

PHYSICALLY ACTIVE RECREATION OF YOUTH

Youth are active outdoor recreationists—playing outdoor games and sports, bicycling, and horseback riding. The factor analysis reported in appendix A also shows swimming and attending outdoor sports events to be highly associated with this congeries of activities.

These are the outdoor diversions of youth. Age by sex for each region (appendix A table 12) provides the most reliable basis for estimating the combined participation in these activities, according to the regression analysis. The "active" score combined from these activities can be predicted with greater precision than any other factor. Between 30 and 45 percent of the total variance is accounted for by regression on age and other factors shown in appendix A, table 12. Income, occupation, and education (for those 25 years and older), possess very little predictive power. The reason, of course, is that bicycling, playing outdoor games and sports, and so forth, are primarily activities of the younger ages. Because of this we must look to age, urbanization, sex, and similar demographic factors to account for variation in the participation rates in the individual activities.

This chapter discusses playing outdoor games and sports, bicycling, and horseback riding. Swimming and attending outdoor sports events are reported in other sections, although the factor loadings assigned to them for this "active" factor is high.

In general, adults engage least in these activities. Adults provide the greatest opportunity for increases in participation. Playing fields in urban places undoubtedly are required for increases in playing outdoor games and sports, but trails are the primary requisite for increases in bicycling and horseback riding. The bicycle tour along trails free of motor vehicles in areas with convenient camping facilities or hostels may readily become a popular family outing, as in Europe. Planning of routes is needed. Perhaps areas of historical importance should be the initial focus of such a program, in order to combine educational interests with recreation, such as Lancaster County, Pa., the Natchez-Woodville Area, Miss., the Charleston, S.C. country, trails to the colonial and revolutionary war scenes of New England, and the Chesapeake and Ohio canal trail along the Potomac River.

PLAYING OUTDOOR GAMES OR SPORTS

Some games may be played in less than an hour; others may last for 2 to 3 hours or even all day. The amount of physical activity or exertion required varies from moderate to high with the game. Similarly, some games require considerable skill, as golf or baseball, and require practice to maintain this skill. On the other hand, one may

play without achieving a high level of skill, although enjoyment of the game and acceptance by teammates often rest upon one's ability to perform skillfully. Except for the purchase of the necessary equipment, many games require very little expenditure. In some instances the equipment may be supplied by the school or organization sponsoring the game, or may be shared by teammates. Such might be the case for a sand-lot baseball game among neighborhood boys. Golf, polo, and similar games not only require considerable equipment, but also a course or playing field which must be appropriately marked and maintained. Hence, membership in an organization or club which provides such facilities or the payment of a fee upon each occasion is necessary to participate. Consequently, the monetary outlay for various games differs not only with the type of game but also with age, social status, level of skill, and perhaps other factors associated with the player. Playing games is similar to fishing in this respect—one may engage quite economically without any expenditure or one may spend a great deal on a single occasion.

Status is associated with different games. Because boats must be maintained and time is required to learn to manipulate the boat, sailing and racing are prestigious sports. Similarly, the image of polo playing is associated with the higher economic groups. Although tennis is quite popular, relatively speaking, perhaps a higher degree of status accrues from playing tennis than, for example, sand-lot baseball, or croquet. In general, playing a particular sport is a means of status achievement, and the sports themselves are evaluated in some hierarchy of prestige. Greater prestige accrues with greater skill.

One's degree of skill, normally, is improved with practice. Consequently, skill improvement offers a challenge to the individual. Undoubtedly there are other motives for a given game. One may enjoy the game because of mere pleasure in physical exercise, skill achievement, or in attaining or maintaining status as a teammate. One may play to bet on the outcome of one's score, to win a prize, or to defeat an opponent. Such motives undoubtedly stimulate the widespread interest in games and sports.

Playing outdoor games or sports is the third most frequently engaged in activity, on an annual rate basis. The annual rate is 12.7 occasions per person for the year, compared with walking for pleasure 17.9, and driving for pleasure, 20.7 (tables 1.01, 2.01, 3.01, and 4.01).^{1/}

^{1/}Table references, unless otherwise specified, are to part II.

The first digit on the left designates the survey: (1) September 1960; (2) December 1960; (3) March 1961; (4) June 1961.

The rate is somewhat higher in the summer and spring than in the fall and winter, but these reflect seasonal variations in the Northeast and North Central regions rather than less intense rates of participation during winter months in the South and West.

Games and sports during summer

During the summer 1960, 30 percent of the population participated one or more times in an outdoor game or sport. The percentage participating varies steeply with age, the percentage being 70 percent for those 12 to 17 years of age (males), and declines abruptly to 2 percent for those males 65 years of age and over (table 1.02.14).

The same association with age is shown by participation rates: a high of 18.27 summer occasions per person for the 12 to 17 year age group to 0.28 occasions per person for males 65 and over. The rate for females similarly declines, although the overall rate for females (2.28) is less than males (5.08).

The rates by age and sex for each region show the same picture (table 1.02.14).

The same steep decline in rate of participation by age and sex is observed, also, when the data are viewed according to size of place of residence (table 1.03.14).

Fifty-four percent of all occasions of outdoor games and sports are reported by boys and girls 12 through 17 years of age. This has a significant effect upon other relationships we shall consider, particularly income, to which we now turn.

Family income shows a strong association with participation in outdoor games and sports, increasing from 0.74 occasions per person for the income group of less than \$1,500 annually to 6.4 occasions for the group whose families earn more than \$15,000 annually. However, the chief increase occurs between the lowest income group and the group earning \$6,000. Thereafter (for higher income groups), the rate of increase is less. Although for each region the rate increases in general as income increases, the "trend" by no means is uniform, particularly for the South and West. In the South, for example, there are two peaks to the distribution, one for the \$1,500 to \$2,999 income class and another for the \$8,000 to \$9,999 income class, suggesting that there are two widely spaced classes whose children play games frequently.

In the West participation increases to the income group beginning with \$3,000 and then declines with the \$6,000 to \$7,999 class, only to increase again for higher income groups. Some of this variation undoubtedly may be attributed to sampling, but it is large enough to indicate significant differences between income classes when viewed by region (table 1.02.14).

The data suggest the universality of playing outdoor games among all income groups except the very lowest. The latter exception may be a function of the age composition of the lowest income class. Upper income groups participate somewhat more heavily. Both of these findings reflect the variation

in the proportion of children under 18 years and of the population 65 and older in these income groups, as the appendix C table shows.

Residence effects

Participation is higher in standard metropolitan areas than elsewhere: 4.11 compared with 3.61 in small urban places, and 3.06 in rural areas. Thus, playing outdoor games or sports engages more time and more people in large urban places than in small urban places or rural areas (table 1.03.14).

Now, viewed according to income of families in cities of over 1 million, those earning less than \$3,000 annually participate very little (1.58 occasions during the summer) and members of families earning over \$15,000 annually participate quite heavily (9.65 during the summer). Between these two extremes, the participation level is fairly uniform (varying from 3.74 to 5.11). Standard metropolitan areas under 1 million have a more varied pattern. The less than \$3,000 income group has a fairly high participation rate (4.35), and as income increases, the rate declines except for a higher rate among those earning \$6,000 to \$7,999 annually, then a slight decline and an increase among those earning over \$15,000 annually (5.50). This irregular pattern within cities 50,000 to 1 million undoubtedly reflects age as well as some regional variation, since we find that the rates vary by region for cities of this class (a low of 2.5 for the West and a high of 5.1 for the North Central). It also is possible that low income areas in cities of this class have superior opportunities for participation, not present in other urban places (table 1.03.14).

The small urban place (less than 50,000) participates at a fairly high rate among all income groups except those earning less than \$3,000, and hence, in this respect, more closely resembles the pattern of the large metropolis. Rural areas, similarly, are fairly constant in participation level except the lower income groups (less than \$3,000 annually).

The nonwhite population engages at a rate somewhat higher than the white (4.86 compared with 3.48). This superiority of the nonwhite rate is observed in each region except the Northeast, where the white rate is greater (3.96 compared with 3.15). In the West, particularly, the nonwhite rate of participation is greater than the white (12.94 compared with 2.86). The nonwhite rate maintains this superiority for each size of place of residence class, except the rural, where the rate is slightly higher for the white (tables 1.02.14 and 1.03.14).

Nonwhite rates for both male and female are greater than corresponding white rates (table 1.03.14).

In each of the regions the rural farm population presents the lowest rates of playing outdoor games or sports. On the other hand, the rural population living near metropolitan places (SMA, rural population) presents relatively high participation rates for all regions except the West. In the West the highest participation rate is in cities of more than 1 million population (Los Angeles and San Francisco here being the ones represented), with a participation of 5.33 per person for the summer months. Since participation is so greatly age-related, the lack of

a consistent pattern across each region by size of place of residence, undoubtedly reflects some of the variation in age composition of these sub-populations (table 1.02.14).

The rate of playing outdoor games or sports is higher for the urban population than for the rural. Games require groups and these are more readily assembled in communities. This is true for each region except the Northeast where the rural rate (4.37) is greater than the urban (3.77). However, there is no systematic decline in the rate of participation as one moves from the largest urban to the most rural area. The rural farm population has the lowest rate uniformly for each region (table 1.02.14).

Education and games

For the population 25 years or over, playing outdoor games or sports is directly related to number of years formal schooling, the rate increasing from 0.11 for those with less than 4 years of formal schooling to 4.31 for those who have had 4 years or more of college. With a few variations, the pattern is followed in each region. Golf, tennis, and baseball are the games receiving the greatest number of preferences, and these most probably are sports represented by high participation among the better educated of the adult population.

Considered by occupation, farmworkers have quite low rates (1.3 per person during the summer) while professional, technical, and kindred workers have the highest rate (4.18). The remaining occupational categories cluster about the mean occasions per person during summer for all employed persons 14 years of age and over. This pattern is fairly consistent within each of the regions except the South where managers, officials, and proprietors (except farm) and service workers have higher participation rates (table 1.02.14).

Professional, technical, and kindred workers have relatively high rates within each size of place of residence class. Service workers have unusually low rates in large cities but relatively high rates in other urban places. Managers and officials in rural areas have the highest rate of participation. Since we have a variation in the type of sports played (e.g. baseball, as well as golf) one would expect fewer systematic relationships within the adult population, and such is the case (table 1.03.14).

Among both male and female, the rate of participation declines with the respondent's assessment of his health. For example, males who rate their health as excellent play on 8.5 occasions during the summer, as compared with 0.01 among those who rate their health as poor. This relationship holds systematically for each major age group, and for both sexes (table 1.04.14).

In a like manner, the presence of impairments or limiting impairments tends to depress the participation rate. For some age groups, however, persons who have impairments that are not limiting participate in outdoor games or sports heavier than those with no impairments (table 1.04.14).

Eight percent of the population indicates a preference for playing outdoor games or sports as their first choice for outdoor recreation, 6 percent mentions it second choice, and 5 percent third choice. Because the first, second, and third choices contain an unknown amount of duplication, it is not possible to sum these 3 percentages to give an overall percentage who prefer playing outdoor games or sports. However, playing outdoor games and sports probably ranks about fifth in popularity, a position comparable to sightseeing (table 1.21).

Playing outdoor games and sports is most frequently preferred for a period of 2 to 3 hours (11 percent). For short periods of time, a game or sport takes its place in the preference order along with walking for pleasure and swimming, for the summer, each being only slightly less popular than driving for pleasure.

The second most preferred time for playing outdoor games and sports is on a day's outing, 5 percent of the population so mentioning. However, 3 percent each prefer outdoor games or sports as an activity for a weekend trip or on a vacation.

Among the activities mentioned, golf was named most frequently (4 percent), and baseball, next (3 percent). Tennis was also mentioned fairly often (table 1.21).

Playing outdoor games or sports was mentioned as a preference slightly more frequently by the urban population than the rural, and slightly more frequently in large city areas (standard metropolitan areas) than in rural territory (table 1.17).

The preference order, like the participation rate, decreases with age for both males and females.

Table 1. Percent of persons participating freely in outdoor games or sports which are preferred as outdoor activities, and percent mentioning various restrictions on participation, June-August, 1960

| | Persons preferring outdoor games or sports | | | | | | |
|-------------------------------------|--------------------------------------------|----------------------|--------------------------------------|-----------|------|---------|-------|
| | All | Participating freely | Reasons for not engaging more often— | | | | |
| | | | Facilities | Financial | Time | Ability | Other |
| Playing golf | 100 | 33 | 8 | 7 | 42 | 3 | 7 |
| Playing baseball | 100 | 45 | 10 | 2 | 31 | 3 | 10 |
| Playing tennis | 100 | 24 | 22 | 9 | 33 | 9 | 3 |
| Playing other games or sports | 100 | 49 | 8 | 3 | 30 | 5 | 5 |

Source: Table 1.14.

One-third who prefer golf play as often as they would like. Those who do not play as often as they would like are restricted chiefly by time (42 percent). The lack of facilities and the lack of financial ability do not appear to restrict participation among those who already prefer golf, according to the respondent's report. However, those reporting a time or money restriction have median incomes \$1,000 less than those who participate freely. Median age of those preferring golf is relatively high (38.5 for males, and 35.5 for females). (See table 1.15.)

Preference for baseball

Forty-five percent of those who prefer baseball are able to play as often as they would like. Thirty-one percent of those who prefer baseball feel that they are limited by time and 10 percent mention the lack of facilities. This is a young group (median age for males 16.5 years). The median income of those participating freely (\$6,300) is considerably higher than the median income of those who feel some money or time restriction (\$4,700), attesting to the reason behind the restriction (table 1.15).

Twenty-four percent of those who prefer tennis as an outdoor activity play as often as they would like. Time, also, is mentioned most frequently as the restricting factor (33 percent), but the absence or lack of facilities is mentioned by as many as 22 percent of those who prefer tennis. Nine percent mention financial restrictions, and another 9 percent feel that they lack skill or ability to play. Thus, programs to improve skill undoubtedly would increase participation.

About one half of persons preferring to play other outdoor games and sports do so as often as they would like, and 30 percent of those who prefer other games and sports feel that they are restricted by time. Very few mention other restrictions.

Generally, time is the chief factor restricting greater participation in these outdoor games and sports. The next most serious restriction is lack of facilities, particularly for tennis and baseball (table 1.14B). The median income of those who participate freely in baseball is higher than for those who report a time or money restriction but not for "other" games and sports (table 1.15).

The only item of recreation equipment used for games in the survey was a golf set. Fourteen percent of respondents said a golf set was available in the household. Seven percent said they had used the set within the past year. (The difference between these percentages does not represent the percent of unused golf sets in the household, for some household member other than the respondent may have used it.) (See table 5.47.)

Possession of a golf set is directly related to family income. From the lowest income class with 1.1 percent reporting a set, ownership steps up to 2.4, to 5.4, and so forth, to 64.2 percent for the \$20,000 or more income class. This direct relationship of ownership to income is consistent for each size of place of residence class, although the magnitude of the percentage varies (tables 5.47 and 5.48).

Ownership of a golf set is somewhat more frequent in the North Central region, 17 percent of the

respondents in the area reporting the presence of a golf set in the household. The South has the lowest percentage, 9 percent. Persons living in standard metropolitan areas of 1 million and in rural territory of standard metropolitan areas report the highest percentage of ownership, 17 percent, whereas other rural residents report the lowest, 6 percent.

The active young people who play games and sports also engage frequently in other active outdoor sports. Correlation is significantly different from zero with all of the major summer activities. However, unusually high association is observed with swimming (0.42), bicycling (0.36), attending outdoor sports events (0.33), and picnicking (0.26). (See appendix A, table 3c.)

BICYCLING

In America, bicycling is almost altogether an activity of youth. Of all the cycling days engaged in by our sample during the summer, 1960, only 18 percent were by persons older than 17 years. Nine percent of the population reported engaging, but only 3 percent of the population indicated some preference for cycling. The population as a whole engaged 1.75 days (during the 3 summer months, 1960), but the age group 12-17 cycled on an average of 10 days. Boys are more active cyclists than girls. Participation is slightly greater outside metropolitan areas than within them. The rate of participation increases to the \$3,000 to \$4,499 family income group, and then gradually declines as income increases. Nonwhites cycle more than whites. There are very few cyclists who do not rate their health as good or excellent.

The population as a whole engages in cycling at a rate of 5.15 occasions per person for the entire year. Cycling during summer is more frequent (1.75 occasions per person) than the fall (0.93 per person) or winter (0.87 per person). In the spring there are 1.6 occasions per person. The annual cycling rate is highest in the Northeast (5.38) and South (5.32). (See tables 1.01, 2.01, 3.01, and 4.01.)

Bicycling is engaged in almost completely by the younger age groups. Of all the cycling participation days during the summer, 82 percent was reported by those 17 years of age or less; the participation rates for older ages are insignificant by comparison. As a consequence, any differences reported below which may be associated with income, region, residence, or other factors, reflect in part whatever differences which may exist in the age composition of these groups. Among age groups above 17 years, the rate of participation declines with age (table 1.02.04).

By family income, rates increase from the lowest income class to the \$3,000 to \$4,499 class and thereafter decline. This relationship, also, is complicated by differences in percentage of persons under 18 years of age among income classes. The lower three income groups contain disproportionate shares of older persons, perhaps retired on small incomes, as is presented for the summer sample, appendix C, table 1. In the South the peak participation level is reached among the \$8,000 to \$9,999 income class. With this age-income association, the evidence is

clear that income is but a weak barrier to participation in cycling (table 1.02.04), a fact further substantiated by table 1.15.

Considering only persons 25 years of age and older, we find that as education increases, the average number of days cycling increases, also, reaching a peak among those with 1 to 3 years of college, and dropping off for the group completing college. This relationship is not uniform among regions, and is due to heavier participation in the West plus sampling variation. In any event we are here considering only 14 percent of the cycling days reported during the summer (table 1.02.04).

The nonwhite rate of cycling exceeds the white for the United States as a whole (2.67 to 1.64 for the white) and within each region, except the Northeast. The difference is greatest in the West where the nonwhite rate is 6.65 compared with 1.58 for the white. In the South the nonwhite population is almost all Negro, but in the West almost one-half of the nonwhite population consists of other races (Indian, Japanese, Chinese, Filipino, etc.). A possible explanation for the lower rate in the Northeast lies in the concentration of the Negro population in large cities where cycling participation is typically lower.

The nonwhite male rate (3.42) exceeds the white male rate (1.88) and the nonwhite female rate (1.99) exceeds the white female (1.41). (See table 1.03.04.)

Cycling and impairments

Persons with limiting impairments cycle quite infrequently (0.53 days per person for the summer), but those whose impairments are not limiting cycle almost as frequently as those who have no impairments (1.69 to 1.90). Cyclists reporting their health to be good or excellent cycle at higher rates than those who report their health as fair or poor. In fact, 95 percent of the population 12-17 years of age report themselves to be in good or better health, so that there is no basis to compare cycling rates among those with poor health (table 1.04.04).

Table 2 shows the relationship between the respondent's assessment of his health and annual days participation in bicycling. For age groups producing sufficient occasions for computation, the relationship with health is quite clear cut.

Table 2. Annual days participation per person in bicycling by age, for males according to state of health, June 1960-May 1961

| Health | All | Age in years | | | |
|----------------|-------|-------------------|-------------------|-------------------|-------------------|
| | | 12-17 | 18-44 | 45-64 | 65 and over |
| All | 6.65 | 39.66 | 1.06 | 0.39 | 0.15 |
| Excellent..... | 11.49 | 43.03 | 1.13 | .36 | .09 |
| Good | 4.52 | 32.35 | 1.14 | .54 | .45 |
| Fair | 2.26 | ($\frac{1}{2}$) | .77 | .34 | .02 |
| Poor | .03 | ($\frac{1}{2}$) | ($\frac{1}{2}$) | ($\frac{1}{2}$) | ($\frac{1}{2}$) |

$\frac{1}{2}$ Less than 0.005 days per person, or omitted because of insufficient sample size. (Source: Tables 1.04.04, 2.04.04, 3.04.04, and 4.04.04.)

Differences between regions for the summer are small. The North Central region has a slightly higher participation level (2.00 per person) while the Northeast has the lowest regional rate (1.45 per person). (See table 1.02.04.)

For the United States as a whole, the summer rate is slightly higher outside standard metropolitan areas than within them (1.86 and 1.67). This difference is consistent across regions, except in the South, where the SMA rate of 2.08 exceeds the rate for the population outside SMA (1.44). Within SMA's the rural residents of the area participate more heavily than the urban, except, again, in the South where its large city rate is greater. Outside the SMA's, however, the small city rate exceeds the rural uniformly in each region.

The explanation of the above differences rests partly upon variations in the age composition of these areas. Lower rates for the rural population outside SMA's results also from either income differences or preference, perhaps both.

Considering only the age group 12-17 years, inclusive, residents of the small city outside SMA's participate heavily in cycling (16.00 for males and 11.6 for females). Boys living in cities of 1 million or more cycle an average of 12.78 days during the summer compared with 5.88 for girls of the same ages living in the same areas. The next highest rate is for boys in all rural areas (11.50 days per person), followed by rural girls (9.49). This boy-girl variation according to place of residence may reflect the difference in the protection accorded girls in large cities, or other limitations upon their recreation pattern. The difference does not exist in the same order among residents of small cities (less than 50,000) nor in rural areas, as is shown by the following ratio of average boy participation per day to participation per day by girls:

| | |
|-----------------------------------|-----|
| All | 1.4 |
| Urban, SMA, over 1 million | 2.2 |
| Urban, SMA, under 1 million | 1.4 |
| Urban, not in SMA | 1.4 |
| Rural..... | 1.2 |

Source: Table 1.03.04.

Only about 18 percent of the cycling days during the summer were by employed persons 14 years of age and over. But within this group the occupation participating most are the service workers. Professional and technical workers participate least. Although there are a few such differences, occupation does not appear as a useful basis for analyzing cycling rates (tables 1.02.04 and 1.03.04).

Considering all outdoor activities, cycling is low in the preference order, only 3 percent of the population expressing "some" preference for it as a general outdoor activity (a combination of first, second, and third choices). It ranks with hiking, nature walks, and attending outdoor concerts, drama, etc. In terms of occasion, it is almost altogether an activity chosen for the 2 to 3 hour period, rather than for a day outing or a longer period of time (table 1.21).

The relationship between cycling participation during summer and participation in other activities is

shown below. Displayed, also, are percent of cyclists expressing "some" preference for various other activities.

Table 3. Correlation of cycling participation with other activities, and percentage preference for activities by degree of participation in cycling, June-August 1960

| | Correlation coefficient ^{1/} | Percentage expressing "some" preference by days participation in cycling | | |
|---------------------------|---------------------------------------|--------------------------------------------------------------------------|-------------------|-------------------|
| | | 0 | 1-16 | 17 or more |
| Playing games | 0.36 | (^{2/}) | (^{2/}) | (^{2/}) |
| Swimming | .28 | 39 | 72 | 74 |
| Hiking | .22 | 2 | 3 | 11 |
| Nature walks..... | .17 | 3 | 2 | 2 |
| Attending sports events | .16 | 12 | 9 | 9 |
| Walking for pleasure | .16 | 11 | 9 | 6 |
| Horseback riding | .15 | 5 | 18 | 16 |
| Picnics | .13 | 34 | 26 | 11 |
| Boating | .12 | 11 | 12 | 8 |
| Camping | .11 | 10 | 11 | 23 |
| Driving for pleasure | .09 | 27 | 11 | 8 |
| Fishing | .10 | 34 | 18 | 32 |
| Sightseeing | .08 | 19 | 9 | 2 |
| Water skiing | .06 | 4 | 12 | 5 |

^{1/}The variable used was the square root of the number of days participation during the summer source, appendix A, table 3c.

^{2/}Preferences not available for playing games.

This table demonstrates the youthful nature of the other activities of cyclists. Playing games, swimming, and hiking are the activities most highly correlated with bicycling. These require vigor. Preference for swimming, hiking, and camping shows a positive association with cycling participation. Preferences negatively associated with cycling participation are the less demanding and more sedentary activities: walking for pleasure, picnicking, driving for pleasure, and sightseeing. That is, although participation in these activities shows a significant association with cycling, the cyclist's preference for them suggests that they are not his favorite outdoor activities. Except for these four activities, any of the other activities would be engaged in if opportunity were afforded in relation to cycling. Thus, cycling or hiking paths to fishing or swimming locations would prove to be compatible with the interests of the youthful participant (table 1.12).

Fifty-six percent of those who prefer cycling say they engage as often as they would like. Those who feel that they would like to participate more often give reasons which were classified as either financial (24 percent) or time (12 percent) as a basis for being restricted (tables 1.14B and 1.13).

The motivation to cycle probably arises from several factors. Among young people the mere fact that others go cycling is sufficient motivation. The joy in physical activity, movement, and the associated change of scene, the opportunity which bicycling affords to

explore new places and byways—each undoubtedly contributes to the desire to cycle. Possession of a bicycle probably adds to the youngster's status within his age group, particularly when he first learns to ride. With increasing age these status-giving properties undoubtedly decline. After initially learning to ride, some additional skill can be acquired. Indeed, there are elaborations in skill, such as guiding without hands on the handlebars ("Look, Mom, no hands!"), or emulation of tricks of the vaudeville master cyclist, but these increments of skill are not generally pursued. Considering that the cyclist may adjust speed and physical exertion to a comfortable energy output, the level of physical activity may be classed as moderate. One may engage for as long a period as one chooses, but undoubtedly most occasions of bicycle riding are for 2 to 4 hours, as the preference data show, the ride being liberally broken with rest periods. All-day excursions or treks of several days, which are not typical, would require more intensive physical exertion. Considering the relationship between participation and income, previously described, the general availability of bicycles, and their low maintenance cost, bicycles undoubtedly are available to all but the lowest income group. The great opportunity to increase cycling participation lies among the 18-44 age group. Perhaps journeys by family groups would be possible if paths free of other traffic are provided, and if hostels or camping facilities are made available. This has been realized in several European countries.^{2/}

HORSEBACK RIDING

Only 6 percent of the population went horseback riding one or more times during the summer 1960. This was 0.42 occasions per person. Participation in the spring is as frequent as the summer, but during fall and winter the average occasions per person is about 0.2. Thus, annually, horseback riding occurs at a rate of 1.25 occasions. Participation is about twice as frequent in the West as in the rest of the country. The West participating 0.88 occasions per person for the summer. The South participates next most frequently, the rate being about half that of the West. Thus, horseback riding is associated with rurality and with open spaces (tables 1.01, 2.01, 3.01, and 4.01).

Even though the male rides slightly more than the female, nationally, his rate of participation is appreciably greater only in the South, which includes Texas. On the other hand, in the Northeast the female rate is about four times that of the male. In the other two regions the participation rate is quite similar for the sexes (table 1.02.10).

The younger ages, 12 to 17 years, participate in horseback riding at rates significantly higher than other ages. Generally, the rate declines with age, participation being quite insignificant for those over 65. This age pattern is fairly uniform across each region for both male and female. There are two interesting variations. In the West, the male participates in each age group through 64 at rates considerably higher than those for the same age groups in other

^{2/}See ORRRC Study Report 18.

regions. There also is a higher participation rate among females 18 to 44 in the Northeastern States, evidently reflecting the popularity of horseback riding among what has been popularly termed the "horsey set", as well as girl's boarding schools. Horseback riding, indeed, is a young person's activity (table 1.02.10).

The pattern of decreasing participation with age, both for male and female, is repeated within each size of place of residence class. Rural males 18-44 years, participate more than males living in urban places (table 1.03.10).

The percentage of the population engaging in horseback riding increases with family income successively for each income class, but the rate, as measured in days per person for the summer, does not similarly show a consistent increase. However, below the \$4,500 annual income class participation is considerably less than for income groups above that amount. This pattern varies considerably by region. While it characterizes fairly well participation in the Northeast and North Central States, participation levels in the West are higher among lower income groups than higher income groups. In the South participation is higher among the \$4,500 to \$6,000 income group than income groups above and below that income class. In summary, the frequency of engaging in horseback riding increases with income, with the important condition that region has an important impact upon participation in the activity. The South and West, where evidently opportunity and facilities are more plentiful, engage more frequently (table 1.02.10).

When examined by size of place of residence, generally, the same relationships hold. However, the number of days participation is greater for lower income groups in rural areas than urban places. Residents of small cities earning \$4,500 to \$6,000 have a high participation rate, as also do the upper income classes in rural areas of the West. Since these data chiefly reflect participation among young people under 25 years of age, we are examining the activities of youth. Rural areas and small cities evidently afford greater ease of participation and, perhaps, cheaper participation than is the case in larger cities. For the same income classes, participation rates are higher in rural areas and in small cities than in larger urban places (table 1.03.10).

Horseback riding and color

The nonwhite population participates slightly more than the white population, although differences are of doubtful significance (0.52 days per person compared with 0.41). The greater nonwhite participation is altogether due to the higher nonwhite participation in the West, where the nonwhite population participates at a rate of 4.1 days per person compared with 0.7 for the white population in the West. One presumes that this reflects chiefly the Indian and Oriental participation there. In other regions, the white is greater than the nonwhite, particularly in the Northeast and North Central regions (table 1.02.10).

When color is considered by size of place of residence, the same pattern prevails, with the nonwhite rate being superior in rural areas (1.39 compared with 0.58 for white). The difference is due chiefly to

greater participation of the nonwhite male in rural areas, because generally the white rate is greater than the nonwhite for all other place of residence classes. The nonwhite female participates less, relative to the nonwhite male, than does the white female relative to the white male (table 1.03.10).

The actual percentages of the population 12 years of age and over engaging in horseback riding are only 5 or 6 percent for the size of place of residence classes. However, when examined in terms of days participation per person, greater variation is evident, showing the urban population in standard metropolitan areas to engage considerably less than the urban population outside of standard metropolitan areas and, especially, than the rural population (table 1.03.10).

This pattern generally typifies each region, and is especially pronounced in the West. All classes considered, the participation rate per person for the summer increases from 0.17 in cities of over 1 million, to 0.19 for cities under 1 million, to 0.57 for smaller urban places, and, finally, to 0.65 for rural areas.

Thus, the joint consideration of income, region, and size of place of residence, suggests that available space and animals in the South and West make participation possible even among low income groups and that the same opportunity does not exist in the Northeast and perhaps North Central regions. Since these data are for summer, variations due to weather are relatively constant.

Persons 25 years of age and over account for only 17 percent of the total horseback riding occasions reported on the survey during the summer. The rate of engaging among this group increases, generally, with number of years education, although the rates appear somewhat unstable across regions. Years of schooling seem to have more effect in the Northeast and less in the West, where rates are about equally as high irrespective of years schooling (table 1.02.10).

For the labor force, farmworkers in the West engage at a rate of two occasions for the summer, while service workers and laborers in the West engage more frequently than they do in other regions. Professional workers in the West also engage fairly frequently (1.13 occasions per person). The next most frequent participant is the white-collar worker in the Northeastern States (0.94 occasions per person). By occupation these are the outstanding participants in the Nation; the remaining variations by occupation are not great, and the frequencies are low (table 1.02.10).

When examined by size of place of residence and occupation, the white-collar workers in rural areas show the highest participation, but rates are generally low and do not warrant detailed analysis (table 1.03.10).

Since horseback riding is chiefly engaged in by younger persons, it is not surprising to find that chiefly those who report good health or better engage in the activity. The number of days per person declines with the reported state of health both for males and females and for each age group (table 1.04.10).

Neither do persons with limiting impairments go horseback riding. The rate among those with no impairments is 0.47 compared with 0.25 for those who have impairments that are not limiting.

Six percent of the population indicate "some" preference for horseback riding, a high proportion considering that only 6 percent of the population went

horseback riding one or more times during the summer. This places horseback riding 11th in the preference order. When considered according to time available, the percentage preferring horseback riding does not vary, each type of occasion receiving 1 percent of the preferences. One would have expected the 2 to 3 hour period to receive more preference indications. The frequency of preference selection does not allow us to examine characteristics of those preferring horseback riding, except in terms of participation in other activities (table 1.21).

Since horseback riding is an activity engaged in chiefly by young persons, one would expect it to be associated with those outdoor activities in which young people like to engage. For example, as participation in bicycling increases, so does the preference mention of horseback riding (from 5 percent preferring horseback riding among those who participate zero days in bicycling to 16 percent for those who participate heavily in bicycle riding). The same relationship holds for those participating in swimming, and to a lesser extent in camping, boating, driving for pleasure, hiking, hunting, sightseeing, and picnicking. Thus, participation in a wide variety of activities is associated with preference for horseback riding. This is particularly true for vigorous activities (table 1.12).

Among those who prefer horseback riding, one fourth participate as often as they would like. Twenty-six percent of those who do not participate as often as they would like feel that they are restricted by financial limitations and 23 percent by a lack of time. Facilities, evidently meaning availability of horses and paths, was mentioned by 15 percent of the group preferring horseback riding. Six percent mentioned an inability to ride (table 1.14B).

It would appear, then, that cost of engaging as well as time to engage share equally as important restrictions upon engaging in horseback riding.

Reasons for not riding more often

Among those who have tried horseback riding but do not like it, about one third mentioned fear as the reason for not continuing to engage. The next most frequent factor mentioned was dislike of being around horses.

Among those who prefer horseback riding, the percentage participating as often as they would like is about equally distributed by income (32 percent among the group earning less than \$3,000 annually compared to 29 percent among those earning \$10,000 or more). Similarly, the most frequent reason given for not engaging as often as they would like is time or money, mentioned about equally for each income group. The group earning \$10,000 or more mentioned a lack of facilities (22 percent) as compared with only 2 percent mention of facilities by those having incomes less than \$3,000 annually. Almost 60 percent of the income group earning less than \$3,000 mentioned time or money as being the chief restriction (table 1.13). Thus, it would appear that increases in income and, leisure time will create more horseback riding occasions, particularly in areas where trails and horses are plentiful.

Rental of a horse for occasional rides is possible for those with moderate incomes, but owning a horse in an urban environment may require considerable outlay,

particularly for feed and stall charges. Such expenditures may not be as great in rural areas where feed is more plentiful. In general, the cost of horseback riding probably is greater than costs for many other outdoor activities.

Riding horses is an outdoor activity in which one usually would engage for 2 or 3 hours, although treks across country might take longer. Great exertion is not required to ride a horse for a brief period, although moderate physical exertion certainly is required. One may mount and ride with little skill or one may possess considerable skill in handling the steed. Furthermore, by varying the animal, the terrain on which one rides, and the time involved, one may continuously create new challenges to improve horseback riding skills. In general, however, the basic skills required for proper control and manipulation of the animal as well as the physical responses necessary on the part of the rider in order to make the activity enjoyable, are minimal and once acquired, may be elaborated upon without undue effort.

Status achievement through participation perhaps is high in urban areas, particularly among middle and upper class groups. In rural America, on the other hand, status may be achieved through possession of unusually fine animals, through skillful performance, or related activities, rather than merely from horseback riding itself. A variety of motives may be served by riding. One may ride primarily because the exercise gained is within one's capacity without overtaxing one's strength. Another motive may be love of animals; the pleasure of attaining coordination of movement between rider and horse creates an affinity between man and beast. Where one rides in a group with others, sociability cannot be minimized, for such undoubtedly is a strong motive for many occasions. A desire for new experience motivates horseback riding occasions which take one over new terrain or into unfamiliar areas. Horseback riding, also, may be a means for sightseeing, picnicking, hunting, and related activities.

The number of horses on farms has declined from about 10 million in 1942 to 3,089,000 in 1960, the latter figure also including mules. The decline suggests a decrease in the use of animals for work on farms, rather than a decline in horseback riding for pleasure. The California Recreation Survey ^{3/} estimated approximately 267,300 riding horses in the State (1958). Using this figure and applying the National Recreation Survey rates of participation to the California population provides an estimate of 40 occasions per horse for the June-August period. If this rate of horse utilization for pleasure rides by the population 12 years of age and over is generalizable to the Nation, 1,378,000 horses are required for riding purposes. From the Census of Agriculture, 2,224,000 horses of all types (work and riding horses), are on farms but this does not include an unknown number of rental riding horses not on farms. In short, except to indicate that the supply of horses appears to exceed that needed to meet the current demand for pleasure riding, the data on supply of horses are not sufficiently precise for study.

^{3/}"California Public Outdoor Recreation Plan, Part II," Sacramento, Calif.: Documents Section, State of California, 1960.