Hierarchies of preference by elite athletes with impairments toward other athletes with impairments were examined by administering the Athletes With Impairments Attitude Survey (AWIAS) to 138 members of the United States Disabled Sports Team as they were traveling to the 1992 Paralympic Games. The AWIAS uses 12 statements concerning social and sport relationships to measure social distance from a particular impairment group. Five groups of athletes participated—athletes with amputations, cerebral palsy, dwarfishm or les autres, paraplegia or quadriplegia, and visual impairment—with each participant filling out a separate survey for the four impairment groups other than his or her own. For all groups combined, the participants' responses toward other impairment groups, ordered from most to least favorable attitudes, were amputations, les autres, para/quadriplegia, visual impairment, and cerebral palsy. The preference hierarchies for individual groups were very similar to this overall pattern.

An attitude is an acquired behavioral disposition or an emotion of action toward a person, a place, a thing, or an abstract concept (Lemon, 1973). An attitude object may be singular, such as a particular person, or plural, such as persons with impairments or persons with a particular impairment (Lemon, 1973). Several experts agree that there are three main components of attitudes: affective, cognitive, and behavioral (Antonak & Livneh, 1988; Horne, 1985; Triandis, 1971). The affective component is concerned with feelings of liking or disliking the attitude object and may be estimated according to physiological measures such as heart rate, pupil dilation, or galvanic skin response or by phenomenological measures based on Likert (1932) or Guttman (1944) scales. The cognitive component refers to the knowledge or beliefs a person holds about the attitude object, including positive and negative stereotypes. Cognitive responses are typi-
cally measured by checklists, surveys, and rankings. The behavioral component pertains to intentions or actions of a person toward the attitude object. Paper-and-pencil instruments are typically used, in which responses are recorded that indicate probable social acceptance behaviors (e.g., would ignore, would greet, would converse with, would accompany to movie, would invite home).

Illustrative of this type of instrument is the Social Distance Scale developed by Bogardus (1932–33). Bogardus defined social distance as the degree of sympathetic understanding that exists between persons. Bogardus’ test contained seven statements that allowed subjects to express their attitude regarding groups of persons, such as persons of various races, occupations, or religions. Two examples of these statements were “would marry” and “would have merely as speaking acquaintances.” Subjects responded with a yes or no to each statement, and the total number of positive responses was calculated for each target group. The seven statements were chosen by Bogardus to represent equal intervals of social distance after analyzing how 100 subjects classified a pool of 60 statements gleaned from ordinary conversations.

Among those to apply Bogardus' measurement techniques to the study of attitudes toward individuals with disabilities were Shears and Jensema (1969), Tringo (1970), Harasymiw, Horne, and Lewis (1976), Aufsesser (1982), and Tripp (1988). In each of these studies, the authors reported a hierarchy of preferences of nondisabled persons toward persons in various disability categories. The findings across these studies were very similar, revealing an extremely stable hierarchy of preference in American society that underlies stereotypical thoughts and behaviors.

For example, using his Disability Social Distance Scale (DSDS), Tringo (1970) reported that 455 high school students, undergraduate and graduate students, and rehabilitation workers, when rating 21 disability categories, most preferred association with persons with health impairments such as arthritis, asthma, and ulcers, and least preferred association with persons with alcoholism, mental illness, and mental retardation. Moreover, the five disabilities targeted in the present study were ordered from most to least preferred as follows: amputations, blindness, paraplegia, dwarfism, and cerebral palsy. In a similar study, Harasymiw et al. (1976) administered the DSDS to 416 high school and college students and rehabilitation workers and found the exact same ordering of the 21 disabilities as reported by Tringo (1970).

In two studies in which health impairments were excluded and 10 disabilities were targeted, the respondents most preferred a close friend with blindness, deafness, amputation, and harelip, as well as one who used a wheelchair, and least preferred a close friend with mental retardation, emotional disturbance, and cerebral palsy (Aufsesser, 1982; Tripp, 1988). Slight differences in order were reported among physical education, recreation, and special education majors (Aufsesser, 1982) and regular and adapted physical educators (Tripp, 1988), but overall, the report of preferences was consistent with the observations of Horne (1985) and Yuker (1988), who published literature reviews on preference hierarchies.

Other measurement approaches using 2- and 3-point rating scales (e.g., Grand, Bernier, & Strohmer, 1982; Semmel & Dickson, 1966; Strohmer, Grand, & Purcell, 1984) also have resulted consistently in a rank ordering where blindness was more preferred than mental retardation and cerebral palsy and where amputation was more preferred than blindness, mental retardation, and cerebral palsy.
Yuker (1988) stressed that context should be considered when designing studies about preference hierarchies because disabilities like blindness and mental retardation are reacted to differently in service delivery, social, and employment settings. In contrast, other disabilities always seem to be rated the same regardless of context. According to Yuker (1988), persons with amputations are near the top of each hierarchy, whereas persons with cerebral palsy are near the bottom. This preference ordering also was supported by Grand et al. (1982), who studied attitudes toward amputations, blindness, cerebral palsy, and epilepsy in social situations.

Theorists have posited that preference hierarchies and associated stereotyping behaviors are attempts by individuals, particularly those representing dominant positions, to maintain stability in society and preserve the status quo (Allport, 1954). Preference hierarchies reflect the subconscious need of individuals to clarify and protect their relative positions in society (Harasymiw et al., 1976). Functionalist theory in sociology recognizes this role of preference hierarchies and indicates that prejudice and discrimination are natural phenomena (Coleman & Cressey, 1993). According to functionalist theory, prejudice and discrimination are both the cause and effect of contemporary social disorganization. This cause-and-effect cycle can be modified only by intense efforts based on understanding of the feelings, beliefs, and attitudes of both individuals who discriminate and those who are discriminated against. Knowledge about preference hierarchies may offer insight into challenges that social institutions must meet when changes, like integration and inclusion, are desired by some individuals but not others.

Research on hierarchical preference structures, indicating that persons with mild disabilities tend to be reacted to more positively than persons with severe disabilities (Yuker, 1988), may reflect administrative practices pertaining to integration and inclusion in all societal institutions, including disability sport (Atha, 1994; Dendy, 1994; Holland, 1994; McCann, 1987). Within the Paralympics movement, for instance, paraplegia and amputations are considered conditions of mild severity, whereas cerebral palsy and blindness present full spectrums of functional abilities ranging from mild to severe. An issue of intense debate among sports administrators, athletes, and researchers is the criteria or standards that athletes must meet to be eligible for the Paralympics (Steadward, Nelson, & Wheeler, 1994). Underlying this controversy are diverse perceptions and attitudes about varying degrees of disability and kinds of sport adaptation. Research on preference hierarchies might lead to better understanding among individuals who are currently trying to change the nature of disability sport.

Despite the body of literature on preference hierarchies of nondisabled persons, little is known about the attitudes of individuals with impairments toward one another (Alessi & Anthony, 1969; Fung, 1992; Sherrill, 1989). In general, students with disabilities are more comfortable with others who have the same disability than with individuals who have different disabilities, although Fichten (1988) reported that attitudes of students with disabilities toward one another often are ambiguous. Moreover, Fichten (1988) showed that attitudes of students with disabilities toward others with both similar and different disabilities tend to be stereotyped and negative.

After extensive interviews with elite athletes with disabilities, Sherrill (1986, 1989) concluded that a hierarchy of stigmatized disabilities exists among individuals who compete in the Paralympics. Many athletes describe prejudice
and discrimination among athletes with dissimilar disabilities, which may be real or perceived (Sherrill, 1986, 1989; Steadward et al., 1994). Most pronounced are feelings by athletes with cerebral palsy (CP) that they are not accepted by athletes with spinal cord injuries and amputations (personal communications between C. Sherrill and Paralympic athletes, July 1984, September 1988, September 1992). Illustrative of these feelings were observations by athletes with CP that other athletes seldom initiated social interactions or included them in nonsport activities.

The recent trend toward integrating athletes with different disabilities in the Paralympic movement has generated much controversy (Holland, 1994; Sherrill, Paciorek, Davis, & Rich, 1993; Steadward et al., 1994). A historical perspective is necessary to understand this controversy. The Paralympic movement began in 1952 and, for over 20 years, included only athletes in wheelchairs. This group continues to provide more athletes for the Paralympic movement than other disability categories. Until 1976, international competition was available only to individuals in wheelchairs, most of whom had spinal cord injuries (DePauw & Clark, 1986). Throughout the history of the Paralympic Games, other impairment groups have been added: athletes with amputations and athletes with visual impairment in 1976, athletes with ambulatory cerebral palsy (C5–C8) in 1980, and athletes with wheelchair cerebral palsy (C1–C4) and athletes with other locomotor impairments or “les autres” in 1984. Les autres—including dwarfism, limb deficiencies, muscular dystrophy, osteogenesis imperfecta, postpolio conditions, and multiple sclerosis—is the term used to designate locomotor conditions not covered by other labels or organizations (Paciorek & Jones, 1994; Sherrill, 1993). The addition of new athlete groups has required modification of the international governing body to provide representation from each disability group as well as geographical regions and sports. This modification, which is somewhat continuous, has resulted in challenges to existing power structures and considerable debate about the future.

In 1993, the president of the International Paralympic Committee (IPC), Robert Steadward, brought together Paralympic administrators, coaches, athletes, and researchers from all over the world to examine issues at a conference called Vista '93. Nine prepared speeches were given on integration, several of which are cited in this paper (Dendy, 1994; Holland, 1994; Labanovich, 1994), and several speeches on classification related also to integration issues (e.g., Atha, 1994; McClellan & Frogley, 1994). In addition to the published proceedings, a book of question-and-answer dialogue from the discussion sessions that followed prepared speeches was published (Steadward et al., 1994). The impromptu interactions recorded in this book offer much insight into ongoing controversy.

Presently, six separate sports organizations in the United States participate in the Paralympics: the Dwarf Athletic Association of America (DAAA), Disabled Sports U.S.A. (DSUSA) (formerly called National Handicapped Sports) for athletes with amputations, the United States Association for Blind Athletes (USABA), the United States Cerebral Palsy Athletic Association (USCPAA), the United States Les Autres Sport Association (USLASA), and United States Wheelchair Sports (USWS) (formerly called the National Wheelchair Athletic Association) for athletes with paraplegia or quadriplegia. The 1992 Paralympics in Barcelona, Spain, marked the second time the United States Disabled Sports Team attended the Paralympics as a group; this event afforded an excellent opportunity to examine the attitudes of elite athletes with impairments toward one another.
Therefore, in the present study, two specific research questions are addressed. First, is there a clear hierarchy of preference by elite athletes with impairments toward other elite athletes with impairments? And second, are the hierarchies of preference similar for elite athletes in different impairment groupings? These questions will be addressed by using a modification of the Disability Social Distance Scale (Tringo, 1970).

Method

Subjects

The subject pool for this study consisted of the 381 members of the United States Disabled Sports Team (USDST) for the 1992 Paralympics in Barcelona. These athletes were considered to be elite by virtue of their meeting the qualifying standards to compete in the Paralympics and their selection to represent the United States in international competition. The goal was to survey all members of the USDST while in flight to the Paralympics, but administrative exigencies limited data collection to athletes on a single aircraft \( n = 320 \). The 106 men and 32 women (36% of the USDST) who consented to participate in the study represented five impairments: amputation (AMP), cerebral palsy (CP), les autres (LA), paraplegia and quadriplegia (PQ), and visual impairment (VI). Athletes with paraplegia and quadriplegia, even though their disabilities ranged from mild to severe, were combined in the same category (PQ) because of similarities in the nature of the disabilities. Athletes with dwarfism were included within the les autres category, as required by Paralympic rules.

The five disability categories are listed in Table 1, along with sample sizes, percentages of athletes on the USDST, and mean ages. The mean age of the entire sample was 29.9 years, with a standard deviation of 7.9 years. A one-way ANOVA showed that the age differences across the five disability groups were not significant \( p > .05 \), and a chi-square test showed that the percentages of females in the five disability groups were not significantly different \( p > .05 \). Also, the difference between the percentage of females in the study sample and the percentage of females in the USDST for each disability group was 5% or less.

Data Collection Instrument

The attitudes of the members of the USDST toward each other were surveyed through the use of the Athletes With Impairments Attitude Survey (AWIAS), developed by Mastro and Sherrill. The AWIAS was modeled after Tringo's (1970) Disability Social Distance Scale (DSDS); the AWIAS was based on 12 statements of social and sport relationships, whereas the DSDS included only 9 statements. The statements in the DSDS were chosen to create an equal-interval scale of social distance; respondents selected a single statement from the 9 options to reflect their attitude toward persons with a particular impairment. However, in the AWIAS, subjects responded to all 12 statements, 7 of which were specifically related to sport or the Paralympics, with agree (2 points), undecided (1 point), or disagree (0 points). Further, the AWIAS consisted of five parallel forms, each with the same 12 statements, but referring to different impairments:
Table 1  Sample and Population (USDST) Size, Percentages Relative to Total Sample and Total Populations, and Mean Age for Each Impairment Group

<table>
<thead>
<tr>
<th>Impairment group/sex</th>
<th>Sample</th>
<th>% of total sample</th>
<th>USDST</th>
<th>% of total USDST</th>
<th>Mean age (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amputation</td>
<td>22</td>
<td>16</td>
<td>80</td>
<td>21</td>
<td>29.0</td>
</tr>
<tr>
<td>Men</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cerebral palsy</td>
<td>25</td>
<td>18</td>
<td>76</td>
<td>20</td>
<td>28.0</td>
</tr>
<tr>
<td>Men</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Les autres</td>
<td>4</td>
<td>3</td>
<td>15</td>
<td>4</td>
<td>31.5</td>
</tr>
<tr>
<td>Men</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Para/quadriplegia</td>
<td>57</td>
<td>41</td>
<td>138</td>
<td>36</td>
<td>31.5</td>
</tr>
<tr>
<td>Men</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual impairment</td>
<td>30</td>
<td>22</td>
<td>72</td>
<td>19</td>
<td>29.0</td>
</tr>
<tr>
<td>Men</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>138</td>
<td>100</td>
<td>381</td>
<td>100</td>
<td>29.9</td>
</tr>
</tbody>
</table>

amputations, cerebral palsy, dwarfism or les autres, paraplegia or quadriplegia, and visual impairment. Some sample questions from the AWIAS are as follows: "I have worked out or trained with some athletes with (specify impairment)." "I would feel comfortable competing in sport against someone with (specify impairment)." "I would marry or have a relationship with someone with (specify impairment)." "I have friends with (specify impairment)."

The format of the AWIAS was similar to that of the Disability Social Relationship Scale developed by Grand et al. (1982), which included parallel forms for measuring attitudes toward amputations, blindness, cerebral palsy, and epilepsy. Subjects completed the forms for the four impairment groups other than their own, yielding four summary scores each with a maximum of 24 points.

The content validity of the AWIAS was established by a panel of experts in adapted physical activity, including a supervisor of public school adapted physical education, a professor of therapeutic recreation, a head coach for the Paralympic Games, and five elite athletes with impairments. Each expert reviewed the draft version of the AWIAS and noted any additions, deletions, or changes needed to accurately determine the attitudes of elite athletes with impairments toward one another. The comments of the panel of experts were used to modify the draft version and subsequently produce the final version of the AWIAS.

Test–retest reliability was established for the AWIAS on a group of 20 athletes with visual impairment who participated in the 1994 World Track and Field Championships in Berlin, Germany, sponsored by the International Paralympic Committee. These athletes were given the AWIAS on two occasions separated
by a 1-day interval. The intraclass correlation coefficients (Berk, 1979) between the two administrations were .996 on the para/quadriplegia form, .998 on the cerebral palsy form, .881 on the amputation form, and .999 on the les autres form. The individual scores on the four forms, which could range from 0 to 24, were exactly the same on the two administrations for 75%, 85%, 75%, and 90% of the individual subjects on the four forms, respectively.

**Procedures**

The USDST traveled to Barcelona in two separate aircraft: 320 on one, and 61 on the other. All 320 athletes on the first aircraft were given the AWIAS packet during the flight, with a cover letter requesting participation in this study. The athletes with visual impairments were administered the survey orally if they decided to participate. A total of 143 surveys were collected, but 5 (3.5%) were completed incorrectly, so only 138 were used in the data analysis.

**Data Analysis**

First, five Friedman two-way ANOVAs, one for each of the impairment groups, were used to examine whether the summary scores of the respondent groups were significantly different across the other four impairment groups. Five separate ANOVAs were necessary because each group responded to statements about different sets of impairments.

Next, the four summary scores were analyzed in terms of six paired comparisons. For example, the six pairs for athletes with an amputation were (a) CP versus LA, (b) CP versus PQ, (c) CP versus VI, (d) LA versus PQ, (e) LA versus VI, and (f) PQ versus VI. The result of each pairwise comparison was coded as the first score being greater than, equal to, or less than the second score. For example, if an athlete with an amputation had a score of 22 for CP and 24 for LA, the result would be recorded as less than. Across subjects in all five impairment groups, there were 10 paired comparisons, but only six for each individual subject. Also, the tabulations for any paired comparison only reflected responses from subjects in the other three impairment groups. The concept of theory testing by individual subject applied in this study has been recently advocated by many researchers, including Bouffard (1993), Thorngate (1986, 1987), and Valsiner (1986).

**Results**

The Friedman two-way ANOVAs showed that the summary scores given by respondents in each of the five impairment groups were significantly different across the four target impairment groups: AMP(3, N = 22) = 14.14, p < .01; CP(3, N = 25) = 12.97, p < .01; LA(3, N = 4) = 8.63, p < .05; PQ(3, N = 57) = 55.12, p < .0001; VI(3, N = 30) = 8.85, p < .05. A chi-square table was used to determine the critical values of the Friedman statistic. However, this statistic was not able to indicate which groups were rated significantly higher than other groups. Thus, a hierarchy of preference was constructed from the tabulations of the six paired comparisons from each of the 138 subjects.

Of the 828 paired comparisons, 190 (22.9%) had the same summary scores and were coded as equal. These were not included in the hierarchy analyses.
The remaining 638 data pairs were divided into 10 different impairment pairings (e.g., AMP versus CP, PQ versus VI). For each of these impairment pairs, the percentage of subjects with summary scores greater for one impairment than the other was calculated. Then, based on these percentages, the impairments were arranged in a hierarchical order.

As shown in the following data, the summary scores for AMP were higher (reflecting more favorable attitudes) than each of the other four impairments for 71–92% of the subjects; the scores for LA were higher than the remaining three impairments for 63–79% of the subjects; and the scores for PQ were higher than VI and CP for 63–79% of the subjects. Chi-square analyses (df = 1) showed that all of these comparisons were significant at least at the .05 level, except between LA and PQ and between PQ and CP. The last two levels of the hierarchy were not clearly ordered, with 51% of the subjects having higher scores for VI compared to CP (p < .05).

Below is the hierarchy of preference for all subjects combined. Percentages of subjects with higher scores for the impairment are listed at the top left of each cluster (***p < .001, **p < .01, *p < .05).

Next, hierarchies of preference were constructed for each respondent group to determine if there was a consistent pattern. These hierarchies, which had only four levels because the groups did not fill out the form for their own impairment, are presented with the percentage of subjects with summary scores greater for one impairment than the other. The percentages indicated clear hierarchies for all groups except VI, although the statistical power of the chi-squares was limited because of small sample sizes. For example, the athletes with CP had higher summary scores for athletes with AMP than the other three groups (57–86%), higher scores for athletes with LA than those with VI (80%) or PQ (75%), and higher scores for athletes with PQ than those with VI (79%).

On page 205 are hierarchies of preference for individual subject groups. Again, percentages of subjects with higher scores for the impairment are listed at the top left of each cluster (***p < .001, **p < .01, *p < .05, y = Yates’ correction for continuity).

The ordering of the hierarchies for the combined groups and for the individual groups is summarized in Table 2 to facilitate comparison. The social distance indicated by the respondents was the least and second-least for AMP and LA, respectively, for the combined group as well as for all individual groups. PQ was next for the combined group and three of four individual groups. The

\[
\begin{align*}
\text{AMP} & \quad (92\%) > \text{VI}^{***} \\
& \quad (91\%) > \text{CP}^{***} \\
& \quad (73\%) > \text{PQ}^* \\
& \quad (71\%) > \text{LA}^*  \\
\text{LA} & \quad (74\%) > \text{CP}^{**} \\
& \quad (68\%) > \text{VI}^* \\
& \quad (63\%) > \text{PQ}  \\
\text{PQ} & \quad (79\%) > \text{VI}^{**} \\
& \quad (63\%) > \text{CP}  \\
\text{VI} & \quad (51\%) < \text{CP}
\end{align*}
\]
Attitudes of Elite Athletes

Amputation

LA (93%) > CP
(83%) > VP
(64%) > PQ

PQ (76%) > VP
(73%) > CP

CP (65%) > VI

Cerebral palsy

AMP (86%) > VI
(54%) > PQ
(57%) > LA

LA (80%) > VI
(75%) > PQ

PQ (79%) > VI

Les autres

AMP (100%) > CP
(100%) > VI
(100%) > PQ

PQ (100%) > CP
(100%) > VI

VI (67%) > CP

Para/quadriplegia

AMP (96%) > CP
(94%) > VI
(81%) > LA

LA (80%) > CP
(58%) > VI

VI (57%) > CP

Visual impairment

AMP (81%) > PQ
(78%) > CP
(75%) > LA

LA (56%) > PQ
(50%) = CP

CP (50%) > PQ

uncertainty of the ordering of the two impairments with the greatest social distance—CP and VI—first shown in the combined hierarchy also was observed in the hierarchies of the individual groups.

Discussion

The results of this study indicated that elite athletes with impairments have a hierarchy of preference toward one another. The ordering of social distance from
Table 2  Social Distance of Groups, From Least to Most Preference, for Each Group of Respondents and for All Respondents Combined

<table>
<thead>
<tr>
<th>Responding group</th>
<th>Sample n</th>
<th>Ordering of groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1st</td>
</tr>
<tr>
<td>Combined</td>
<td>138</td>
<td>AMP &gt; LA &gt; PQ &gt; CP &lt; VI</td>
</tr>
<tr>
<td>VI</td>
<td>30</td>
<td>AMP &gt; LA = CP = PQ</td>
</tr>
<tr>
<td>PQ</td>
<td>57</td>
<td>AMP &gt; LA &gt; VI &gt; CP</td>
</tr>
<tr>
<td>CP</td>
<td>25</td>
<td>AMP &gt; LA &gt; PQ &gt; VI</td>
</tr>
<tr>
<td>AMP</td>
<td>22</td>
<td>LA &gt; PQ &gt; CP &gt; VI</td>
</tr>
<tr>
<td>LA</td>
<td>4</td>
<td>AMP &gt; PQ &gt; VI &gt; CP</td>
</tr>
</tbody>
</table>

Note. AMP = amputation; CP = cerebral palsy; LA = les autres, including dwarfism; PQ = paraplegia/quadruplegia; VI = visual impairment.

The respondents, from least to the greatest, appeared to follow the ordering of severity of disability. The impairment with the least social distance—AMP—can be considered to have the lowest degree of disability because the amputation is usually limited to a single limb. LA, the impairment group next in the hierarchy, is comprised of a variety of impairments, some of which have little effect on sport performance. Further, LA included persons with dwarfism, who usually have no impairment except their size. Persons with PQ, rated third in the hierarchy, generally have more severe disabilities than persons with AMP or LA. The impairments at the bottom of the hierarchy with the greatest social distance from athletes with other conditions may have associated disabilities different from other impairments: CP with unusual movement problems and communication deficits, and VI with a tendency toward isolation from the sighted world. The results also indicated that this hierarchy of preference generalized across the different groups of respondents, except with some minor variations at the lower end for athletes with VI.

The hierarchy of preference expressed by elite athletes with impairments toward one another was quite similar to the disability hierarchies expressed by nondisabled individuals (Aufsesser, 1982; Grand et al., 1982; Harasymiw et al., 1976; Semmel & Dickson, 1966; Strohmer et al., 1984; Tringo, 1970; Tripp, 1988). The one exception to this similarity was VI, which athletes placed lower in the preference hierarchy than did individuals using the Bogardus (1932–33) social distance questions or identifying persons with which disability they would most like to have as close friends. This finding that attitudes of athletes in a sport-specific situation toward each other may differ from attitudes in other contexts supports the use of situation-specific contexts when measuring attitudes and preferences.

VI may have been lowest in the overall preference hierarchy because all subjects, with the exception of those with VI, were linked or connected by having some kind of physical disability and thus possibly sharing some common concerns, experiences, and stigmas. Past, present, and anticipated
contacts between athletes with VI and athletes with other disabilities tend to be fewer than those among athletes with similar or the same sport classifications, who increasingly compete against each other in Paralympic events (J. Mastro, unpublished interviews with other Paralympic athletes with VI, 1992). One reason for this is that athletes who cannot see other athletes are at considerable disadvantage in initiating interactions; they cannot call hello to someone across the field or start a conversation with someone they cannot see. Individuals who compete in wheelchairs or use prostheses and braces tend to perceive themselves as more like each other and more like nondisabled peers than athletes with VI. According to Katz (1981), perceived similarity is an important factor in attitudes.

Future research should examine reasons that athletes give for initiating or failing to initiate contact with athletes with dissimilar impairments. A model for such work might be the study of Aufsesser (1982), who asked subjects to indicate their criteria for selecting a preferred disability. Attention should be given also to gender and age differences as well as variance caused by congenital and acquired etiologies and sport socialization histories.

The present study was the first to examine preference hierarchies among athletes with impairments. Such research is becoming increasingly important as the nature of disability sport undergoes rapid changes and the roles, responsibilities, and expectations of athletes, coaches, and leaders shift. Most changes, at present, seem to be instituted by power structures at top organizational levels: the executive boards of the IPC and the national-level sport disability organizations (Steadward et al., 1994).

Former and current athletes with disabilities typically have some representation at these upper levels but constitute the minority. Although many individuals call for increased executive involvement of athletes, such a change is slow in taking root (Sherrill & Williams, 1995). The present research, which was initiated by a Paralympic athlete with VI, illustrates an approach that can lead to more information about the ways that athletes think and feel.

The recent decision to combine athletes with diverse physical disabilities into sport-specific integrated competition as opposed to traditional disability-specific competition is changing the day-to-day experiences of athletes, their perceptions of themselves and others, and possibly their attitudes (Sherrill et al., 1993). Likewise, the controversy over inclusion of athletes with learning disabilities in the Paralympics is contributing to organizational and individual change (Atha, 1994; personal communications, IPC Sport Science Committee, April 1–8, 1995; Steadward et al., 1994). Much time has been devoted to this issue, and the opinions of athletes have been polled formally and informally. Carefully designed research procedures, like those in the present study, may be one approach to analyzing the ongoing controversy over inclusion of athletes with learning disabilities and to devising strategies to support the IPC mission.

Research indicating that preference hierarchies exist, and the understanding that these preferences affect behaviors and interactions, stand out against the backdrop of "top-down" change in Paralympic sport. Top-down change is common in most power structures (Sage, 1990). Such change is not necessarily bad, but change is more effective when everyone affected is directly involved. Accepting that preference hierarchies exist in disability sport seems a viable first
step in helping high-level administrators better understand the athletes they serve. Understanding can lead to strategies that promote greater acceptance of all individuals associated with disability sport. One strategy might be the initiation of qualitative research to examine variables related to and perhaps underlying preference hierarchies in disability sport. It is important also to replicate the present study to determine if results are the same.

References


Attitudes of Elite Athletes

Nelson, & G.D. Wheeler (Eds.), *Vista ’93: The outlook* (pp. 352-358). Edmonton, AB: Rick Hansen Center.


