Only in play and sports can an individual who creates artificial obstacles, pursues contests, and tempts fear achieve full toleration. In this age of greater leisure time, what determines the choice of becoming sedentary or physically active? What motivates man to participate? Why do many choose to be sedentary in spite of the better health, fitness, strength, relaxation, and other outcomes known to occur with participation? Although there is research-supported knowledge of why man SHOULD play, it appears that man does not play primarily for health and fitness. Therefore, there must be other reasons; however, very little is known about why man DOES play. It is possible that needs of which the participant is unaware are being gratified.

With sport such a dominant aspect of American life, investigators are not content with knowing what sport does physiologically for the participant but also are questioning why man plays and participates in the sports that he does. Recently, investigators have wrestled with definitions, with classifications, with the rationale, and with attempts to explain this involvement. Some writers have been content with Huizinga's somewhat general approach to the discussion of play; others have continued to reduce the generalization to more fundamental components through the process of classification and development of other conceptual models.

CLASSIFICATION OF SPORTS AND GAMES

Caillois produced the first comprehensive and logical classification of games and sports. His paradigm is based on both the description and the behavior of the game. The four categories included in his paradigm are: AGON (competition), ALEA (chance), MIMICRY (simulation), and ILINX (vertigo). Caillois' paradigm attempted to order and classify sport but failed to supply a category for many activities within his flexible framework.

McIntosh's consideration of Caillois' classification also found it lacking. Consequently, he developed a classification determined by the motive and the nature of the satisfaction which the sport provided the participant rather than by the activity itself. His first category included those sports in which the participant could "prove" himself better than others either singly,
in pairs, larger groups, or teams. The second category was comprised of combat sports or those activities requiring physical contact with the opponent or with equipment. Conquest sports were placed in the third category; challenge is provided by the environment or the situation rather than by individual or group opponents. A fourth category included those physical activities that express or communicate feelings and ideas through movement but are not considered sport or activities where one can demonstrate superiority.

Social anthropology has made several contributions to the classification of sports and physical activity. Games and physical activities have been classified as to whether the activity was primarily concerned with physical skill, with strategy, or with chance. Investigators concluded that: (a) the games of physical skill are related to environmental conditions and are possibly associated with mastery of both self and environment, (b) the games of strategy are related to social systems and to the mastery of the social system, and (c) the games of chance are related to religious beliefs and are associated with mastery of the supernatural. In general, the conclusions support the psychoanalytic theory that games are exercises in mastery.

Another study was concerned with relating types of games adults preferred to their child-training pattern experience and economic status. It was concluded that games of strategy were stressed for the value of obedience and preferred by upper status groups and women who had had such a child-training experience. Games of chance were associated with routine-responsibility experience patterns and were found among the lower status groups and among women. Games of physical skill were associated with high achievement training and were popular among upper status groups and among men.

Efforts have just begun to produce a framework for characterizing physical activity as some type of social-physiological phenomenon. The value of physical activity that participants perceive suggests that such phenomenon can be reduced to more specific components. One such component is concerned with the possibility of a common motivation to participate in activities that may be classified as EUSTRESS-SEEKING.

EUSTRESS (PLEASANT STRESS)

Eustress is associated with adventure, excitement, and thrilling experiences and is considered as a pleasant type of stress as opposed to the painful, unpleasant type of stress (dys-stress) studied by Selye and his followers. Both types may be voluntary.

Bernard described eustress as fun and as having the capacity to enhance vital sensations. Eustress "turns one on" and, in the process, releases energy. She suggested that if knowledge of how to make activities eustressful is acquired, ways to motivate more people to participate may be found. The study of eustress-seeking may provide the key that will unlock part of
the mystery of human motivation and provide support for a curriculum change for physical education. It is quite possible that eustress may be a factor in physical activity that "turns on" many individuals. This possibility may exist to the extent that properly directed physical activity could be a substitute for many of the current efforts to "turn on" through spiritual media, drugs, trance-states, etc. In general, stress-seeking may be defined as behavior structured to amplify the individual's level of involvement. The work of Petrie and Ryan and their discussion of the athletic participation of the augmenter and the reducer support the theory of sport participation being classified as stress-seeking.

Characteristics of Eustress

Experiences of a limited duration are characteristic of eustress. Stresses sought are those associated with a proximate climax and tend to occur in a context that is the antithesis of routine, boredom, stability, and sameness; without confrontation, excitement dwindles. Sports and physical activities without intrinsic eustress usually have to add a competitive element to attract eustress-seekers. Thus, some means of comparison, of keeping score, and of testing oneself are essential.

Seeking a symbolic or a physical challenge that motivates the searcher to become actively involved is called stress-seeking according to Klausner. Both types of stress-seekers (the symbolic and the physical) share many common characteristics: both approach the task rationally, both tend to repeat the difficult challenge or continue to seek new and greater ones, and both tend to be egocentric. Participants in sports and other activities may be seekers of physical challenges and of stressful situations.

Recognition has been given to the fact that some individuals strive to raise their tension levels rather than maintain homeostasis. The paradox observed in the stress-seeker, that of seeking painful, stressful situations rather than avoiding them, may be resolved by the fact that pleasure and pain are both drawn from the same reservoir of underlying excitement. How else can one explain the mixture of joy and fear of a child's first trip down a long slide and the resulting excitement, or that combination of anxiety and thrill of diving from a three-meter board the first time? Experiencing this combination of pain and pleasure may well be the motivating factor involved in repeating stressful situations. That some individuals seek this type of stress for its own sake and enjoy the process is obvious in the literature and research. Why one seeks or avoids stress is a complex question; why man plays is also a complex question. It is possible that the answer to both is quite similar.

Individual differences in stress-seeking appear justified. If a continuum of stress-seeking-avoiding can be envisioned, individuals would be placed all along it from one extreme to the other. Stress-seeking varies in degree and nature both within a given culture or
subculture and from one culture to another.

The role that stress-seeking plays in the motivation of man to participate in physical activities has yet to be determined. In many activities the stress is clear, apparent, and freely sought. The process of transferring anxiety or fear into pleasure composes the very essence of participation. To understand how and why this occurs is to understand why one participates.

Factors Influencing Eustress-Seeking

Several factors are to be considered when evaluating eustress-seeking as a motivator to physical activity:

Human Physical Energy. The amount of human energy available for eustress-seeking determines how much one may utilize. Klausner has shown that stress-seeking in parachuting is related to individual differences in human physical energy. He classified jumpers as "thrilled" and "tempered" and described the former as more energetic, less accident-prone, and having a lesser sense of danger. Fear adaptation is more active among the "thrilled" and more passive among the "tempered." Bernard suggested that if the individual differences that Klausner found among sky divers were so great, then the differences in human energy available to them and to others who find more sedentary forms gratifying must be much greater. Those who get their satisfaction vicariously must evidence even greater differences. This possibility remains to be explored.

Klausner pointed out that eustress may be more than energy-consuming; it may be energy-mobilizing. He suggested that eustress-seeking may release energy for constructive social activities. Most people have far more energy resources than they realize. This has been demonstrated many times in emergencies when individuals accomplish feats never dreamed possible.

Age is related to available energy. Youth has more energy than that required for the routine of living. This may partially explain the relationship of physical activities to age. The young average age of participants in riots, demonstrations, street fights, gang wars, etc. may be explained by the energy available for eustress-seeking. The available amount of human energy may also explain why lower classes, who have to expend tremendous energy for a living, seek their eustress through vicarious forms. The reported relationship between social class and sports participation may possibly be explained by the difference in energy levels that may exist among classes. The possibility also exists that utilization of energy through directed physical activities may leave too little energy to become involved in socially undesirable behavior. Much more research is needed on the role vigorous activity may play in affecting positive behavioral patterns.

Class. Historically the class-bound nature of eustress is characteristic. Lower classes, restricted in opportunities, have had to seek challenges in adventure and excitement differing from the upper classes. Ghetto areas may provide eustress-seeking through riots, street fighting, brawls, etc. when no
other outlets are available. Providing constructive outlets for all classes may serve to meet the needs in a positive manner. Current studies are investigating the social climbing that may occur through select sport participation.

Sex. The male has traditionally been the stress-seeker; adventure, excitement, and the thrill of battle have been the male prerogative. The American culture provides and approves stress-seeking activities for the male, but few for the female. There is no reason to suspect that women are any less stress-seeking than men. Because of the physical difference in size and strength, most women seek their excitement and eustress in other ways. Physical education should provide for activities which meet this need. Boys have grown up testing their physical strength, their bodily skill, and their courage while girls traditionally have needed no such assurance. With the cultural trend toward unisexuality, there may be reason for change in the physical education curriculum, especially for women.

Stress Seeking Vicariously

Vicarious eustress may be created by words, by music, by pictures, by symbols; it may also be created by observing bodily actions of others in spectator sports. These sports, such as automobile racing, bull fighting, boxing, and competitive sports of all kinds have supplied and continue to supply eustress to both participants and to millions of spectators. Evidence of the amounts of energy generated through vicarious eustress can be observed universally with the trouble officials have in trying to prevent fights from breaking out during and after competitive events. Research is not available to support the theory that active participation in eustress activities would eliminate vicarious eustress-seeking.

OTHER SUPPORTING THEORIES

Steinhaus16 expressed the theory that youngsters who grow up with over-protective parents who say, “No, no, no!” each time the youngster attempts to explore, to climb, to venture close to the “brink of catastrophe,” will produce offspring unwilling to take risks in adult life. In contrast, those youngsters allowed to take risks and who enjoy challenges serve as the “doers” in society. Klausner suggested this when he said that a good population of risk-takers enhanced the possibility of economic development.

Russell, in his Reith Lectures of 1948 argued that there is savage in each person that must find some outlet compatible with the culture. He suggested that sports competition might provide this outlet for such competition does not occur enough in the lives of most individuals. He further added that men must compete for superiority and that sports contests yielding seemingly useless results are the best solution. On the other hand, the results do matter; if not, they would not satisfy man. Victory or defeat is never for all time as the participant will live to challenge once again.

Morris,5 in his discussion of “Exploration,” outlined rules which could easily serve as principles of eustress.
He stated that the function of exploration was to provide the participant with greater awareness of his environment and his relationship to it. All through life each person carries on complex and specialized forms of exploration and experimentation. Through training as performers and observers, Morris felt that individuals could sensitize their responsiveness to the tremendous exploratory potential that these pursuits offer. Eustress-seeking can be classified as a type of exploration or testing and has the potential of providing many rich experiences. Morris supported Stinhaus' theory when he suggested that if a child fails to explore, to experiment, to join in these experiences as a child, then similar experiences will be difficult, if not impossible, as an adult.

Lorenz stated that sport can educate man to a conscious and responsible control of his fighting behavior. While his topic was aggression, he suggested eustress-seeking activities as an outlet for the aggressive tendencies of man. He further suggested that the difficult forms of sport, particularly those demanding cooperation and dangerous undertakings, provide the challenge and the outlet that man needs. Proper channeling should direct man toward desirable positive behavioral patterns and provide opportunities for meeting these needs.

Bernard said that in societies where all energies are not devoted to survival it can be assumed that energy will be available for pleasure. If this assumption is correct, then it does not have to be asked why they seek eustress, but what factors determine the form of eustress-seeking taking place?

Rosenthal, Professor of Preventive Medicine at the University of Illinois College of Medicine and Medical Director of the Research Foundation, has spent several years theorizing about danger as a way of joy. He reported that participants of "risk-exercise" (fox hunting, bull fighting, polo, mountain climbing, etc.) described a sense of exhilaration, of feeling euphoric. He concluded that the experience of the creative person is exhilarating, but that there is always tension at one level or another; while experiencing lightheartedness they are beset with doubts and uncertainties. Participants of risk-exercise experience an exhilaration without fear, doubt, or uncertainty. Individuals who participate in nonrisk sports and activities experience physiological benefits and an uplift in spirit but not to the same degree. Rosenthal believes that the popularity of risk-exercise may indicate the degree of conflict within the society and within the individual. He stated that the basic premise of risk-exercise is that calculated risks, both physical and mental, are essential to the well-being of man. The feeling experienced in demanding risk-exercise are so great that one becomes addicted in that he must go back and experience it again.

Rosenthal stated that we now have enough evidence that this exhilaration response does exist with involvement in risk-exercises. The mechanisms responsible for this reaction are yet to be discovered but it is important for each individual to realize that participation
in risk exercise can offer sensations that are at the extreme end of the human elation continuum.

Each of these writers has alluded to the fact that man has demonstrated needs which may be identified as eustress needs. Each has suggested that these needs may be met through some means of positive direction of energies and abilities. Physical education may better serve to meet these needs if efforts are directed toward understanding the motivating factors behind man's action and restructuring programs to more adequately meet these needs.

CONCLUSION

Sports and participation in physical activity appear to serve as one of the few socially accepted avenues left for eustress-seeking. Many of our young people have joined the civil rights movement; others, the Peace Corps; and still others, the hippies; or resorted to drugs and other stimulants. This still leaves many who turn to crime, to rioting, and to violence in their quest. The problem is one of channeling and providing suitable modes of expression; not suppressing this eustress-seeking. The professions of physical education and recreation should be vitally interested in researching this area as they are in the best position to expand the positive potential of stress-seeking.

Man's longing to fly, to go to the moon, to jump farther, to climb higher, all attest to his need to flirt with danger. This joy of being on the "brink of catastrophe"; this need to encounter danger, to master it, to repeat this mastery until it loses the danger; and then go to further challenges, supports man's need for this eustress-seeking. How else can the excitement of the "near misses" that are so often experienced in sports be explained? The games of "chicken," "I dare you," and others also support this need. Skiing is an excellent example. Many participants admit this as part of the intrigue of skiing. Participants in other activities, such as white water canoeing, also verbalize pleasure as flirting with danger, of being on the "brink of catastrophe" in explaining why they enjoy participation. For Jean Claude Killy, as for many others, skiing was only one of an assortment of thrills; when that was mastered, new and more dangerous activities had to be found. Continued participation in an activity must be emotionally exciting including both fear as well as enthusiasm. Anticipation of these emotions may well be part of the original motivation for participation.

It may be that the common motivation to participate in many sports and physical activities is eustress-seeking. The flirt with disaster, the sudden release of tension, and the surge of exhilaration that follows may well be the sensation each is seeking. Everyone appears to have an instinctive need to pit himself against some force that is out of his control, to find out what sort of person he is under stress, and to fight natural forces. This whole area needs research to focus the direction of physical education programs toward meeting the psychological and social needs of mankind. To do this,
greater understanding of why man plays and what motivates him is needed.

REFERENCES