

# Tracking youth joblessness: persistent or fleeting?

*High turnover, seasonality, and work-school transitions are some reasons for high unemployment among young people; a recent longitudinal study suggests that recurrent and extensive joblessness among a relatively few persons may also be an important aspect of the labor market*

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Many studies have focused on differences between youth and adults in job and labor force turnover in attempts to account for the fact that youth unemployment is always higher than that of adults. However, some recent research suggests that the observed age-related differences in the incidence of joblessness are misleading indicators of the dynamics of youth unemployment. While frequent turnover is admittedly a feature of the youth labor market, the core of joblessness may in fact be accounted for by a relatively small number of persons who search for jobs for very long periods.<sup>1</sup>

A new study of matched data from the Current Population Survey examines the unemployment experience of selected individuals in the course of a year, and over 2 consecutive years. The findings suggest that:

- Prolonged joblessness is somewhat concentrated among a relatively small group of workers but is also strongly affected by the business cycle.
- A clear association exists between the extent of past joblessness and the likelihood of subsequent unemployment.
- Two or more spells of joblessness in one year do not necessarily presage similar unemployment the next year.

- Recurrent unemployment is no respecter of age, striking all labor force groups.

The analysis exploits the short-run longitudinal capabilities of the Current Population Survey, which permit construction of a 2-year retrospective labor force history of persons in the sample. This previously untapped data set allows some examination of the following important questions: Is the experience of extensive unemployment in one year associated with extensive unemployment in the following year? How important are repeat spells of unemployment? And, are persons with multiple spells of unemployment in one year more likely than others to experience spells in the subsequent year?

Of course, 2 years is a relatively short time in terms of labor force history, and no definitive analysis of what has been called the “scarring effect” of persistent youth joblessness is possible.<sup>2</sup> Still, the questions that can be addressed are of interest in their own right.

## Data sets and limitations

The Current Population Survey (CPS), which provides the underlying data base for the following analysis, is a monthly survey of a rotating panel of approximately 60,000 households (strictly speaking, addresses).<sup>3</sup> Each month, Census Bureau enumerators visit the households in the sample and ask a series of structured questions about the labor force status of each member 16 years of age and over during the reference week. The CPS com-

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prises eight independent panel or rotation groups. Each household is interviewed for 4 consecutive months, dropped from the sample for 8 months, and reinterviewed for 4 final months. Therefore, it is possible that as many as one-half of the households visited in March of one year will be interviewed again the following March, and that responses for this subset of the CPS sample may be matched for purposes of longitudinal study.<sup>4</sup>

To examine work and unemployment experience, two separate matches were made from CPS data for March 1975–76, and for March 1978–79. These reference dates were chosen for two basic reasons: First, every March, a series of supplemental questions about the previous year's work experience is asked of CPS respondents. Included is such information as weeks worked, weeks unemployed, spells of unemployment, and number of employers worked for during the previous year. Thus, for those persons in our matched samples, we have 2 years of labor force history; that is, the work experience data in the matched files refer to 1974–75 and 1977–78. This allows some examination of the concentration and persistence of unemployment, the effects of repeated jobless spells, and so forth. Second, the data from these two time periods might shed some light on the effect of the business cycle on work experience; the March 1975–76 match covers a rather deep recessionary period, while the March 1978–79 match covers 2 years of recovery and expansion.

Several important restrictions on the use of these data and the sample should be noted at the outset. The major data problem is that the work experience questions are asked retrospectively, and the responses are thus subject to recall biases. Respondents may not accurately remember what they and the other members of their households were doing a year earlier. For example, individuals may not recall a brief period during which they were not available for work, and may instead report one long spell of unemployment. The results of Census Bureau tests with the usual monthly CPS questions suggest that recall bias is very important, and generally results in higher estimates of employment and lower estimates of unemployment.<sup>5</sup>

In addition to the data limitations, there are problems with the matched sample, in particular those involving differing probabilities of reinterview and response variability. Basically, the biases in the matched data fall under the heading of sample selectivity:<sup>6</sup> All movers, nonrespondents, those who died, and persons who change answers to questions on which the match is keyed (such as race or sex) are lost to the sample. (In contrast to most longitudinal files, the CPS is not designed to follow respondents who move.) This problem goes beyond the simple loss of a match because the reason for a non-match may, in some way, be correlated

with an individual's labor force activity. For example, persons who change addresses or are otherwise not matched may have different patterns of labor force activity than others. In other words, it is possible that there is some interaction between labor market activity and the likelihood of being in the matched file.

Thus, our matched sample is not a random sample of the population, and common forms of statistical analysis are not necessarily appropriate without adjustment for the selectivity problem. For example, persons who change addresses are disproportionately "lost" from the sample, while those less likely to move—older people and whites—are overrepresented in both of the matched data sets. More importantly, only about 50 percent of youth age 18 to 24 who were potential matches were retained. More than 60 percent of 16- and 17-year-olds made the match, but that is still somewhat below the proportion of adults matched. In addition, persons in the actual match are less likely than those in the full set of potential matches to have been currently unemployed, and slightly more likely to have been currently employed (especially in March 1975–76). If current labor force status is associated with past status, or is a determinant of future work experience, the matched data will necessarily reflect that bias.

A related sample problem involves rotation group bias. Persons in rotation groups 1 through 4 in March 1975 and March 1978 were eligible for inclusion in each match.<sup>7</sup> The data for whites age 18 and over indicate that these persons are underrepresented in the first rotation group relative to each of the other rotation groups. On the other hand, there is some evidence of an overrepresentation of blacks age 16 to 17 in the first rotation group. (Interpreting the data for the other age groups for blacks in the sample is difficult, as the rotation group proportions fluctuate considerably.) Of course, individuals do not necessarily enter the survey in the first rotation group, because the rotation group identifier refers to the address of the household and not to the person(s) occupying the address. And, the matched sample may be weighted toward later rotation panels if persons in later rotation groups are more likely to be matched because they are less "mobile"—the sample selectivity problem.

The phenomenon of rotation group bias in panel surveys can often involve more than just differential reinterview probabilities. Specifically, it may also include a conditioning effect—that is, the answers to survey questions are affected by the number of times the respondent has been interviewed. However, the degree to which the information from the CPS work experience questionnaire might be influenced by respondent conditioning is not known.

Lastly, there is the problem of weighting the data. Because the weights used to inflate the raw sample

counts from each monthly CPS are based on answers received that month, the March weights for the match periods 1975–76 and 1978–79 need not be the same. As there is currently no reliable theoretical or statistical foundation for handling this problem, the unweighted matched samples are used for analysis. Therefore, any results based on these data pertain, strictly speaking, only to those persons in the sample, and generalized conclusions should be significantly tempered.<sup>8</sup>

### A theoretical overview

The unemployment rate may be disaggregated into its frequency and extent components. Much previous research has indicated that youth-adult differences are primarily the result of a higher incidence of unemployment among youth, rather than longer spells.<sup>9</sup>

Table 1 provides further evidence of this relationship. The incidence of unemployment shown is simply the number of persons who experienced unemployment at any time over the period divided by the number of persons with any labor force experience during the period. Both the incidence over a single year and that for the 2-year period covered by the matched data have been calculated.<sup>10</sup> (Excluded from the unemployment figures are all persons who worked at least 50 weeks during the year, but also experienced a 1- to 2-week temporary lay-off. This exclusion should not greatly affect the estimates for youth because so few are full-year workers. The calculations for adults 25 years of age and older will be biased downward slightly because a number do experience such brief layoffs.) Table 1 also shows the probability that those in the sample who reported unemployment in 1974 or 1977 also experienced some joblessness during the subsequent year (1975 or 1978). This probability is a rough indicator of the “persistence” of unemployment. The closer the probability is to 1, the less “turnover” there is among those who experience unemployment. Last, we show the average number of weeks of joblessness experienced over the entire 2-year period covered by each match. This number was estimated by dividing the total number of weeks of unemployment over the match period by the number of persons who had some unemployment at any time during that 2 years.

Not surprisingly, the results are similar to the findings of other researchers. The likelihood of joblessness declines with increasing age, while average total time unemployed increases with age. Blacks have a higher incidence of joblessness, and usually spend more time unemployed than whites. Youth whose major activity was attending school show both a lower incidence and spend significantly less total time unemployed than other youth.<sup>11</sup>

The probability that persons who had some unemployment in 1974 or 1977 also experienced unem-

ployment during the following year varied among demographic groups. Youth age 18 to 24 were generally more likely than others to have some joblessness in both years, but these differences were not always large. Overall, the results suggest that neither the persistence hypothesis—that the same persons unemployed one year are also unemployed the next year—nor the turnover hypothesis—that different persons are unemployed each year—completely fits the facts.

Information on weeks of employment is shown in table 2. Reported weeks worked vary significantly by age, race, sex, and major activity.<sup>12</sup> And, except for those whose major activity was school, the average number of weeks worked varies in the opposite manner from that of the experience of unemployment.<sup>13</sup> Lastly, the probability that persons who worked during 1974 or 1977 also worked during the following year varied significantly among groups. For example, young blacks were much less likely than their white counterparts to have worked in consecutive years.

Recently, some researchers have suggested that youth-adult experiences cannot be fully explained by these simple average differences in the likelihood and amount of unemployment and the “normal turnover” that such movement is supposed to represent.<sup>14</sup> Specifically, it has been suggested that the “youth job problem” is really one of a small minority of persons who are without jobs for extended periods, rather than the outcome of high job turnover, seasonality, and the transition between school and work. Do the CPS match data lend any evidence for this hypothesis?

### Recurrent unemployment

*Repeat spells.* It is certainly true that analysis of “average durations” and “average flow probabilities” may mask differences in the experience of unemployment within demographic groups. For example, while the probability of unemployment may satisfactorily account for most youth-adult differences, the bulk of youth joblessness may be highly concentrated by race, sex, or major activity or the same persons may experience many (short) spells of unemployment over time. (Of course, such concentration may also occur within other labor force groups.) Thus, an important question is: Do the same persons experience multiple spells of unemployment from year to year, or is there little relationship between past and subsequent spell frequencies?

Data on the prevalence of repeated jobless spells are available from the CPS matched file. But the information is subject to one additional important limitation. In the March work-experience supplement to the CPS, one of the questions is: “Were the (number of) weeks (person’s name) was looking for work (or on layoff) all in one stretch?” The responses are coded as 1 spell, 2 spells, or 3 or more spells. *However, this question is asked only of*

those persons who also worked at any time during the previous year. Thus, spell information is obtained only for a subset of those who experienced some unemployment. Because demographic groups differ significantly in the likelihood of having worked during the year, the data may be biased in terms of assessing the issue of recurrent spells of unemployment. Consider, for example, the data set for the 1977-78 match. In 1977, blacks, women, and persons whose major activity was school were less likely to have worked than other groups. However, a number of such individuals were reported as having looked for work for varying lengths of time,

and were thus unemployed labor force participants. (The results from the 1974-75 match, although not shown here, were very much the same. The major difference was that, regardless of their experience in 1974, there was a somewhat greater likelihood that persons reported one or more spells in 1975 than was true of the 1977-78 match. This is clearly a cyclical phenomenon.)

There are a number of ways to examine the importance of multiple periods of unemployment.<sup>15</sup> For example, one might calculate the average number of spells per person, and compare that across demographic

**Table 1. The incidence and duration of unemployment by age, race, sex, and school status, 1974-75 and 1977-78**

Age, race, sex, and school status	Unemployment, 1974-75					Unemployment, 1977-78				
	Incidence, 1974 <sup>1</sup>	Incidence, 1975	Incidence, 1974-75 <sup>2</sup>	Probability in both 1974 and 1975	Duration, 1974-75 (in weeks) <sup>3</sup>	Incidence, 1977 <sup>1</sup>	Incidence, 1978	Incidence, 1977-78 <sup>2</sup>	Probability in both 1977 and 1978	Duration, 1977-78 (in weeks) <sup>3</sup>
<b>Total</b>										
16 to 17 years . . . .	27.6	32.6	40.3	0.350	14.0	24.1	27.0	34.6	0.350	13.9
18 to 19 years . . . .	29.6	31.7	43.5	.417	16.8	29.8	26.9	40.1	.401	15.8
20 to 24 years . . . .	24.0	27.6	36.6	.450	19.5	26.9	21.0	35.8	.338	18.3
25 to 54 years . . . .	11.1	14.1	19.3	.431	20.6	12.5	10.1	17.2	.355	19.0
55 years and over . .	8.3	10.0	13.7	.333	22.9	8.1	6.4	11.1	.278	23.1
<b>White</b>										
16 to 17 years . . . .	26.1	31.0	38.9	.352	14.1	22.8	24.5	32.8	.335	13.4
18 to 19 years . . . .	28.2	29.4	41.9	.391	15.5	27.0	24.3	37.5	.370	14.3
20 to 24 years . . . .	22.7	26.2	36.0	.434	18.7	25.2	19.2	33.6	.324	16.7
25 to 54 years . . . .	10.3	13.4	18.2	.435	19.6	11.5	9.8	16.0	.355	18.1
55 years and over . .	7.9	9.7	13.2	.342	21.5	7.7	6.0	10.4	.282	23.1
<b>Black and other</b>										
16 to 17 years . . . .	40.4	46.0	51.8	.341	13.7	34.8	50.0	48.1	.434	14.6
18 to 19 years . . . .	40.7	50.4	55.6	.563	22.9	51.0	45.3	56.9	.527	22.2
20 to 24 years . . . .	34.0	38.3	48.9	.531	23.8	38.4	32.6	49.4	.400	25.1
25 to 54 years . . . .	18.2	20.2	28.9	.411	22.5	20.4	15.1	26.5	.359	23.2
55 years and over . .	10.6	12.8	18.5	.275	21.9	12.8	11.1	18.1	.259	21.5
<b>Men</b>										
16 to 17 years . . . .	28.5	32.5	41.1	.359	15.3	24.9	28.1	36.0	.354	16.0
18 to 19 years . . . .	29.8	34.1	44.8	.485	19.0	29.3	27.3	39.0	.480	18.5
20 to 24 years . . . .	24.9	30.2	40.0	.530	21.4	29.2	21.5	38.2	.359	20.1
25 to 54 years . . . .	10.1	12.9	17.7	.493	21.7	10.8	9.2	15.2	.414	20.6
55 years and over . .	7.7	10.5	13.4	.347	23.5	8.3	7.0	11.5	.317	23.4
<b>Women</b>										
16 to 17 years . . . .	26.6	32.6	39.6	.339	12.6	23.2	25.9	33.1	.346	11.4
18 to 19 years . . . .	29.4	29.1	42.2	.340	14.3	30.4	26.5	41.2	.326	13.4
20 to 24 years . . . .	23.0	24.7	35.1	.358	17.2	24.4	20.4	33.3	.312	16.2
25 to 54 years . . . .	12.5	15.8	21.2	.365	18.4	14.5	11.3	19.5	.300	17.5
55 years and over . .	8.9	10.3	14.2	.316	22.9	7.9	5.7	10.6	.218	22.1
<b>Major activity: School</b>										
16 to 17 years . . . .	28.1	32.1	39.6	.346	13.8	23.0	25.9	33.6	.310	12.8
18 to 19 years . . . .	24.6	29.7	39.0	.352	12.3	23.1	25.6	35.6	.331	13.0
20 to 24 years . . . .	18.9	28.8	36.1	.338	11.5	24.0	20.9	32.6	.333	13.1
<b>Major activity: Other</b>										
16 to 17 years . . . .	25.7	35.3	44.7	.370	15.0	29.9	33.8	41.0	.517	19.2
18 to 19 years . . . .	34.1	33.6	47.9	.460	20.5	36.4	28.1	44.8	.445	18.1
20 to 24 years . . . .	25.2	27.3	37.9	.469	21.2	27.7	21.0	36.8	.399	19.2

<sup>1</sup> The incidence of unemployment in a single year is the number of persons who experienced some unemployment divided by the number with some labor force experience.

<sup>2</sup> The incidence of unemployment over the full 2-year period refers to the number of persons who were unemployed at least once divided by the number of persons who were in the labor force at least once during the 2 years.

<sup>3</sup> The average duration was calculated as total weeks unemployed during the 2-year period

divided by the number of persons who experienced unemployment at least once. Total weeks unemployed was derived by multiplying the number of persons unemployed by the mid-point of the following duration intervals: 1 to 4 weeks; 5 to 14 weeks; 15 to 26 weeks; 27 to 39 weeks; and 40 to 52 weeks.

NOTE: Excludes those persons who worked at least 50 weeks during the year and experienced a temporary layoff of 1 to 2 weeks.

**Table 2. Duration of employment by age, race, sex, and school status, 1974-75 and 1977-78**

[In weeks]

Age, race, sex, and school status	1974-75				1977-78			
	Average duration of employment, 1974	Average duration of employment, 1975	Average duration of employment, 1974-75	Probability of some employment in both 1974 and 1975	Average duration of employment, 1977	Average duration of employment, 1978	Average duration of employment, 1977-78	Probability of some employment in both 1977 and 1978
<b>Total</b>								
16 to 17 years . . . . .	24.0	25.4	39.8	0.832	21.8	25.9	38.9	0.862
18 to 19 years . . . . .	27.8	30.1	51.0	870	27.9	30.7	52.6	.913
20 to 24 years . . . . .	35.5	36.1	65.5	889	35.7	36.8	67.5	.928
25 to 54 years . . . . .	41.9	41.6	78.9	938	41.5	41.9	79.5	.954
55 years and over . . . . .	40.6	40.4	72.9	832	39.6	40.2	72.1	.852
<b>White</b>								
16 to 17 years . . . . .	24.9	25.9	41.4	850	22.4	26.3	40.4	.884
18 to 19 years . . . . .	28.3	30.4	52.4	888	28.7	31.3	54.6	.926
20 to 24 years . . . . .	35.7	36.2	66.0	895	36.4	37.2	68.8	.933
25 to 54 years . . . . .	41.9	41.7	79.2	939	41.6	42.0	79.7	.956
55 years and over . . . . .	40.6	40.5	72.9	830	39.7	39.3	72.5	.854
<b>Black and other</b>								
16 to 17 years . . . . .	15.9	20.4	26.6	667	15.6	21.2	26.4	.648
18 to 19 years . . . . .	23.3	26.7	39.8	718	21.4	25.8	38.2	.808
20 to 24 years . . . . .	34.4	35.3	61.6	846	31.1	34.0	58.7	.895
25 to 54 years . . . . .	41.5	40.5	76.6	923	40.6	41.5	77.6	.943
55 years and over . . . . .	40.3	39.5	72.9	859	38.8	37.9	68.1	.821
<b>Men</b>								
16 to 17 years . . . . .	23.6	25.8	40.6	845	21.9	26.6	40.1	.859
18 to 19 years . . . . .	28.9	30.5	53.3	894	28.5	30.4	53.7	.938
20 to 24 years . . . . .	36.5	36.7	69.0	924	37.1	38.4	72.5	.965
25 to 54 years . . . . .	44.3	43.8	86.7	981	44.0	44.3	87.3	.988
55 years and over . . . . .	41.4	40.6	75.0	856	40.4	40.9	74.4	.865
<b>Women</b>								
16 to 17 years . . . . .	24.5	24.9	39.0	817	21.6	25.1	37.7	.866
18 to 19 years . . . . .	26.5	29.6	48.5	843	27.3	31.0	51.5	.889
20 to 24 years . . . . .	34.5	35.4	61.9	851	34.3	35.1	62.5	.889
25 to 54 years . . . . .	38.7	38.5	69.2	880	38.2	38.9	70.4	.911
55 years and over . . . . .	39.4	40.0	69.8	798	38.4	39.3	68.8	.832
<b>Major activity: School</b>								
16 to 17 years . . . . .	23.4	24.6	38.1	825	21.3	25.1	37.5	.856
18 to 19 years . . . . .	23.2	23.9	40.3	844	23.3	25.6	42.5	.883
20 to 24 years . . . . .	24.0	25.0	42.6	819	24.8	25.4	44.6	.891
<b>Major activity: Other</b>								
16 to 17 years . . . . .	26.6	29.6	48.8	.862	24.5	30.6	47.7	.895
18 to 19 years . . . . .	31.9	35.8	61.3	.894	34.4	35.2	63.2	.943
20 to 24 years . . . . .	38.2	38.5	71.0	.905	37.6	38.9	71.9	.934

groups; or, one might estimate the proportion of the unemployed who had more than one spell over a given period. The approach taken here is a bit different, in that it attempts to determine whether individuals who report multiple spells in one period are more likely than those with one or no reported spells to experience multiple spells in the next period.

The information needed to address this question is presented in tables 3 and 4. These tables show the number of persons in the sample by the number of jobless spells reported in 1977 and the corresponding probability of having no spells reported, one spell, two spells, or more than two spells during 1978.<sup>16</sup> For example, table 3 shows that among 16- to 17-year-olds who had one spell in 1977, 20 percent had one spell in 1978. It is im-

portant to note that persons shown in the "no spells reported" category include both those who had no unemployment, and those with some unemployment but no work experience. Depending on the labor force group, the "no work-unemployment" group constituted 2 to 9 percent of the total "no spells reported" category.

The data in table 3 suggest several interesting phenomena. First, for all persons there is a somewhat higher probability that those who had multiple spells in 1977 experienced at least one spell in 1978. Second, the likelihood of experiencing two or more spells in 1978 tends to be an increasing function of the number of spells in 1977 (except among all 18- to 19-year-olds). Unfortunately, the reasons for the transitions from em-

ployment into unemployment cannot be determined. And, in order to identify any causal relation between multiple spells in one period and the experience of multiple spells in the subsequent period, we would require more information to ensure that the results are not simply due to heterogeneity in the probability of recurrent spells among individuals. Of equal importance is the fact that there is far from a perfect correlation between reported spells in 1977 and the likelihood of spell recurrence in 1978, and, as previously indicated, 2 years of data may be insufficient to truly assess the issue of spell recurrence. It may be noted that youth age 16 to 24 who had two or more spells in 1977 were somewhat more likely than their adult counterparts to report two or more spells in 1978; this was especially true for persons age 20 to 24.

Men with multiple jobless spells in 1977 were more likely than women to have multiple spells in 1978, and this difference in probabilities tends to increase with age. However, regardless of sex and age, the probability of two or more spells in 1978 is positively related to the number of spells in 1977.<sup>17</sup>

Table 4 shows the experience of persons 16 to 24 years of age by their major activity classification in March 1978. Persons 16 to 19 whose major activity was school were less likely to report having any spells in

1978 (recall that this does not necessarily mean they had no unemployment), regardless of the number of spells in 1977. There is no clear difference in this probability among 20- to 24-year-olds. Individuals age 16 to 19 whose major activity was other than school and who experienced two or more jobless spells in 1977 were just slightly more prone to report multiple spells again in 1978 compared to the school group. However, this difference was not very large.

The data in tables 3 and 4 do indicate some correlation between repeat spells in 1977 and spells in 1978, but the significance of this relationship is unclear. Differences in the probability of recurrent spells between youth and adults are not large, but the fact that one must have had some work experience in 1977 in order to be asked about jobless spells may introduce a significant bias to this comparison. Thus, while there is some support for the hypothesis that "past turnover is associated with subsequent turnover," the phenomenon does not appear to be pervasive, or to differ greatly among labor force groups.<sup>18</sup>

*The concentration of unemployment.* Perhaps recurrent, multiple spells of unemployment mask the fundamental nature of youth and other groups' joblessness. Instead, it may be that unemployment is truly concentrated

**Table 3. The probability of experiencing recurring spells of unemployment by age and sex, 1977-78**

[Numbers in thousands]

Age and spells of unemployment in 1977	Total					Men					Women				
	Number in sample	Probability of experiencing:				Number in sample	Probability of experiencing:				Number in sample	Probability of experiencing:			
		No spells, 1978	One spell, 1978	Two spells, 1978	Three or more spells, 1978		No spells, 1978	One spell, 1978	Two spells, 1978	Three or more spells, 1978		No spells, 1978	One spell, 1978	Two spells, 1978	Three or more spells, 1978
<b>16 to 17 years:</b>															
No spells reported . . . . .	1,869	0.855	0.098	0.025	0.022	910	0.854	0.091	0.029	0.026	959	0.856	0.104	0.022	0.018
One spell . . . . .	140	.671	.200	.071	.057	71	.662	.197	.085	.056	69	.681	.203	.058	.058
Two spells . . . . .	33	.666	.152	.121	.061	24	.667	.167	.125	.042	9	.667	.111	.111	.111
Three or more spells . . . . .	31	.645	.194	.129	.032	22	.545	.227	.182	.045	9	.889	.111	.000	.000
<b>18 to 19 years:</b>															
No spells reported . . . . .	1,160	.834	.107	.038	.022	544	.827	.105	.037	.031	616	.839	.109	.039	.013
One spell . . . . .	193	.684	.212	.021	.083	81	.556	.309	.037	.099	112	.777	.143	.009	.071
Two spells . . . . .	67	.552	.179	.134	.134	40	.500	.175	.175	.150	27	.630	.185	.074	.111
Three or more spells . . . . .	56	.661	.268	.000	.071	39	.667	.256	.000	.077	17	.647	.294	.000	.059
<b>20 to 24 years:</b>															
No spells reported . . . . .	2,552	.876	.092	.018	.015	1,136	.862	.104	.018	.017	1,416	.887	.082	.018	.013
One spell . . . . .	423	.757	.175	.035	.033	229	.742	.179	.039	.039	194	.773	.170	.031	.026
Two spells . . . . .	131	.603	.183	.130	.084	87	.575	.207	.126	.092	44	.659	.136	.136	.068
Three or more spells . . . . .	116	.586	.181	.095	.138	77	.481	.234	.104	.182	39	.795	.077	.077	.051
<b>25 to 54 years:</b>															
No spells reported . . . . .	17,161	.952	.035	.007	.007	7,958	.951	.034	.008	.007	9,203	.952	.036	.006	.006
One spell . . . . .	1,164	.717	.194	.054	.034	562	.660	.217	.068	.055	602	.771	.173	.042	.015
Two spells . . . . .	284	.585	.246	.088	.081	171	.503	.304	.105	.088	113	.708	.159	.062	.071
Three or more spells . . . . .	236	.593	.203	.072	.131	138	.522	.225	.080	.174	98	.694	.173	.061	.071
<b>55 years and over:</b>															
No spells reported . . . . .	11,404	.986	.009	.002	.002	4,945	.981	.013	.002	.004	6,459	.990	.007	.002	.001
One spell . . . . .	227	.797	.128	.048	.026	147	.755	.156	.061	.027	80	.875	.075	.025	.025
Two spells . . . . .	53	.566	.283	.132	.019	32	.594	.250	.156	.000	21	.524	.333	.095	.048
Three or more spells . . . . .	48	.583	.167	.063	.188	31	.516	.161	.097	.226	17	.706	.176	.000	.118

**Table 4. The probability of experiencing recurring spells of unemployment by age and school status, 1977-1978**

[Numbers in thousands]

Age and spells of unemployment in 1977	Major activity: School					Major activity: Other				
	Number in sample	Probability of experiencing:				Number in sample	Probability of experiencing:			
		No spells, 1978	One spell, 1978	Two spells, 1978	Three or more spells, 1978		No spells, 1978	One spell, 1978	Two spells, 1978	Three or more spells, 1978
<b>16 to 17 years:</b>										
No spells reported .....	1,642	0.859	0.099	0.023	0.019	227	0.828	0.088	0.044	0.040
One spell .....	110	.736	.173	.064	.027	30	.433	.300	.100	.167
Two spells .....	25	.680	.160	.120	.040	8	.625	.125	.125	.125
Three or more spells .....	24	.708	.125	.125	.042	7	.429	.429	.143	.000
<b>18 to 19 years:</b>										
No spells reported .....	646	.828	.115	.042	.015	514	.850	.097	.033	.029
One spell .....	83	.745	.229	.000	.024	110	.636	.200	.036	.127
Two spells .....	20	.650	.150	.100	.100	47	.510	.191	.149	.149
Three or more spells .....	15	.733	.267	.000	.000	41	.634	.268	.000	.098
<b>20 to 24 years:</b>										
No spells reported .....	438	.872	.103	.018	.007	2,086	.875	.091	.017	.017
One spell .....	62	.774	.194	.016	.016	361	.753	.172	.039	.036
Two spells .....	12	.667	.167	.083	.083	119	.597	.185	.134	.084
Three or more spells .....	5	.200	.200	.400	.200	111	.603	.180	.081	.135

among persons who suffer very long single spells of unemployment, while most others are unemployed only infrequently or not unemployed at all. To address this question, it is necessary to examine the extent to which the total number of weeks unemployed during a given period is "concentrated" among a small number of people.<sup>19</sup>

Little information is available on this issue, primarily because of the difficulties in obtaining unemployment (and employment) spell histories. The usual approach has been to use data from the March CPS work-experience supplement to measure the extent of unemployment over the previous year. From these data it is possible to calculate the number of weeks of joblessness by duration category as a percent of total reported weeks unemployed for any given labor force group. For example, in 1975, only 4.4 percent of all persons with some labor force experience were unemployed for more than 26 weeks, but this group accounted for almost 52 percent of total weeks unemployed.<sup>20</sup>

The same kind of information by age, sex, race, and major activity is shown in tables 5, 6, and 7 for the years 1974-75, and 1977-78. Again, the data are from the matched CPS files. The calculations are based on the mid-range of the unemployment duration categories. This is a rather simplistic assumption, but it should not affect the relative value of the estimates because it is used consistently. The analysis excludes essentially year-round workers with 1 to 2 weeks unemployment due to temporary layoff, but all other persons who looked for work are included.

As previous research has indicated, the aggregate probability of leaving unemployment tends to decline with time unemployed. The result is an apparent concentration of unemployment in longer duration categories

simply because the likelihood of escape from joblessness is lower the longer a spell has lasted. Even if each individual's escape rate were constant over time unemployed, a relatively large share of unemployment would be accounted for by individuals with lower escape probabilities. The data should be interpreted with this in mind.

As expected, the yearly data in table 5 provide clear evidence of over-the-year unemployment concentration, but the degree of concentration varies somewhat by age, sex, and economic conditions. In 1974, the 8.6 percent of the labor force of young men age 16 to 17 who were unemployed more than 14 weeks accounted for 69.3 percent of total weeks unemployed. (The labor force percentages are not shown here, but are available upon request.) Among women of the same age, the numbers were 4.1 and 53.6 percent, respectively. The brief bouts that youth have with unemployment would appear to contribute less to overall unemployment; among 16- to 17-year-old males in 1974, 14.6 percent were jobless less than 5 weeks and accounted for just 12.8 percent of all weeks unemployed. There is a pronounced cyclical pattern to these data. In 1975, both the proportion of the labor force and the percent of total weeks unemployed indicate a sizable shift toward extensive individual total weeks of unemployment. The 1977 and 1978 distributions tend to fall between those for 1974 and 1975.<sup>21</sup>

Table 6 shows similar information by race. With the exception of 16- to 17-year-olds in 1974, both the percent of total weeks unemployed over 14 weeks and the proportion of the labor force jobless for that length of time are higher for black workers. And, once again, cyclical factors clearly operate to lengthen total time out of work: In 1975, fully 23 percent of the labor force of blacks age 18 to 19 were unemployed more than 14

weeks, accounting for 82.7 percent of total weeks unemployed. For white workers, the figures were 10.5 and 76.7 percent, respectively.

The distributions vary only slightly by major activity (table 7), except among those age 16 to 17, for whom no pattern is apparent. For those 18 to 19 whose major activity was not school, unemployment was more concentrated in long total durations relative to the major activity school group, irrespective of aggregate economic conditions. With the exception of 1977, this was also true among 20- to 24-year-olds.

The data tell a consistent story. Weeks unemployed over the course of a year are highly concentrated and very sensitive to the business cycle. Although the degree of concentration among adults is somewhat more skewed toward longer total time unemployed than among youth, the difference is not very large. However, relating this concentration to the issue of "turnover" depends, in part, on whether lengthy unemployment occurs in one spell or is spread over many spells. Our data show that some persons are unemployed a lot, but this does not necessarily mean that these individuals spend a long time finding a particular job. The observed inequality in the distribution of unemployment could also result if all unemployment were generated by high turnover. Any determination of the importance of turnover requires estimating (simulating) how unequal unemployment would be in a simple economy with high turnover and comparing the results to the observed concentrations.<sup>22</sup>

The following tabulation tries to put this issue into

some perspective. The first eight lines indicate the proportion of persons unemployed 15 weeks or longer—generally considered the floor for long-term unemployment—in the indicated year and who also worked, by the number of spells of unemployment reported. (Only data for 1974 and 1977 are shown here, but the results for 1975 and 1978 were similar.) For example, among 16- to 17-year-olds in 1977, 44.4 percent of those with unemployment over 14 weeks reported it all in one spell. (The last two lines of the tabulation show the percentage of people unemployed over 14 weeks who did not work at any time during the indicated year and for whom there is thus no spell information available.)

	Age			
	16 to 17	18 to 19	20 to 24	25 and over
1974:				
Persons with work experience . . . . .	100.0	100.0	100.0	100.0
1 spell . . . . .	51.4	40.6	48.2	48.6
2 spells . . . . .	32.4	36.1	23.7	23.6
3 or more spells . . . . .	16.2	33.3	28.1	27.7
1977:				
Persons with work experience . . . . .	100.0	100.0	100.0	100.0
1 spell . . . . .	44.4	38.6	54.6	62.5
2 spells . . . . .	28.9	30.1	24.6	19.1
3 or more spells . . . . .	26.7	31.3	20.8	18.4
Persons with no work experience:				
1974 . . . . .	22.9	12.7	10.1	21.4
1977 . . . . .	26.2	17.0	12.5	13.2

Table 5. Percent distribution of unemployment by duration, sex, and age, selected years, 1974-78

Year and duration of unemployment	Total					Men					Women				
	16 to 17 years	18 to 19 years	20 to 24 years	25 to 54 years	55 years and over	16 to 17 years	18 to 19 years	20 to 24 years	25 to 54 years	55 years and over	16 to 17 years	18 to 19 years	20 to 24 years	25 to 54 years	55 years and over
<b>1974</b>															
1 to 4 weeks . . . . .	15.2	9.2	7.2	4.8	3.1	12.8	6.8	6.5	3.3	2.4	18.8	12.7	8.2	6.5	3.6
5 to 14 weeks . . . . .	28.7	27.4	26.6	26.7	18.9	29.4	29.1	28.6	27.0	17.9	27.8	25.1	24.3	26.4	17.9
15 to 26 weeks . . . . .	19.3	24.6	30.9	30.1	24.7	27.7	22.9	29.0	32.5	27.5	24.0	27.0	33.2	27.2	18.0
27 to 39 weeks . . . . .	16.8	24.5	21.6	21.0	24.7	17.4	25.6	24.8	20.3	24.3	16.1	22.9	17.8	21.9	22.1
40 to 52 weeks . . . . .	19.9	14.5	13.6	17.3	34.4	24.2	15.6	11.1	16.8	27.9	13.5	12.8	16.5	18.0	38.5
<b>1975</b>															
1 to 4 weeks . . . . .	7.1	4.8	3.3	2.6	1.9	5.1	3.4	2.2	1.8	1.4	9.7	7.0	5.0	3.6	2.6
5 to 14 weeks . . . . .	17.3	20.3	14.7	17.6	11.3	19.3	20.4	14.6	18.1	12.3	14.6	20.2	15.0	17.0	9.6
15 to 26 weeks . . . . .	23.7	22.9	25.8	27.2	27.3	24.5	23.3	27.2	31.2	30.8	22.7	22.3	23.7	22.6	22.0
27 to 39 weeks . . . . .	20.6	20.6	20.6	20.7	22.2	21.3	23.3	22.2	20.1	17.8	19.7	16.3	18.2	19.4	28.8
40 to 52 weeks . . . . .	31.3	31.4	35.5	31.9	37.4	29.7	29.6	33.8	28.9	37.8	33.3	34.1	38.1	35.3	36.8
<b>1977</b>															
1 to 4 weeks . . . . .	11.2	8.4	4.9	3.8	1.8	8.5	6.7	3.5	2.7	1.9	15.9	10.4	6.9	5.1	1.7
5 to 14 weeks . . . . .	27.7	25.9	23.7	22.1	15.2	25.0	24.3	22.9	21.3	14.5	32.3	27.7	25.0	23.0	16.3
15 to 26 weeks . . . . .	15.4	25.3	31.1	32.5	23.1	18.4	26.2	32.2	37.1	22.6	10.4	24.3	29.2	27.6	23.8
27 to 39 weeks . . . . .	19.7	20.4	10.1	22.8	26.0	23.0	21.1	18.1	21.3	26.2	14.0	19.5	18.0	24.4	25.6
40 to 52 weeks . . . . .	26.0	20.0	22.2	18.8	33.9	25.2	21.6	23.2	17.7	34.7	27.3	18.2	20.8	20.0	32.7
<b>1978</b>															
1 to 4 weeks . . . . .	8.1	6.1	4.3	3.6	1.9	6.6	4.5	3.5	2.6	1.8	10.6	8.6	5.2	4.7	2.1
5 to 14 weeks . . . . .	21.4	26.4	18.6	24.2	22.2	15.4	23.4	16.8	26.2	22.6	31.0	30.6	20.8	22.1	20.7
15 to 26 weeks . . . . .	26.1	27.6	34.4	30.9	22.8	26.8	29.5	33.8	35.3	23.5	25.1	25.2	35.1	26.2	20.7
27 to 39 weeks . . . . .	18.1	15.8	20.4	19.9	21.5	18.9	15.0	25.9	15.2	19.4	16.8	16.9	13.3	24.8	24.6
40 to 52 weeks . . . . .	26.2	24.0	22.4	21.5	31.7	32.2	27.8	19.9	20.7	31.0	16.4	18.8	25.5	22.3	31.8



**Table 6. Percent distribution of unemployment by duration, race, and age, selected years, 1974-78**

Year and duration of unemployment	White					Black and other				
	16 to 17 years	18 to 19 years	20 to 24 years	25 to 54 years	55 years and over	16 to 17 years	18 to 19 years	20 to 24 years	25 to 54 years	55 years and over
<b>1974</b>										
1 to 4 weeks	15.0	10.0	7.3	4.8	2.8	16.4	5.9	7.0	4.7	3.9
5 to 14 weeks	26.4	29.2	27.2	27.9	19.0	43.4	19.7	24.0	21.4	10.7
15 to 26 weeks	19.6	27.9	30.7	29.6	22.2	17.6	11.4	31.9	32.7	31.7
27 to 39 weeks	18.0	21.3	22.1	22.3	22.6	9.4	36.6	19.2	14.9	27.8
40 to 52 weeks	20.9	11.5	12.7	15.5	33.5	13.1	25.6	17.9	26.3	25.9
<b>1975</b>										
1 to 4 weeks	7.0	5.3	3.6	2.8	1.8	7.0	3.6	2.1	1.6	2.3
5 to 14 weeks	17.5	22.8	15.9	18.5	11.3	16.1	13.7	10.1	13.4	10.7
15 to 26 weeks	24.9	25.9	27.3	27.6	26.9	17.4	14.7	19.9	25.1	30.0
27 to 39 weeks	20.7	21.2	22.2	20.9	21.7	20.0	26.7	14.4	19.9	26.0
40 to 52 weeks	29.9	29.6	30.9	30.2	38.3	39.1	41.3	37.9	39.9	31.1
<b>1977</b>										
1 to 4 weeks	11.8	9.6	5.8	4.0	1.8	8.4	5.1	2.3	3.0	2.2
5 to 14 weeks	20.6	29.1	27.0	24.0	14.3	26.9	16.7	14.4	15.3	21.3
15 to 26 weeks	30.4	23.5	33.4	32.8	22.9	14.4	30.7	24.4	31.3	24.0
27 to 39 weeks	23.5	19.4	17.7	23.5	26.0	17.5	23.2	19.1	20.2	25.7
40 to 52 weeks	22.1	18.5	16.1	15.7	35.0	32.6	24.3	39.9	30.3	26.9
<b>1978</b>										
1 to 4 weeks	8.7	7.2	5.0	4.0	1.9	6.0	3.4	2.3	2.1	2.0
5 to 14 weeks	22.9	29.4	20.4	26.3	22.9	16.0	18.4	13.3	16.1	18.7
15 to 26 weeks	23.9	28.0	36.7	31.9	23.0	34.4	26.5	27.8	26.9	21.4
27 to 39 weeks	20.5	17.7	20.7	19.7	22.7	9.2	10.7	19.6	20.6	15.3
40 to 52 weeks	24.0	17.8	17.2	18.1	29.5	34.3	40.9	37.0	34.3	42.6

The results are interesting, in part because of the differences between years. In 1977, teenagers who worked and who experienced extensive unemployment were more likely than persons over age 20 to have been jobless two or more times; in addition, a larger fraction of teenagers than of others did not work at all and experienced more than 14 weeks of unemployment. On the other hand, the data for 1974 show little difference in spell proportions except for 18- to 19-year-olds. For example, among 16- to 17-year-olds who worked in 1974, 48.6 percent of those with at least 15 total weeks of unemployment had two or more spells compared to 51.3 percent for adults 25 years of age and older. The proportion with no work experience was little different between adults and 16- to 17-year-olds, although a much smaller percentage of those age 18 to 24 reported no work experience. While a sizable proportion of long duration unemployment is accounted for by persons who had no work experience during the year, the data do suggest that it is hazardous to conclude that a large majority of workers with a lot of unemployment incur it in one long spell.

It is very useful to know that, in a single year, joblessness is concentrated among a small proportion of the labor force who are unemployed a lot, although not necessarily in a single spell. However, it is quite another matter to infer that the same individuals experience persistent, lengthy periods of unemployment year after year. In the next section, we use CPS data to gain some additional perspective on this issue.

**Table 7. Percent distribution of unemployment by duration, school status, and age, selected years, 1974-78**

Year and duration of unemployment	Major activity: School			Major activity: Other		
	16 to 17 years	18 to 19 years	20 to 24 years	16 to 17 years	18 to 19 years	20 to 24 years
<b>1974</b>						
1 to 4 weeks	17.7	18.6	15.6	6.6	5.8	6.3
5 to 14 weeks	27.4	38.8	36.4	33.5	23.2	25.5
15 to 26 weeks	19.7	22.1	22.9	18.1	25.5	31.8
27 to 39 weeks	16.7	10.7	10.5	17.5	29.5	22.9
40 to 52 weeks	18.6	9.9	14.7	24.3	16.1	13.4
<b>1975</b>						
1 to 4 weeks	7.0	8.0	9.2	7.4	3.0	2.5
5 to 14 weeks	16.7	22.9	28.3	20.7	18.9	13.0
15 to 26 weeks	22.9	25.8	36.7	28.2	21.3	24.4
27 to 39 weeks	20.2	19.1	14.1	22.7	21.5	18.6
40 to 52 weeks	33.2	24.2	11.8	21.0	35.4	38.6
<b>1977</b>						
1 to 4 weeks	12.9	13.1	10.1	6.3	6.3	4.3
5 to 14 weeks	30.2	27.7	29.9	20.7	25.1	23.0
15 to 26 weeks	14.8	29.1	16.6	17.3	23.7	32.7
27 to 39 weeks	16.8	19.7	26.7	27.9	20.7	17.1
40 to 52 weeks	25.3	10.3	16.6	27.8	24.3	22.9
<b>1978</b>						
1 to 4 weeks	9.4	8.5	12.1	3.7	4.2	3.4
5 to 14 weeks	21.1	36.2	21.9	22.6	28.4	18.2
15 to 26 weeks	22.5	23.3	28.0	39.4	31.0	35.2
27 to 39 weeks	20.6	14.7	13.9	9.1	16.7	21.2
40 to 52 weeks	26.4	29.6	24.1	25.3	19.6	22.1

**Is current status linked with past unemployment?**

If the observed concentration of unemployment is more than a statistical anomaly in information for single years, one would expect data from the 2-year CPS

matched samples to corroborate the following two hypotheses: First, the more weeks an individual is unemployed in one year, the higher is his or her probability of experiencing some unemployment the subsequent year. Second, a worker with extensive unemployment

**Table 8. Weeks of unemployment in 1974 and 1977 and the probability of experiencing unemployment during the subsequent year, by sex, race, and age**

Sex, race, age, and weeks of unemployment in 1975 or 1978	Probability of experiencing unemployment in 1975 based on weeks of unemployment in 1974				Probability of experiencing unemployment in 1978 based on weeks of unemployment in 1977			
	Less than 5 weeks	5 to 14 weeks	15 weeks and over	27 weeks and over	Less than 5 weeks	5 to 14 weeks	15 weeks and over	27 weeks and over
<b>Total</b>								
16 to 17 years:								
1 or more weeks	.316	.402	.375	.500	.301	.355	.459	.432
15 weeks and over	.103	.182	.146	.250	.091	.118	.230	.216
18 to 19 years:								
1 or more weeks	.349	.455	.481	.621	.320	.395	.530	.522
15 weeks and over	.109	.178	.291	.379	.102	.118	.250	.261
20 to 24 years:								
1 or more weeks	.316	.480	.573	.603	.229	.320	.442	.487
15 weeks and over	.124	.246	.393	.414	.091	.249	.299	.360
25 to 54 years:								
1 or more weeks	.318	.445	.502	.524	.264	.334	.426	.438
15 weeks and over	.136	.251	.361	.382	.081	.102	.270	.309
55 years and over:								
1 or more weeks	.203	.327	.397	.385	.203	.234	.325	.303
15 weeks and over	.125	.202	.319	.295	.051	.102	.198	.197
<b>Men</b>								
16 to 17 years:								
1 or more weeks	.308	.404	.429	.625	.265	.340	.512	.480
15 weeks and over	.128	.191	.250	.375	.074	.109	.279	.280
18 to 19 years:								
1 or more weeks	.464	.508	.478	.652	.397	.500	.518	.539
15 weeks and over	.196	.190	.283	.435	.175	.120	.268	.269
20 to 24 years:								
1 or more weeks	.360	.570	.663	.606	.226	.342	.448	.478
15 weeks and over	.151	.290	.488	.455	.097	.139	.326	.363
25 to 54 years:								
1 or more weeks	.374	.503	.543	.569	.294	.383	.485	.516
15 weeks and over	.180	.277	.412	.431	.094	.113	.314	.387
55 years and over:								
1 or more weeks	.267	.356	.369	.333	.289	.280	.346	.329
15 weeks and over	.167	.220	.298	.262	.053	.120	.223	.224
<b>Women</b>								
16 to 17 years:								
1 or more weeks	.325	.400	.300	.250	.333	.375	.333	.333
15 weeks and over	.078	.167	.000	.000	.107	.097	.111	.250
18 to 19 years:								
1 or more weeks	.260	.368	.485	.500	.262	.288	.500	.500
15 weeks and over	.041	.158	.303	.286	.048	.102	.227	.250
20 to 24 years:								
1 or more weeks	.275	.352	.508	.600	.231	.283	.431	.500
15 weeks and over	.099	.183	.308	.360	.085	.111	.255	.357
25 to 54 years:								
1 or more weeks	.282	.372	.448	.472	.246	.285	.356	.364
15 weeks and over	.109	.218	.294	.326	.074	.091	.218	.236
55 years and over:								
1 or more weeks	.147	.289	.439	.444	.048	.170	.293	.261
15 weeks and over	.088	.178	.351	.333	.048	.075	.159	.152
<b>White</b>								
16 to 17 years:								
1 or more weeks	.311	.393	.395	.545	.282	.351	.440	.433
15 weeks and over	.098	.180	.233	.409	.089	.221	.360	.367
18 to 19 years:								
1 or more weeks	.339	.419	.444	.600	.306	.364	.493	.469
15 weeks and over	.098	.151	.286	.360	.089	.111	.217	.250
20 to 24 years:								
1 or more weeks	.284	.455	.573	.604	.205	.313	.448	.479
15 weeks and over	.101	.221	.363	.396	.076	.128	.299	.352
25 to 54 years:								
1 or more weeks	.330	.446	.504	.515	.254	.341	.428	.448
15 weeks and over	.135	.242	.367	.382	.068	.097	.265	.320
55 years and over:								
1 or more weeks	.189	.354	.400	.397	.180	.229	.339	.306
15 weeks and over	.113	.219	.325	.309	.040	.105	.194	.185

**Table 8. Continued—Weeks of unemployment in 1974 and 1977 and the probability of experiencing unemployment during the subsequent year, by sex, race, and age**

Sex, race, age, and weeks of unemployment in 1975 or 1978	Probability of experiencing unemployment in 1975 based on weeks of unemployment in 1974				Probability of experiencing unemployment in 1978 based on weeks of unemployment in 1977			
	Less than 5 weeks	5 to 14 weeks	15 weeks and over	27 weeks and over	Less than 5 weeks	5 to 14 weeks	15 weeks and over	27 weeks and over
<b>Black and other</b>								
16 to 17 years:								
1 or more weeks	.348	.438	.000	.000	.421	.375	.545	.429
15 weeks and over	.130	.188	.000	.000	.105	.188	.545	.143
18 to 19 years:								
1 or more weeks	.412	.667	.625	.583	.391	.550	.581	.643
15 weeks and over	.176	.333	.313	.417	.174	.150	.323	.286
20 to 24 years:								
1 or more weeks	.483	.538	.577	.600	.400	.357	.425	.500
15 weeks and over	.241	.385	.538	.500	.200	.190	.301	.375
25 to 54 years:								
1 or more weeks	.258	.440	.494	.559	.311	.290	.420	.405
15 weeks and over	.145	.307	.333	.382	.149	.130	.287	.278
55 years and over:								
1 or more weeks	.272	.000	.381	.300	.333	.261	.231	.071
15 weeks and over	.182	.000	.286	.200	.111	.087	.231	.286

one year is more likely to encounter the same prospect the next year.

Tables 8 and 9 provide information relevant to these hypotheses.<sup>23</sup> They show the probability that persons had at least 1 week or more than 14 weeks of joblessness in 1975 or 1978 by the length of time unemployed during the previous year (1974 or 1977). For example, table 8 shows that, for those age 16 to 17 who were unemployed 1 to 4 weeks in 1974, the probability of having at least 1 week of unemployment in 1975 was .316.

With virtually no exception, persons unemployed longer in one year have a higher probability of having some joblessness during the next year. Moreover, long-term unemployment (a total of 15 weeks or more) during one year is associated with a higher probability of extensive total joblessness during the subsequent year.

There appear to be some age-related differences in these probabilities, but they are not so large or persistent that they show up in each data set. However, this unemployment persistence does seem to be slightly greater among those age 18 to 24 than among adults or young teenagers. There is also a cyclical pattern in the unemployment probabilities; that is, regardless of time unemployed during 1974, individuals had a higher probability of 15 weeks or more of joblessness in 1975 than during the recovery-expansion years of 1977–78. Once again, this underscores the critical importance of the business cycle in understanding unemployment duration.

Blacks and whites exhibit the same general pattern as all workers in these age categories. However, except among 16- to 17-year-old employed blacks (for whom

**Table 9. Weeks of unemployment in 1974 and 1977 and the probability of experiencing unemployment during the subsequent year, by school status and age**

School status, age, and weeks of unemployment in 1975 or 1978	Probability of experiencing unemployment in 1975 based on weeks of unemployment in 1974				Probability of experiencing unemployment in 1978 based on weeks of unemployment in 1977			
	Less than 5 weeks	5 to 14 weeks	15 weeks and over	27 weeks and over	Less than 5 weeks	5 to 14 weeks	15 weeks and over	27 weeks and over
<b>Major activity: School</b>								
16 to 17 years:								
1 or more weeks	0.321	0.404	0.351	0.444	0.295	0.307	0.469	0.320
15 weeks and over	.107	.211	.162	.278	.090	.093	.143	.080
18 to 19 years:								
1 or more weeks	.348	.368	.333	.400	.214	.333	.600	.545
15 weeks and over	.058	.132	.133	.200	.071	.103	.200	.091
20 to 24 years:								
1 or more weeks	.256	.500	.273	.250	.267	.314	.500	.615
15 weeks and over	.051	.083	.000	.000	.022	.143	.273	.308
<b>Major activity: Other</b>								
16 to 17 years:								
1 or more weeks	.267	.400	.455	.667	.330	.555	.684	.667
15 weeks and over	.067	.100	.091	.167	.095	.222	.421	.333
18 to 19 years:								
1 or more weeks	.350	.508	.516	.656	.416	.425	.457	.514
15 weeks and over	.167	.206	.328	.406	.130	.125	.271	.314
20 to 24 years:								
1 or more weeks	.333	.476	.597	.630	.218	.321	.436	.469
15 weeks and over	.145	.272	.425	.444	.109	.137	.306	.367

the very small sample makes data interpretation hazardous), blacks unemployed in 1974 or 1977 were somewhat more likely than whites to experience unemployment in 1975 or 1978. And blacks who were jobless at least 15 weeks in either 1974 or 1977 had a somewhat higher probability than whites of experiencing extensive unemployment during the subsequent year.

Table 9 shows that 18- to 24-year-olds whose major activity was not school, and who had more than 14 weeks of unemployment in 1974 or 1977, were only marginally more likely than their student counterparts to experience long periods of unemployment in the following year. For example, 30.6 percent of those age 20 to 24 whose major activity was other than school and who were unemployed more than 14 weeks in 1977 had

long-term unemployment in 1978, compared to 27.3 percent among the school group. However, these differences are related, at least in part, to the business cycle; the differences in probabilities are much greater for 1974-75 than for 1977-78.

The foregoing analysis does suggest that unemployment is concentrated, in the sense that there is an association between past and subsequent unemployment over a 2-year period for the persons in this sample. However, determination of a strict causal relationship, or of influences, other than the business cycle, on the labor supply and demand schedules underlying the association is beyond the scope of this study.<sup>24</sup> Nor have we advanced any hypothesis about what constitutes a substantively significant degree of persistence. These are subjects for further research.<sup>25</sup> □

—FOOTNOTES—

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<sup>1</sup> A critique of much of the relevant literature is contained in Norman Bowers, "Young and marginal: an overview of youth employment," *Monthly Labor Review*, October 1979, pp. 4-16. A turnover perspective and an implicit critique of that approach can be found in Jacob Mincer and Linda Leighton, "Labor Turnover and Youth Unemployment," and Kim Clark and Lawrence Summers, "The Dynamics of Youth Unemployment," in Richard Freeman and David Wise, eds., *The Youth Unemployment Problem: Its Nature, Causes, and Consequences* (Chicago, University of Chicago Press, 1981). Also see Joseph Antos and Wesley Mellow, "The Youth Labor Market: A Dynamic Overview," BLS Staff Paper 11 (Bureau of Labor Statistics, 1979).

<sup>2</sup> For example, this article will not discuss the potential impact of unemployment on subsequent wages (and growth in wages) or career prospects. See Brian E. Becker and Stephen M. Hills, "Teenage Unemployment: Some Evidence of the Long Run Effects on Wages," *Journal of Human Resources*, Summer 1980, pp. 354-72; David Ellwood, "Teenage Unemployment: Permanent Scars or Temporary Blemishes," in Richard Freeman and David Wise, eds., *The Youth Unemployment Problem: Its Nature, Causes, and Consequences* (Chicago, University of Chicago Press, 1981); and Paul Osterman, *Getting Started: The Youth Labor Market* (Cambridge, Mass., MIT Press, 1980).

<sup>3</sup> See *The Current Population Survey: Design and Methodology*, Technical Paper 40 (Bureau of the Census, 1978).

<sup>4</sup> For a discussion of matched data from the CPS, see *Using the Current Population Survey as a Longitudinal Data Base*, Report 608 (Bureau of Labor Statistics, 1980); Daniel Glazer, "A micro-data approach to the Current Population Survey," *Monthly Labor Review*, February 1979, pp. 46-48; and Terence Kelly, "The Creation of Longitudinal Data from Cross-Section Surveys: An Illustration from the Current Population Survey," *Annals of Economic and Social Measurement*, April 1973, pp. 209-14.

<sup>5</sup> See Robert Aquilino, "Methods Test Phase III: Third Report on the Accuracy of Retrospective Interviewing and Effects of Change in Respondent on Labor Force Data," Memo, Bureau of the Census, Apr. 2, 1971. Also see Dale Morgenstern and Nancy Barrett, "The Retrospective Bias in Unemployment Reporting by Sex, Race and

Age," *Journal of the American Statistical Association*, June 1974, pp. 355-57.

<sup>6</sup> See James Heckman, "Sample Selection Bias as a Specification Error," Working Paper No. 172 (Cambridge, Mass., National Bureau of Economic Research, 1977), pp. 1-55; and G. S. Maddala, "Self-Selectivity Problems in Econometric Models," in P. Krishniah, ed., *Applications of Statistics* (Amsterdam, North Holland Publishing Co., 1977). An example of selectivity bias from CPS matched data is included in Francis W. Horvath, "Tracking individual earnings mobility with the Current Population Survey," *Monthly Labor Review*, May 1980, pp. 43-46.

<sup>7</sup> See Barbara Bailer, "The Effects of Rotation Group Bias on Estimates from Panel Surveys," *Journal of the American Statistical Association*, March 1975, pp. 23-30; Barbara Bailer and Camilla Brooks, "An Error Profile: Employment as Measured by the Current Population Survey," report prepared for the Federal Committee on Statistical Methodology, Subcommittee on Nonsampling Errors, 1978; and Philip McCarthy, "Some Sources of Error in Labor Force Estimates from the Current Population Survey," Background Paper 15 (National Commission on Employment and Unemployment Statistics, 1978), pp. 62-76.

<sup>8</sup> The data supporting these assertions are available from the author upon request.

<sup>9</sup> See George Perry, "Unemployment Flows in the U.S. Labor Market," *Brookings Papers on Economic Activity*, 2, 1972, pp. 245-78; Jacob Mincer and Linda Leighton, "Labor Turnover and Youth Unemployment"; and Robert Frank and Richard Freeman, "The Distribution of the Unemployment Burden: Do the Last Hired Leave First?" *Review of Economics and Statistics*, August 1978, pp. 380-91. Note that our concern is with differences across groups. Discussion of the concentration and persistence of unemployment within groups will be analyzed later in the article. The age breaks used for this study were chosen to allow for some examination of differences between adults and various youth groups. For example, those age 16 to 17 tend to be in school; school activity drops off considerably with age. Therefore, one might expect different labor force experience between (say) 16- to 17-year-olds and those age 20 to 24 who are more likely to be in the process of establishing themselves in the full-time labor market. It is also important to understand how age was defined in this paper. From the March 1975-March 1976 matched file, individuals were classified on the basis of their age as of March 1975. From the March 1978-March 1979 file the age classification related to March 1978. Therefore, we are not comparing the behavior of 16- to 17-year-olds in 1974 with the behavior of 16- to 17-year-olds in 1975. Rather, we are following the same individuals over the entire 2-year time span for which data are available from each matched file, but to simplify the tabular presentation, age is taken as fixed as of March 1975 or March 1978.

<sup>10</sup> The incidence of unemployment over the 2-year period is less than twice the average incidence because some people experienced unemployment during both years. There are two possible reasons for this: First, the experience of unemployment in one year increases the probability of having some unemployment the next year. And, second, individuals may have constant (over time) but different probabilities of becoming unemployed, and those with higher probabilities are more likely to be jobless at any time. For a discussion of "sorting" and "tenure dependence," see Stephen W. Salant, "Search Theory and Duration Data: A Theory of Sorts," *Quarterly Journal of Economics*, February 1977, pp. 39–57; A. McGregor, "Unemployment Duration and Re-employment Probability," *Economic Journal*, December 1978, pp. 693–706; and John Barron and Wesley Mellow, "Changes in Labor Force Status Among the Unemployed," *Journal of Human Resources*, Summer 1981, pp. 427–41.

<sup>11</sup> It is important to understand the meaning of the "major activity" classification. The very first item posed to the household respondent for each young person in the CPS sample is: "What was (person's name) doing most of last week, going to school or something else?" This is not the same as asking whether the individuals were enrolled or not enrolled in school. For example, there will be persons who are enrolled in school whose major activity is something else. If this group is "more committed" to the labor force, measures of labor force experience by major activity will tend to show more volatility among the school group. Further, the classification refers to specific months—March 1975 and March 1978—and not, as is true of the employment and unemployment data, to an entire year. Changes in one's major activity could have occurred in the months between March 1975–76 and between March 1978–79. Any differences exhibited between major activity status cannot necessarily be taken as an indication of a causal relation.

<sup>12</sup> There is some evidence from the CPS that the proportion of black male youth with any employment experience in a given year has fallen significantly. No discernible trend is evident for whites. See Norman Bowers, "Young and Marginal," p. 9.

<sup>13</sup> Differences in the unemployment and employment experience of the major activity groups have suggested to some analysts that one's "student status" is an important explanatory variable for many young persons' partial commitment to the job market. Whether school activity is a cause, effect, or involves reciprocal interaction, however, is open to some dispute. Much more about the school-work relation, the role of youth labor in the economy, and changes in that role over time, as well as the functions of the educational system and its connection to the economy would first have to be specified before any causal statement could be made with confidence. See Robert Lerman, "Some Determinants of Youth School Activity," *Journal of Human Resources*, Summer 1972, pp. 366–83; and Paul Osterman, "Understanding Youth Unemployment," *Working Papers for a New Society*, January–February 1978, pp. 58–63.

<sup>14</sup> This view is particularly associated with the work of Kim Clark and Lawrence Summers, "The Dynamics of Youth Unemployment."

<sup>15</sup> An analysis of recurrent spells among three age cohorts in Great Britain may be found in Richard Disney, "Recurrent Spells and the Concentration of Unemployment in Great Britain," *Economic Journal*, March 1979, pp. 109–19.

<sup>16</sup> The small cell sizes in many cases make interpretation of the probability calculations very difficult. Therefore, rather than a finely detailed dissection of the data, focus will be on a few general features.

<sup>17</sup> Black-white differences—not shown here—exhibited no detectable pattern, a fact perhaps affected by the sample selectivity involved; that is, although blacks reported more unemployment than whites, they were less likely to have had any work experience during 1977 and therefore spell information was not collected.

<sup>18</sup> We also examined whether there was an association between the reporting of multiple spells and an individual's industry of longest job during the previous year. Especially among adults, the percent with two or more spells whose industry of longest job was in construction was quite a bit higher than the proportions in other major industries. This association also held—though not as strongly—for those age 20

to 24. Not surprisingly, those teenagers with multiple spells were not disproportionately concentrated in any industry. Note, however, that "industry of longest job" in the past year is not necessarily the only industry in which individuals worked over the year, nor does it necessarily indicate working for the same employer.

<sup>19</sup> See Kim Clark and Lawrence Summers, "The Dynamics." Robert Frank and Richard Freeman, in "The Distribution of the Unemployment Burden," also make the point that spell length may be more important in explaining differences in unemployment within the youth group than differential turnover or spell frequency.

<sup>20</sup> See Norman Bowers, "Probing the issues of unemployment duration," *Monthly Labor Review*, July 1980, p. 30.

<sup>21</sup> Among adults who had some work experience, those whose longest job over a given year was in construction were more likely than others to experience 15 or more weeks of unemployment. This association was much weaker among teenagers. As would also be expected, the proportion of workers with more than 14 weeks of unemployment in a year tended to be greater across all major industry groups in 1975 than in other years. Again, this represents the importance of the business cycle in understanding length of time spent looking for work.

<sup>22</sup> See Robert Lerman, "The Nature of the Youth Employment Problem: A Review Paper," prepared for the Vice President's Task Force on Youth Employment, Nov. 26, 1979, pp. 28–29.

<sup>23</sup> Data in these tables do not necessarily show causality because of the problem of distinguishing heterogeneity and state dependence. One attempt to test for heterogeneity or duration dependence among a sample of unemployed workers is discussed in A. McGregor, "Unemployment Duration," pp. 693–706. One might buttress the results shown in the tables with regression analysis. However, simply correlating current with previous unemployment does not necessarily isolate the impact of previous unemployment if some people—because of institutional and personal characteristics—are more prone to experience unemployment; and, such characteristics need not be observable. In part, this issue revolves around the questions of "adjusting or controlling" for heterogeneity among individuals in the likelihood of experiencing unemployment, and sample selection bias. Of course, a number of ways have been proposed to handle this problem, but their adequacy rests heavily upon the existence of a well-specified theory of unemployment and the "goodness of fit" in transforming the theoretical concepts into their testable empirical counterparts, and, equally important, having a correct theory of censored samples in order to adjust for selectivity bias, assuming that one believes the issue to be important to understanding unemployment. Because of the much fuller treatment that these questions deserve, no attempt was made to go beyond the tabulations shown in the text. For one example of this type of approach, see James J. Heckman and George J. Borjas, "Does Unemployment Cause Further Unemployment? Definitions, Questions and Answers from a Continuous Time Model of Heterogeneity and State Dependence," *Economica*, August 1980, pp. 247–83.

<sup>24</sup> One could undoubtedly list many "factors" which might be associated with extensive joblessness, such as kinds of jobs held, wages, family income, education, and so forth. No attempt has been made here to disaggregate the data into such cells because, especially among youth, the sample sizes are simply too small.

<sup>25</sup> Although not shown here, it should also be noted that there is evidence from the matched files that length of time worked in one year is strongly and positively associated with the probability of working again the following year. There are also some important differences among demographic groups. Black workers, particularly teenagers, are less likely than whites to have had any employment experience at all and less likely to have had subsequent employment regardless of the number of weeks worked the previous year. This is a result both of young blacks' higher probability of experiencing an employment separation and, once separated, the greater difficulty they have in finding a job. There are also differences in "persistence" between the major activity groups: The school group's current working experience is somewhat less related to weeks worked during the past year compared to the other group.