RESEARCH AND REVIEWS

Building Sport Programs to Optimize Athlete Recruitment, Retention, and Transition: Toward a Normative Theory of Sport Development

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Sport development has become a leading issue for sport policymakers and sport managers worldwide. Sport development systems have two main objectives: to increase the number of participants actively engaged in sport and to enhance the quality of performances in sport. This is the foundation of the much used, but rarely examined, pyramid analogy in sport development. In this article, the pyramid model of sport development is explored, and its underlying assumptions are critiqued. Three tasks necessary for an effective pyramid model are identified: athlete recruitment, athlete retention, and athlete transitions. Recruitment requires the assistance of significant others, as well as the proliferation of many smaller, local-level sport programs. Retention requires a focus on motivation, socialization, and commitment. Advancement requires that programs be linked vertically and that athletes be aided in processes of locating and socializing into new levels of involvement. Although specific strategies for enhancing recruitment, retention, and transition of athletes can be identified from the literature, further research is needed.

Governments, international federations, and national federations have long been concerned about formulating policies that will promote the development of sport (Chalip, Johnson, & Stachura, 1996; Thoma & Chalip, 1996). In recent years, this concern has prompted substantial research interest. Some studies have examined the social, political, and economic forces that have shaped particular sport systems (e.g., Boshoff, 1997; Ingham & Loy, 1993; Nevo, 2000); some have explored the ideological and institutional foundations of sport development (e.g., Anderson, 2001; Houlihan & White, 2002; Hylton, Bramham, Jackson, & Nesti, 2001); some have compared sport development cross-nationally (e.g., Green & Oakley, 2001; Ståhl, Rütten, Nutbeam, & Kannas, 2002); some have examined

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particular sport-development challenges and programs (e.g., Burnett, 2001; Collins & Buller, 2000; Lai, 1999). This emerging body of scholarship has demonstrated that sport development has become a dominant concern of sport policymakers and sport managers worldwide. As a result, they have increasingly turned to researchers and the research literature to strengthen the quality of sport policy deliberations (e.g., Carona Designs Inc. & InterQuest Consulting, 2004; Kay, 2004; Salmon, Breman, Fotheringham, Ball, & Finch, 2000). The resulting efforts have provided significant insight but have been ad hoc insomuch as sport development has so far lacked a theoretical framework. This lack of theory has also impeded the progress of sport development research.

Two overarching concerns manifest themselves when governments and sport governing bodies contemplate sports policies. One concern is to enhance the rate of sport participation (Palm, 1991; Ståhl et al., 2002); the other is to enhance the competitive standards that sport participants attain (Broom, 1991; Green & Oakley, 2001). The concern to enhance sport participation has been supported by three key legitimations: (a) health promotion (Seefeldt, 1986; Seidentop, 2002), (b) economic benefits of enhanced fitness (Shephard, 1986; Wang, Pratt, Macera, Zhi-Jie, & Heath, 2004), and (c) enlargement of the nation's pool of athletes who can be developed into international competitors (*Congressional Record*, 1964, pg. A1451; 1974, pp. 32433-32449; Green & Oakley, 2001; McNeill, Sproule, & Horton, 2003). The concern to enhance the competitive standard of national teams has been driven by efforts to elevate national prestige and to strengthen sport as a tool of international relations (Houlihan, 1997; Stokvis, 1989).

Although concerns about the rate of sport participation are conceptually distinct from concerns about competitive standards, participation and competitive standard are linked by the endeavor to create a deep pool of athletes from which a corps of elite competitors can develop (Broom, 1991; Green & Oakley, 2001; Stokvis, 1989). From this standpoint, the objective is to recruit people (particularly children and adolescents) into sports and then to develop a percentage of them (presumably those with "talent") into high caliber performers. This is the origin of the often noted but rarely analyzed pyramid analogy. According to that analogy, high-performance peaks are supported by a broad base of participation (see Figure 1). It is a measure of the analogy's cultural power that it is common parlance among sport administrators and policymakers but lacks any sustained empirical or conceptual integrity.

It is possible to imagine ways of building high-level competition systems without relying on a broad participation base. Some winter sports in the United States, for example, rely primarily on recruitment of athletes initially developed for other sports. For example, the United States bobsled team has been built substantially from elite athletes in other sports whose physical skills and physiques lend themselves to the event (e.g., Herschel Walker and Willie Gault from football and track, respectively). Thus, sports that depend on expensive and scarce facilities, like bobsledding, might not build their competitive excellence from a broad foundation of participation. Nevertheless, those sports might require a broad foundation of participation in other sports to develop the bases of skill and conditioning
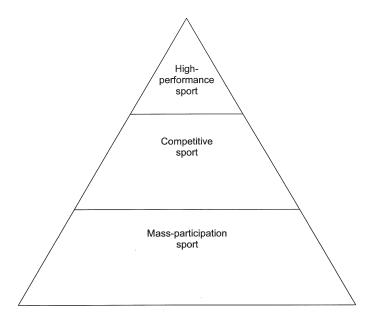
Figure 1 — Pyramid Model of Sport Development.

that are prerequisites to excellence. For example, the US Bobsled and Skeleton Federation website notes that, "Push athletes [those athletes who push the sled fast at the start] are generally recruited from sports like football and track" (n.d.).

It is nonetheless reasonable to imagine a high-performance sport system in which the athletes are identified and recruited for their performance potential (i.e., a system built via selection and conscription). Although a pool of experienced athletes to examine as potential recruits is desirable, it is conceivable that talent identification could occur early enough in the athlete's development (e.g., via so-matotype and motor skills tests in the schools) to obviate the need for any system of broad participation. Research suggests, however, that performance potential in the long-term (i.e., several years hence) is neither readily nor accurately assessed (Abbott & Collins, 2002; Howe, Davidson, & Sloboda, 1998). Effective systems for training, motivating, and supporting athletes are better predictors of success than are any measures intended to identify talent (Hodges, Kerr, Starkes, Weir, & Nananidou, 2004; Williams & Reilly, 2000). This might explain why Kalinowsky (1985) and Monsaas (1985) found that outstanding swimmers and tennis players were not identified as talented early in their careers; rather the label *talented* was bestowed post hoc, after they began to excel.

There are, of course, physical requirements for performance in many sports that are substantially determined by genetics, such as the need for height in basket-ball or the need for a high percentage of white muscle fibers in sprint events. Any

system of sport built from early identification of talent, however, would have to predict more than size, physiology, and somatotype. It would be necessary to predict long-range skill potential. We do not have the requisite technologies to predict skill levels or potentials over long spans of time (Abbott & Collins, 2002; Howe, Davidson, & Sloboda, 1998). The limitations of our technologies for long-range forecasting of individual potentials counsel against an elite performance system based solely on early talent identification and conscription.

On the other hand, social science data suggest the value of pyramid-based approaches to sport development. For example, Chambliss (1989) studied competitive swimming programs and found that the competitive standards attained by swimmers were substantially determined by the swimmers' social environments and the cultures of their teams. Scrutiny of data reported by Chambliss, Kalinowski (1985), and Monsaas (1985) suggests that processes of social comparison (Festinger, 1954) engendered by broadly based programs were significant factors in the genesis of competitive excellence.

It is useful, therefore, to scrutinize the pyramid model of sport development more closely. Sport development policies based on a pyramid model must address at least three key matters: athlete entrance, athlete retention, and athlete advancement. Specifically, how do we bring athletes into the sport system? How do we keep them involved and enhance their commitment to the sport? In addition, once they are involved, how can we best ensure their advancement, particularly the advancement of athletes whose development shows promise? These concerns are addressed here and illustrated via analysis of the athlete development strategies of USA Volleyball.

Entrance and Retention

Entrance refers to the ways in which athletes are first introduced to sports. Who influences each athlete's decision to participate? What factors weigh into that decision? How can sport organizations use this information to attract participants to their programs? Retention, on the other hand, refers to each athlete's choice to continue to participate. What, for instance, motivates an athlete to continue to participate? What kinds of reinforcers ensure continued involvement? How can we facilitate the processes by which an athlete develops commitment to his or her sport?

At least four concepts are required to analyze the processes by which people become involved in sport: recruitment, motivation, socialization, and commitment. Although socialization and commitment are subcategories of motivation, there is heuristic value in analyzing each sequentially. Recruitment is simply the manner by which a team or organization enlists new members. Once the athlete has been introduced to the sport, the processes by which athletes are retained or lost begin. Retention is mediated by the athlete's motivation and the ways the athlete is socialized into the sport and team subculture. Finally, retention is dependent on the commitment an athlete develops to the sport and/or to the sport organization. Commitment refers to the level of engagement with the sport. In order to maintain successful sport development programs, we need to know more about the

interrelationships and interactions among recruitment, motives, socialization, and commitment. As we will see, the presence of multiple motivations and multiple markets militates against the study of any universal participant.

Recruitment

It is first necessary to confront issues related to athlete recruitment. How is it that athletes become involved in a given sport? In many cases, an athlete's initial interest occurs through "sponsored recruitment" (Prus & Irini, 1980; Stevenson, 2002), whereby significant others support and encourage the athlete's involvement (Brodkin & Weiss, 1990; Kay, 2000). Stevenson (1990) found that although athletes' introductions to their sport are indeed "sponsored" by significant others, it is the new relationships and role identities the sport can provide that are influential in the decision to enter a given sport. Interestingly, new relationships might also be important to significant others. For example, Green (1997a) found that relationships with likeminded others were identified as a salient factor in parents' decisions to enroll their children in particular youth sport programs.

Similarly, the importance of both the participant's relationship with the sponsor and the sponsor's valuation of associated role identities play a critical role in the involvement decision. New relationships and role identities, however, can be insufficient in and of themselves to bring athletes into a sport because other forces (e.g., work, social life, other activities) pull athletes away. Research has shown that these conflicts increase as the athlete enters adolescence (Butcher, Lindner, & Johns, 2002; White & Coakley, 1986). Much of this friction can be avoided, or at least minimized, by recruiting young athletes and developing commitment to a sport before adolescence. Sports such as soccer, swimming, and baseball have pursued this strategy, forming leagues for children as young as 4 years. By the time an athlete reaches junior high school, he or she might have become committed to one or more familiar sports. Nevertheless, many of our Olympic sports do not provide opportunities for early commitment.

Throughout most of the country, volleyball, for instance, is rarely played before an athlete enters middle school or junior high school. By this time the pool of potential athletes has been reduced because many have made their commitments to sports such as basketball or soccer, which they have played since the first or second grade. It seems advantageous to introduce potential athletes to sports early in their athletic careers. Mere introduction to sport is, in and of itself, insufficient to obtain participation, as our high rates of nonparticipation and withdrawal show (Butcher et al., 2002).

Opportunities to participate play a significant role in generating participation (Braddock, Sokol-Katz, Greene, & Basinger-Fleischman, 2005; Cicchetti, 1972). At the commonsense level, it is not surprising that some infrastructure is necessary if people are to participate. The significance of infrastructure, however, goes beyond mere opportunity. The key point is that programs themselves create a demand for participants and thereby increase the rate of participation.

The concept of supply-driven demand has been somewhat controversial in classical economic theory. The social–psychological forces generating demand for

program participants are well understood, however, and have been extensively documented by ecological psychologists (e.g., Wicker, 1979). Programs require a minimum number of participants if they are to function adequately. Consequently, each participant or beneficiary encourages others to join, at least until the program is adequately manned. The likelihood that a community (e.g., school, church, neighborhood) member will join a program increases as the ratio of potential participants to programs requiring participants goes down. Ecological psychologists call this phenomenon "undermanning."

Undermanning theory suggests that a relatively high ratio of opportunities to participate will increase athlete commitment (via the same social–psychological forces that generated initial recruitment). In particular the likelihood of becoming a "starter" or making some other significant contribution to the team is enhanced if there are several relatively small programs, rather than if those programs are amalgamated into a single large program. This suggests that, if the concern is to optimize recruitment and initial commitment to a sport, program planners should weigh the psychological disadvantages of seeking economic returns from increasing scale. It might be possible to create the benefits of smallness even in a large club by creating several teams or squads that are relatively independent (cf., Barker & Gump, 1964). More work is needed to identify the optimal number of programs per capita and the most effective ways to divide large teams to obtain the recruitment advantages associated with undermanning.

The effects of undermanning can be amplified by increasing the social incentives and rewards for participating. Stone (1981) shows that sports teams often become significant as representatives of a community or social reference group. Cialdini and his colleagues (Cialdini et al., 1976; Cialdini & Richardson, 1980) have shown that this representation can cause community members to behave in ways that increase the salience and value of team membership. This suggests the utility of affiliating teams with established social-reference groups such as neighborhoods, churches, unions, or schools. The consequent sense of communal representation might enhance both recruitment and socialization. Although there is a long history of research highlighting the effects of sport on national identities (e.g., Caldwell, 1982; Gill, 2005; Marschik, 1998), more research is needed to clarify the effects of community representation on sport participation and commitment.

In summary, it is useful to provide sport programs targeted at children. Recruitment into programs will be improved when significant others encourage participation. By creating many smaller, undermanned programs rather than fewer but larger programs, recruitment and athlete encouragement will be enhanced. When programs represent a natural community, the incentives and reinforcements associated with recruitment will be expanded.

Retention

Motivation.   Joining a sport program does not guarantee that an athlete will continue with the sport. For the athlete to continue, he or she must find value in participation. Sport psychologists have identified a number of significant motives

for sport participation, including exhilaration, social interaction, skill development, team affiliation, and fitness (Cox, 2002). Conspicuously less significant are such extrinsic rewards as winning and prizes.

In terms of the multiple motives for participation, it is suggested that programs focus on social interaction, fitness, skill development, and play, particularly when those programs are targeted at children. Multiple motivations, however, suggest something more fundamental: our programs must cater to a range of markets rather than to any "average competitor." For example, Chalip (1989) identified 20 categories of perceived value in team membership on a team of fewer than 50 families. This suggests the need for a range of programs, and more importantly, a range of implementations. Green (1997a) argues that modified sport programs (in this case, noncompetitive, child-centered programs) can reach parents who would otherwise choose not to enroll their children in organized sport. The need to cater appropriately to different market segments is well understood in marketing (e.g., Haley, 1968), but the implications of benefit segmentation for sport program planning and implementation have been inadequately examined. Indeed, one source of program recruitment and retention problems might be the failure to offer a sufficient assortment of program variations to cater to a diverse and changing array of participant motivations (cf., Chalip & Green, 1998).

Rotter's (1954) social learning theory is particularly useful in this context. Rotter identifies three key variables: benefits, the degree to which each benefit is valued, and the expectation that a behavior will generate a valued benefit. Accordingly, there are three requirements if an athlete is to continue his or her sport participation (Green, 1997b): (a) He or she must perceive at least one benefit to be obtained via participation; (b) he or she must value that benefit; and (c) he or she must believe that participation will engender that benefit. A corollary is that any benefits and their values must be greater than those to be obtained from alternative activities.

Interestingly, despite a great deal of study in sport motivation, we know very little about the nature of benefits people perceive in sport, how those benefits come to be valued, or how people come to perceive personal control (or lack of it) over those benefits. At the very least, we need to unpack the meaning of such catchall ascriptions as "fun." What little work has been done suggests that the range of benefits people find in sport is quite vast. For example, Youngblood and Suinn (1980) located 95 perceived benefits from sport participation. Fertl (1990) found significant differences in values of benefits perceived by participants in different sports. She also found differences in the values attached to benefits by athletes who compete at different levels of the same sport. Duda (1986) found significant cross-cultural variation in the goals participants seek to attain through sport. We know very little about how athletes learn to perceive alternative benefits, although programs designed to help them find new benefits have been shown to enhance commitment and effort (Kozlik, 1960). We do know, however, that individual needs change across the lifespan (Erikson, 1959) and as more basic needs are met (Maslow, 1970). If our programs are going to cater to a sufficient range of individuals, we need to learn more about the ways that benefits come to be perceived and valued.

We also need to learn how to structure our programs so that athletes will find them appropriate to pursuit of those benefits.

Each sport participant's values and expectancies are likely to be complexly structured. Herzberg, Mausner, and Snyderman (1959) have shown that in work settings negative and positive features of organizational life are not bipolar; on the contrary, negative and positive elements function independently. It is particularly significant that this work shows that the absence of a positive (i.e., a benefit) is not necessarily negative and the absence of a negative is not necessarily positive. In too much work on sport, we have assumed the opposite. We need to reexamine sports environments to determine how particular aspects of the sport experience come to be perceived as positive or negative, how variations in the preference or expectation for particular benefits affect perceptions of positives and negatives, and how those perceptions affect athletes' behavior and intentions. Variations across sports, the lifespan, and levels of competition need to be examined.

Sport motivation has typically been studied piecemeal, and models of motivation have relied on relatively simple heuristics. For example, when Fiedler's (1958) classic work was extended into sport domains, researchers differentiated task motivation from social motivation (e.g., Martens, 1970). This distinction finds its echo in program design when administrators talk about "recreational" versus "intensive" programs. The distinction also arises when managers of "serious" teams downplay social programming, or when managers of "fun" teams worry that their programs have become "too serious."

Programs do vary in terms of their relative foci on task versus social programming. Nevertheless, there is no conceptual basis for assuming task and social foci to be bipolar. It is reasonable to expect task and social motivations to vary independently, as shown in Figure 2. In other words, some participants might be motivated predominantly by social outcomes from participation, whereas others are motivated predominantly by aspects of the task itself (e.g., skill development, physical activity, rewards). Still others might value both social and task elements highly. Programs combining task-oriented training with time and opportunities to socialize can attract participants from three quadrants (labeled A, B, and C in Figure 2). Programs emphasizing one element or the other are likely to lose participants from at least one of those quadrants (A or C). This example illustrates two fundamental points: (a) Programs that cater to multiple motives for participation are more likely to retain athletes long enough for those athletes to apprehend and value other benefits; and (b) by multiplying the benefits to be obtained, athletes are less likely to be enticed away from the sport into other (presumably less rewarding) activities.

As Kozlik (1960) has shown, the benefits of participation are not learned and valued as a result of mere exposure to sport; benefits need to be taught and experienced. Indeed, the values to be obtained from a sport are likely to vary as a consequence of program implementation. For example, McCormack and Chalip (1988) have shown that coach behaviors, particularly the coach's capacity to demonstrate that he or she finds significant intrinsic reward in the sport, play a
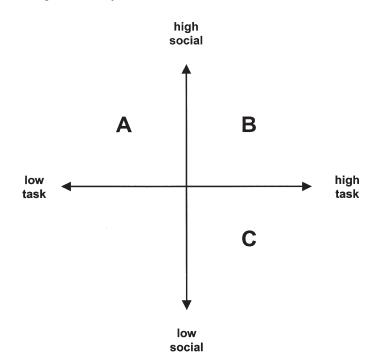
Figure 2 — **Task and Social Motivation for Participation.**

significant role in determining the benefits athletes learn to obtain from participation. This recommends programs that train coaches in administrative techniques and social skills appropriate to the level and range of values of the athletes they coach (e.g., Seidentop, 2002; Smoll & Smith, 1979).

Socialization. Socialization affects participants' expectations, perceptions of rewards, and the values they attach to those rewards. Experiences during socialization into the sport subculture can impel athletes toward more intense commitments to the sport or, if reinforcer values decline, can turn athletes away. Motivation is not static; new experiences can change individual expectancies and values. As we shall see later, this can become particularly important during transitions to new levels of participation.

Socialization into a sport and its culture bridges the gap between recruitment and commitment. It is the process of creating and/or confirming the individual's role or identity with the subculture that results in increased commitment to the sport through what Leonard and Schmitt (1987) call "side bets" (e.g., types of investment in the subculture). These side bets refer to the manner in which one's past actions confine future actions. For example, as a new rugby player begins to create an identity of rugger, he becomes almost a stereotype of the subculture. He

takes on the most obvious characteristics of the culture: dressing, speaking, and acting the part of an experienced rugby player. His behavior is now constrained by this image. Consequently, he cannot abandon this image by becoming upset over a cut or minor injury. As you can see, by acting the part, one actually confirms his or her role identity within the subculture.

Undermanning (Wicker, 1979) can be useful at this stage by increasing both the incentives and rewards for taking on new sport roles. Socialization is enhanced when the team is small enough that people have to be actively recruited to fill all player and administrative roles. Undermanning enhances the degree of involvement and level of responsibility expected of participants, thereby increasing the side bets participants make.

A significant implication is that centralization of athlete development is contraindicated, at least at the stage of entry and initial socialization. As the distribution of programs, groups, or teams widens, so does the number of roles; as the number of roles widens, so do the opportunities for construction of role identities. Role identities are important for athletes. Further, in the case of youth sport, opportunities for parents to take on role identities with the program or organization can enhance their child's socialization into the sport (Green & Chalip, 1997, 1998). Conversely, centralization decreases the opportunities an athlete (and his or her parent) have to engage in new sport roles. An additional disadvantage of centralization is that the benefits of community identification are lost.

Socialization research suggests that programs identified with a reference group that is already meaningful to the participant are likely to facilitate the process of socialization into sport subcultures. Socialization into a sport's subculture requires that the athlete learn the role requirements and expectations of the subculture (Donnelly & Young, 1988). To the degree that role expectations in the program are consistent with the participant's broader experience of his or her community, those role expectations will be easier to learn.

Commitment.   Elite athletes often attribute their successes to their commitment to sport and to training for sport (Scanlan, Russell, Wilson, & Scanlan, 2003). Commitment has also been shown to play a vital role in driving nonelite athletes' social involvement and identification with their sport (Wheaton, 2000). When enjoyment and opportunities for involvement rise, so does commitment; conversely, when enjoyment and opportunities for involvement fall, commitment also falls (Carpenter & Scanlan, 1998). Athletes who are at risk for burnout have been shown to be less committed to their sport (Raedeke, 1997). These findings demonstrate the need to engender commitment among athletes who have been recruited into a sport.

As athletes commit to a sport, their involvements in other sports or nonsport activities decline. Stevenson (1990) found two factors to explain athletes' decisions to specialize in a given sport: potential for success and the people associated with the sport. The first factor is the deliberate seeking of desirable role identities, and the second is the role support necessary for development and maintenance of those identities. In Stevenson's study, athletes who committed to a sport sought to be identified as successful athletes. Highly committed athletes made a conscious decision, often with help from significant others, about which sport offered the

greatest potential for success. Added support for the athlete role was provided by others in the forms of social support, team spirit, and sport-related social interactions. Here we see again the interplay of task and social factors in furthering athlete motivation.

Stevenson's work suggests that mere provision of opportunities for participation or skill acquisition is inadequate. Programs must incorporate designs that maximize the social support and expressions of team spirit to be obtained. Family and community support groups, team social functions, and mentoring need to be structured into program design.

It might seem that the first factor identified by Stevenson, each athlete's potential for success, is not something that is controllable through program design. The perception of success, however, is mediated by expectancies and goals (Burton & Martens, 1986). Athletes can be trained to set realistic goals and to plan and evaluate their development accordingly (Chalip, 1980). Thus, goal planning (as opposed to mere goal setting) is something that needs to be trained from the outset. Programs need to build this component into their athlete development planning. Here again an appropriate social support structure is necessary so that athletes can learn to plan goal attainment and evaluate their planning and its implementation realistically. Indeed, it might be necessary to train significant others (e.g., parents, coaches, teachers, or a spouse) in these same processes in order to foster the requisite systems of social support. These recommendations are consistent with Sport Commitment Model formulations that incorporate personal investments and social support (along with enjoyment and involvement opportunities) as underlying drivers of sport commitment (Scanlan, Russell, Beals, & Scanlan, 2003).

Summary Analysis

The pyramid model of sport development assumes that a broad base of participation is required to produce athletes willing and able to progress to sequentially higher levels of competition. In order to obtain this base of competition, athletes must first be recruited (or sponsored) into a sport. This, in turn, requires a proliferation of community-based programs catering to multiple motives and market segments. Program design must provide recruits with opportunities to learn about and to come to value both social and task rewards associated with participation. This includes opportunities to undertake new and significant roles, as well as training in goal planning. In order to enhance the articulation between task and social benefits of participation, social support systems need to be designed into the program.

Mere provision of programs is inadequate. Sport programs are social systems with their own internal dynamics (Kirk & MacPhail, 2003). They are embedded in a broader system of social relations. Adequate program design and implementation require meticulous planning and continuous evaluation of the internal social system, as well as its articulation with the wider social fabric within which it is embedded. Although the research literature suggests the broad outlines required for such planning (cf. Nichols, 2002), added research is needed, particularly to identify the benefits people perceive in sport, how they come to value

particular benefits (and not others), how and why those values change, and how values and expectancies are affected by variations in program design and implementation.

Advancement

As the athlete's skills and conditioning improve, the pyramid model of sport development prescribes that the athlete should move to more advanced levels of training and competition. This typically requires that the athlete move to more advanced teams or squads within the same club, or that the athlete move to another club altogether. Although there has been extensive psychological and sociological study of the processes by which athletes become involved in sport, there has been scant study of the processes of athlete advancement. Movement up the pyramid is by no means automatic, even if an athlete's skills warrant such advancement. We know very little about what hinders or facilitates advancement. A study of United States women's volleyball (Green, 1992) illustrates the issues.

The Case of USA Volleyball Development

In United States indoor volleyball, the path to the national team is through USA Volleyball's (USAV) national team pyramid. According to Collier (1988), former assistant coach of the women's national team, "We have a well defined, logical progression for each player with aspirations to be a member of our national team program" (p. 4). This progression begins with the selection of club-level players through the high performance tryout system. It culminates in selection to the national team. Age and talent determine a player's place in the pyramid (see Figure 3).

Yet, the system is neither straightforward nor effective. One analyst of the quality of volleyball play in the United States concluded that the system was not producing players who could play at an adequate standard:

> In the great debate over the state of women's [volleyball play] in the United States there really is no debate at all. [It is] undeveloped because it's unappreciated. Unappreciated because it's undeveloped. Unacceptable because of all of the above, and under a great deal of fire. . . . And that's an understatement. (T. Green, 1994, p. 34)

An examination of the American women's volleyball system highlights potential pitfalls of the pyramid system (Green, 1992). Although USA Volleyball has made substantial strides in addressing key system deficiencies, fundamental problems remain. Because these aptly illustrate the challenges of pyramid-based sport development, it is useful to take a closer look at the USAV system.

Identification.   Identification of athletes relies on tryouts at each level of the pyramid. Although tryouts seem procedurally just, their value is limited. The number of tryouts held at each level decreases from the 5 (boys) or 27 (girls) for the USAV High Performance Camps, to a selection procedure (without tryout) for the USA World University Games team (USA Volleyball, n.d.). Aspiring athletes
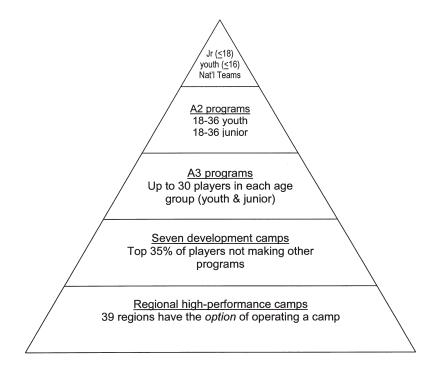
Figure 3 — USA Volleyball Development Model.

Jr (≤18)
youth (≤16)
Nat'l Teams

A2 programs
18-36 youth
18-36 junior

A3 programs
Up to 30 players in each age
group (youth & junior)

Seven development camps
Top 35% of players not making other
programs

Regional high-performance camps
39 regions have the *option* of operating a camp

must travel hundreds of miles, incurring all travel expenses, and pay a fee for the tryout. These barriers result in exclusion of qualified athletes, particularly those whose finances preclude the trip.

Financial wherewithal, however, is not the only (or even the most significant) barrier. Because most tryouts are held in conjunction with national qualifying tournaments, a player who is a member of a club competing in the tournament has a significant advantage. Players from clubs not competing at the tournament can try out, but they are at a disadvantage because they will not be evaluated in a competitive setting.

A related problem is that USAV relies on Junior Olympic club coaches to disseminate information about tryouts. Typically, information travels from the national office to the 39 regional junior coordinators. These coordinators then pass the information to the club representatives who, in turn, get the information to the coaches and ultimately, the players. The individuals involved in this chain are, for the most part, volunteers with many other responsibilities and demands on their time. Consequently, information travels erratically. Players outside the club structure (e.g., high school players) are outside the loop entirely and unlikely to learn

about tryouts even if information within their region is flowing smoothly between the coordinators and the clubs.

We see, then, that movement up the pyramid is not guaranteed, even if procedures are put into place to identify athletes who are ready to advance. Before they can begin to move up, athletes have to be willing to pay for a chance to advance; they are better off if they are a member of a team that competes in the tournament; and the communication between the national office, regional coordinators, and club officials must be unimpeded. Again, we see the need for an infrastructure of social support that, in some cases, needs to be augmented by financial support.

Transition.   New difficulties become manifest once the athlete is selected into a training camp. Some athletes have trouble adjusting to the new training environment. Training camps last several days, and the camps are run like extended tryouts, with athletes doing three sessions per day of intensive skill practice. The emphasis is on skill execution, not on skill instruction. Athletes are provided little, if any, feedback about their performance.

Later in their careers, players might have the opportunity to try out for Olympic festival teams or the national team. Again, however, there is scant effort to facilitate the transition to the new group, and little attention is paid to nurturing young potentials. Movement up the pyramid occurs less as a natural progression through the ranks than as a consequence of persistence in the face of barriers to transition.

Analytic Summary.   This abbreviated description of the USAV's development program highlights three difficulties common to pyramid-based development systems: (a) The presence of sequential levels in a pyramid does not assure athlete progression up the pyramid; (b) athlete progression requires effective linkages among organizations (clubs, regional boards, national governing bodies, etc.) at each level of the sport, and this includes programmatic linkages, as well as efficient communication up and down the pyramid; (c) athletes require social and material support to make the transition to new levels—this includes efficient means of identifying when an athlete is ready to seek transition, as well as means to facilitate athlete adjustment to programs at increasingly advanced levels.

Fostering Organizational Linkages

Linkages, as a practical matter, specify the pathways that athletes will take as they move to increasingly higher competitive levels within their sport. The best-known examples in sport are the linkages among major- and minor-league baseball teams. Linkages of this kind have been described by Leonard (1982) as follows:

> Inter-organizational linkages perform two major functions—control and assistance. The purpose of control linkages is to enable one organization to determine some aspect of another's performance. The other purpose of linkage is to provide assistance. In principle, assistance can be provided without control; in practice, this rarely is the case. (p. 36)

In order to facilitate athlete transitions, the linkages between levels of the pyramid must be seamlessly articulated. Some countries have sought to articulate levels by placing sport under government control (Chalip et al., 1996). American policymakers have explicitly eschewed government control (Chalip, 1995). Consequently, linkages in American sport are confounded by the number and types of organizations trying to coordinate their sport programs. Volleyball, for example, is governed by at least four different sets of "official" rules and is offered by organizations with aims as varied as the NCAA, YMCA, Boys and Girls Clubs of America, and USA Volleyball.

Both USAV and the United States Tennis Association (USTA) have implemented programs designed to draw young athletes into their sports through mini-volleyball and tennis in the schools. Although both programs encourage and anticipate athletes to take the next step, neither program provides any well-defined linkage to the next level. Athletes obtain no systematic encouragement to advance; they are given scant information about advancement opportunities and club programs are provided little, if any, information about participants who might be approached to join.

American sport governance thus lacks both assistance and control functions. If athletes are to be moved up the pyramid, sport development programs must implement procedures to inform athletes about subsequent levels to which they can aspire. They must nurture athletes' ambitions to move to sequential levels of the pyramid, and they must help athletes learn about advancement opportunities. In addition, programs must help clubs and training squads at sequential levels to identify potential candidates for advancement. The requisite methods for program design and evaluation are well understood (Fredericks, Carmen, & Birkland, 2002; Kettner, Moroney, & Martin, 1999) but have yet to be applied to sport (but see Chalip, 1989). Control linkages, such as regulation and monitoring, can help reduce transition snags. Athlete stagnation and attrition can be reduced by monitoring athlete movement, athlete attrition, and club development. As weaknesses and failures are located, interventions can be developed to redress emergent problems and to enhance the articulation between levels.

Easing Athlete Transitions

When an athlete moves to a more advanced team, club, or squad, the athlete must adjust to a new cohort of athletes, new coaching, and new expectations. Many of the problems are comparable to those encountered during initial recruitment: the social system must be designed to nurture athlete commitment and motivation. Because the transitioning athlete has already been socialized into the sport, the problem now is one of resocialization. For example, Chambliss (1989) shows that the culture of programs at advanced levels is qualitatively different than the culture of programs in the same sport at lower levels of training and competition. As the athlete makes the transition into a higher-level group, he or she is not merely learning to interact with a new reference group; he or she must learn to do familiar things in new ways.

The problem is comparable to shifting into a new culture; the problems of adjustment are akin to those of culture shock. Palm (1991) describes the problems this way:

> The newcomer must be seen as a complex of disturbances to the sport system. So, the newcomer can be seen as a technical disturbance as he is not able to meet the skill requirements. . . . In addition, he more or less is a group disturbance as he is not yet able to comply with the norms and standards of the group. [The newcomer] cannot give publicly recognized excellence to the name of the group. Thus, he is a recognition disturbance. (p. 20)

Six symptoms of culture shock could result (Furnham & Bochner, 1986): (a) a sense of stress, (b) feelings of loss and deprivation in relation to old friends and status, (c) fears of rejection, (d) confusion about role identity and expectations, (e) disorientation engendered by unanticipated expectations in the new culture, and (f) feelings of inadequacy. If transitions are to be facilitated, sport programs must implement procedures to diagnose and address these problems as they arise. Better still, procedures that forecast and intervene to prevent such failures can significantly reduce the problems of transition to the new group culture (Befus, 1988; Bennett, Aston, & Colquhoun, 2000; Hanson & Fox, 1995).

If athletes are to advance smoothly, we need further research to identify appropriate procedures for the diagnosis, treatment, and prevention of transition failures. Transitions out of the athlete role as a consequence of retirement have been studied extensively (e.g., Cesi Erpi, Wylleman, & Zupanic, 2004; Drahota & Eitzen, 1998; Sinclair & Orlick, 1993), and several interventions have been designed to help athletes retire successfully (e.g., Grove, Lavalee, Gordon, & Harvey, 1998; Pearson & Petitpas, 1990; Stankovich, Meeker, & Henderson, 2001), but comparable attention has not been given to athlete transitions to new athlete roles as they move up, down, or horizontally in the sport system. It is a significant gap in our research literature.

Concluding Remarks

Sport programs have emerged haphazardly—often through the collective efforts of a few energetic volunteers and sometimes through the enthusiastic patronage of one or more organizations. In the United States, sport programs occur at various levels and in many places but are often ambiguously linked. At times they might even be in conflict. For example, several states prohibit high school athletes from training in more than one sport at a time. In 1991, the NCAA passed what became known as the 20-hour rule, effectively forcing some world-class athletes to relinquish college scholarships in order to train for international competition.

There is something ideologically comfortable about a sport system that has many different (sometimes competing) organizations. It smacks of laissez faire, open markets, and democracy. Our system, however, is nether laissez faire nor democratic, as the bans on multisport training and the 20-hour rule so aptly demonstrate. In fact, the real loser is often the very person our sport programs purport to serve: the athlete.

We know a great deal about the social and psychological parameters of sport participation, but little of that knowledge is brought to bear on program planning, implementation, or evaluation. We know enough to systematically rethink the design and integration of our sport programs. The pyramid model of development has much to recommend it, but the provision of sequential levels for advancement is insufficient. Our programs must be designed to optimize athlete recruitment, promote athlete commitment, and sustain athlete transitions. We have the conceptual tools; we need to learn their applications.

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