunft des Sports. Materialien zum Kongreß "Menschen im Sport 2000"* (S. 14-43). Schorndorf: Hofmann.

Gieseler, K., Grupe, O. & Heinemann, K. (Hrsg.). (1988). *Menschen im Sport 2000* (Dokumentation des Kongresses "Menschen im Sport 2000" vom 5.-7.11.1987 in Berlin). Schorndorf: Hofmann.

Grupe, O. unter Mitarbeit von D. Kayser, A. Kirsch und W. Preising (1986). Künftige Aufgaben und Probleme der Sportwissenschaft. In: Deutscher Sportbund (Hrsg.), *Die Zukunft des Sports. Materialien zum Kongreß "Menschen im Sport 2000"* (S. 262-268). Schorndorf: Hofmann.

Güldenpfennig, S. (1974). Erweiterte Reproduktion der Arbeitkraft - Ein Ansatz zur Bestimmung des Verhältnisses von Sport und Arbeit. In S. Güldenpfennig, W. Volpert & P. Weinberg, P. (Hrsg.), *Sensumotorisches Lernen und Sport als Reproduktion der Arbeitskraft* (S. 12-59) Köln: Pahl-Rugenstein.

Heckhausen, H. (1979). Sportpsychologie: Auf der Suche nach Identität in einem magischen Dreieck verschiedener Fachwissenschaften. In J.R. Nitsch (Hrsg.), *Bericht über die 10-Jahrestagung der Arbeitsgemeinschaft für Sportpsychologie in Köln 1979* (S. 43-61). Köln: bps-Verlag.

Heinemann, K. (1986). Zum Problem der Einheit des Sports und des Verlusts seiner Autonomie. In Deutscher Sportbund (Hrsg.), *Die Zukunft des Sports. Materialien zum Kongreß "Menschen im Sport 2000"* (S. 112-118). Schorndorf: Hofmann.

Hollmann, W. (1988). Was ist gesund am Sport? Prävention, Rehabilitation und Wohlbefinden des Menschen. In K. Gieseler, O. Grupe & K. Heinemann (Hrsg.), *Menschen im Sport 2000* (Dokumentation des Kongresses "Menschen im Sport 2000" vom 5.-7.11.1987 in Berlin, S. 235-243). Schorndorf: Hofmann.

Kamper, E. (1972). *Enzyklopädie der Olympischen Spiele*. o.O.: Econ.

Kunath, P. (Hrsg.). (1983). *Sportpsychologie in europäischen Ländern - Stand und Tendenzen* (FEPSAC-Report; Material des internationalen Seminars zu Sportpsychologie in den Ländern Europas vom 22.4.1983 in Berlin/DDR). Leipzig: Deutsche Hochschule für Körperkultur.

Kurz, D. (1986). Vom Sinn des Sports. In Deutscher Sportbund (Hrsg.), *Die Zukunft des Sports. Materialien zum Kongreß "Menschen im Sport 2000"* (S. 44-68). Schorndorf: Hofmann.

Landers, D.M., Boutcher, S.H. & Wang, N.Q. (1986). The history and status of sport psychology: 1979-1985. *Journal of Sport Psychology*, *8*, 149-163.

Lenk, H. (1975). Leistungsgesellschaft und Leistungskritik. Ideologische Elemente in der gegenwärtigen Leistungsdiskussion und deren sozialphilosophische Kritik angesichts der Probleme industrieller Produktionsarbeit. *Zeitschrift für Arbeitswissenschaft*, *29* (3), 129-137.

Marx, W. (1989). Bemerkungen zum Sprachenstreit in der deutschen Psychologie. *Psychologische Rundschau*, *40*, 89-92.

Muckenhaupt, M. (1988). Schaffen die Massenmedien eine neue Wirklichkeit des Sports? Sportübertragung - Sportverständnis - Sportengagement. In K. Gieseler, O. Grupe & K. Heinemann (Hrsg.), *Menschen im Sport 2000* (Dokumentation des Kongresses "Menschen im Sport 2000" vom 5.-7.11.1987 im Berlin, S. 289-303). Schorndorf: Hofmann.

Nideffer, R.M. (1984). Current concerns in sport psychology. In J.M. Silva & R.S. Weinberg (Eds.), *Psychological foundations of sport* (pp. 35-44). Champaign, IL: Human Kinetics.

Nitsch, J.R. (1986). Zur handlungstheoretischen Grundlegung der Sportpsychologie. In H. Gabler, J.R. Nitsch & R. Singer (Hrsg.), *Einführung in die Sportpsychologie: Teil 1. Grundthemen* (S. 188-270). Schorndorf: Hofmann.

Taylor, F.W. (1911). *Principles of scientific management*. New York: Harper.

Toffler, A. (1971). Toffler, A. (1971). *Der Zukunftsschock* (3. Aufl.). Bern: Scherz.

Traxel, W. (1979). Publish or Perish! - auf deutsch oder englisch? *Psychologische Beiträge*, *21*, 62-72.

Ulich, E. (1985). Arbeitspsychologische Konzepte und neue Technologien. In K. Zink (Hrsg.), *Personalwirtschaftliche Aspekte neuer Technologien* (S. 135-159). Berlin: Schmidt.

Uneståhl, L.-E. (1986). The future of sport psychology. In L.-E. Uneståhl (Ed.), *Comtemporary sport psychology* (Proceedings from the VI. World Congress in Sport Psychology, pp. 291-301). Örebrö: Veje Publications.

Volpert, W. unter Mitarbeit von A. Raeithel (1984). *Gefahren der Informationstechniken für unser Handeln und Zusammenleben.* Vortrag auf der Internationalen Konferenz der Bundesrepublik Deutschland in Zusammenarbeit mit der OECD: 1984 und danach. Die gesellschaftliche Herausforderung der Informationstechnik. 28.-30. November 1984 in Berlin.

Williams, J.M. & Straub, W.F. (1986). Sport psychology: Past, present, future. In J.M. Williams (Ed.), *Applied sport psychology. Personal growth to peak performance* (pp. 1-13). Palo Alto, CA: Mayfield.