SOME ASPECTS OF UNEMPLOYMENT CHANGE

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The past several years have witnessed a substantial growth of interest in and analysis of the complex of factors which generate a given level of unemployment. As a result, there has been a considerable amount of work in disaggregating the total unemployment estimate for any period of time and, in turn, focusing on such matters as the composition of the unemployed, the duration of unemployment, spells of unemployment, types of unemployment (frictional, seasonal, structural), etc. 1/

While by no means a new phenomenon, this emphasis on the disaggregative approach reflects

(a) the greater availability of data on the component parts of the unemployed,

(b) the growing recognition of the importance of tracking current changes in the demographic and economic characteristics of the unemployed and not just the global total of unemployment; that is, the understanding that for any given time period, meaningful perception of what is happening on the current scene as well as in the longer run is derived from an examination of the anatomy in addition to the overall total of unemployment,

(c) the realization that in terms of viable programs for action in this area, answers to such questions as "Who are the unemployed?" and "Where are the unemployed?" and "How persistent is unemployment?" are perhaps the critical ones.

Among the various facets of the disaggregative approach, one which again is by no means new but which is receiving increased attention is the matter of the gross changes which are involved in a given net change in labor force, employment or in unemployment. For example, in April 1958 when unemployment was still on the increase, the Monthly Report on the Labor Force reported as follows:

		(Millions)
Unemployed in March 1958		5.2
Found employment in April	-1.5	
Left labor force in April	- .6	
Reductions in unemployment March-April 1958		-2.1
Remaining unemployed March-April 1958		3.1
Lost employment in April	+1.2	
Entered labor force and unemployed in April	+ .8	
Additions to unemployment March-April 1958		+2.0
Unemployed in April 1958		5.1

One year later (April 1959) when unemployment was on the decline, the MRLF reported as follows:

		(Millions)
Unemployed in March 1959		4.4
Found employment in April	-1.6	
Left labor force in April	- .7	
Reductions in unemployment March-April 1959		-2.3
Remaining unemployed March-April 1959		2.2
Lost employment in April	+ .8	
Entered labor force and unemployed in April	+ .7	
Additions to unemployment March-April 1959		+1.5
Unemployed in April 1959		3.6

The two examples are illustrative of the fact that any given month's unemployment change is apparently a compound of a very substantial amount of gross flows into and out of the labor force and employment; that even during a month of increasing unemployment a very substantial amount and proportion of the unemployed did find jobs; that, on the other hand, during a month of declining unemployment, a very substantial amount and proportion of the unemployed that month were made up of persons who had just lost jobs, etc.

What can perhaps be best described as an exploratory foray into the field of gross change in relation to unemployment is the subject of this paper, which examines the record of one cycle (1957-58-59) and asks the following questions, to which some answers, or at best hypotheses, will be attempted:

1. What is the actual amount--in absolute as well as relative terms--of gross change which finally sifts down into a given month's unemployment level?

2. What is the relative importance, in the midst of all this turmoil, of the people who remain unemployed over the month?

3. Where do those who exit from unemployment go? To jobs? Out of the labor force?

4. From where do those who newly enter unemployment come? From jobs? From out of the labor force?

Cutting across these four questions, we will also attempt to discern--on the basis of an avowedly short span of time and data--any relevant seasonal and cyclical differences.

1. The total number of separate individuals involved in any one month's unemployment figure falls into three groups: a) the stayers--those remaining unemployed from last month; b) the exits--those leaving unemployment by virtue of finding jobs or leaving the labor force; and c) the entries--those newly unemployed by virtue of losing jobs or coming into the ranks of the unemployed directly from outside the labor force.

Adding all three and dividing by the current month's unemployment yields a figure representing the rate of gross change, i.e., the relationship between the total number of persons involved and the resulting net unemployment figure, thus:

$$\frac{\text{Stayers+entries+exits}}{\text{Current month's unempl.}} = \text{Rate of gross change in unemployment}$$

The monthly rates for the period 1957 through 1959 are shown in Table 1 and Chart 1.

The following observations seem to be warranted by the data:

A. The rate of gross change in unemployment is very high--approximately close to 150% during the period under observation. To put it another way: Every 100 persons reported as unemployed during a given month represented the net effect of about 150 persons entering, leaving and staying unemployed, with the entries and exits further compounded by movements into and out of employment, into and out of the labor force.

B. There is an apparent cyclical variation in the movement of the rates of gross change in unemployment--for the total group as well as for men and women separately. As can be seen from Chart 1, during the winter and spring of 1958 when unemployment was moving up, these rates declined perceptibly; during the winter and spring of 1959 when unemployment was turning down, these rates moved up rather sharply; throughout the recession year of 1958 the rates of gross change were below either 1957 or 1959, representing a trough between these two adjacent years.

Our hypothesis in this case would state: Rates of gross change in unemployment vary inversely with the business cycle. To put it another way: The dynamism and change which go to make up a given month's unemployment level tend to slow down somewhat in the business downturn, to accelerate during recovery; the rate of moving around in and out of employment, in and out of the labor force ebbs during a business downturn, rises in recovery.

C. The brief period covered, including as it did rather sharp cyclical change as well as the effects of the steel strike in latter 1959, may have masked a number of seasonal patterns in the rate of gross change in unemployment. One--and the expected one--does stand out: the fairly regular increase in the rate during spring to the peak figure in June each year as students enter the labor force.

D. The differences between the two sexes were also very much in accord with a priori expectations, with gross change consistently higher among the women. The difference was substantially widened during the trough of the recession, mostly because of the much sharper drop in the rate of gross change in unemployment among the men than among the women, for reasons which may become apparent from the data presented below.

E. So far, our discussion has been confined to the rates of gross change in unemployment. The absolutes are of some interest and significance, too. Their sheer volume is impressive. In calendar 1957 there were about 18 million separate entries into unemployment status and a somewhat smaller number of separate exits from unemployment. (These, of course, are not necessarily different persons.) In the recession year of 1958, both entries and exits moved up substantially (although relatively less than total unemployment, so that the rates declined as we have already pointed out) and the 1959 figures are also running well ahead of 1957.

Measuring the impact of employment and unemployment change is done in a number of different ways: we, for example, calculate the total volume of unemployment, the proportion it represents of the labor force, the duration of unemployment, spells of unemployment, etc. The data described so far represent still another related dimension. Again, in terms of sheer impact, the fact that there were about 24 million new unemployment experiences during 1958--or even 18 million during the relatively much better year of 1957--is a matter to be reckoned with. By the same token, so is the number of exits out of unemployment--not only in relation to their economic consequences, but to some of the institutional settings which are supposed to deal with this kind of turnover, e.g. the local employment service office or the personnel offices of business and industry, as well as to some of the social consequences, e.g. in attitudes toward unemployment under conditions of substantial turnover.

2. The data cited so far lend considerable weight to the concept of the unemployed as a substantially volatile group. Nevertheless, unemployment does persist among various groups and various areas, and we come now briefly to the question of how much unemployment carries over from one month to the next. What, then, is the proportion of a current month's unemployment which is left over from a previous month (the "stayers" in our terminology)? Table 2 and Chart 2 speak to this point.

A. On the overall, somewhere between about 50 and 60 percent of a month's unemployed were carry-overs from the previous month during the three years under observation. As might be expected from the previous data, women, who have a higher rate of gross change in unemployment, tend to have a smaller proportion of "stayers" in unemployment status in any two adjacent months.

B. Again, it is difficult to assess the presence of seasonal patterns within such a small span of time; but, as expected, the proportion of stayers moves down very perceptibly in June when the students move into the labor force.

C. The change over the cycle is rather clear. With the duration of unemployment moving up significantly during 1958 and early 1959, the proportion still unemployed from the previous month also moved up. This was particularly true among the men. And just as the sex differential in rate of gross change widened during the business downturn, so did the sex differential in the proportion of persons carrying over in unemployment status from one month to the next. This period starts out rather sharply in the middle tier of Chart 2.

Thus, both the level and amplitude of change in the variable under observation in this section was larger for the men than the women. For the men, at least, the change in direction of movement was rather marked at both turns of the cycle.

3. If, on the overall, somewhere between 50 and 60% of a month's unemployed are left over from the previous month, then somewhere between 50 and 40% are newly arrived in unemployment status that month. What proportion of these, in turn, represent persons who have lost their jobs? What proportion have entered unemployment directly from outside the labor force? Table 3 and Chart 3 present the evidence on this score.

A. The difference between the two sexes in this regard is so marked as to warrant quite a different set of observations for each. Among the men, the great majority (about three-fourths) of the new entries into unemployment during a given month are employed the month before.

B. There is a marked seasonal pattern here: The proportion of men moving into unemployment from employment is at a peak (about four-fifths) in January as men exit from seasonal December jobs; the proportion then falls rather regularly to its expected low in June when students come into the labor force and then rises again into the fall and winter when men leave employment from such outdoor activities as agriculture and construction.

C. Among the women, on the other hand, the great majority (about three-fifths) of the new entries into unemployment during a given month were not in the labor force at all during the previous month.

D. As is true among the men, the proportion of the newly unemployed women who came from employment status the month previous reaches a peak in January (the only time the figure is over 50%) after exits from seasonal December jobs, especially in trade; the low point here is also in June when students enter the picture. There are apparently also, however, upturns in the proportion of a given month's jobless among the women who come from the employed rather than from outside the labor force in the spring (April-May) and fall (October). The spring phenomenon may be due to temporary Easter employment, the October one to perhaps the end of the season in such nondurable manufacturing activities as food processing.

E. There is no discernible major cyclical change among either the men or women, although the peak in the winter of 1957-58 is worthy of mention. The unemployed doubled in numbers between October 1957 and February 1958; just between December 1957 and January 1958, unemployment rose from 3.4 million to 4.5 million, an increase of one-third; for that month (January 1958) the proportion of new unemployed among men coming from employment the month previous was not far from 90 percent.

The proportions of the newly-unemployed arriving from a job that was lost (or given up) as against those coming from outside the labor force may be of substantial significance. The disemployed represent persons with work experience, perhaps a different kind of income status, certainly a better chance that there will be a claim for unemployment insurance. This, of course, is not to denigrate the importance of those coming directly from outside the labor force, e.g. the young graduate in search of his or her first full-time job. At any rate, seasonal movements aside, a marked change in these proportions may be worthy of the analyst's attention, both in terms of an assessment of current developments as well as a prognosis for the future.

4. As indicated previously, the large monthly number of entries into the status of unemployment are accompanied by an equally large number of exits from unemployment. Thus, during 1957 there were an average of about 1½ million entries and 1½ million exits from unemployment each month and about 2 million entries and 2 million exits from unemployment each month in 1958. Table 4 and Chart 4 show the information on what proportion of those who left unemployment found jobs and what proportion left the labor force altogether.

A. Here again, the differences between men and women are very marked. The preponderant majority of the men (anywhere from 70 to 80%) move from unemployment into a job; the corresponding ratio among the women is about 50%. Thus, women again represent the major stream of movement into and out of the labor force, into and out of unemployment.

B. The seasonal patterns of movement seem to be fairly regularly defined. Among the men there is a drop in the proportion going from unemployment to employment (and thus an increase in those going from unemployment to outside the labor force) during the winter months when many outdoor employment activities ebb. The same is true during the summer months, representing the well known phenomenon of students leaving the labor force after a short period of unemployment between school terms. The reverse movement (an increase in the proportion among men going from unemployment to employment) is seen regularly in

the spring with the increase in outdoor employment opportunities.

C. The seasonal pattern among women is somewhat less regular and less marked in amplitude, but not too far substantively from the one among the men. Generally, the proportions moving from unemployment to employment are lowest in the winter months, highest in the fall, with the summer showing the usual effects of the pattern of student entry and exit.

D. As was true in the case of movements into unemployment, there is no major discernible change over the cycle in the pattern of exits from unemployment into jobs or into nonworker status. Unlike the case of entries into unemployment, however, whatever change over the cycle took place is apparently more notable among the women rather than the men. As can be seen from Chart 4, there was some dampening of the proportion among women moving from unemployment into employment (with a somewhat higher proportion going outside the labor force altogether) during the recession year of 1958.

On the basis of this brief, exploratory analysis of gross change in unemployment which took place during the years 1957-58-59, the following conclusions seem warranted.

A. The phenomenon of gross change (in employment and labor force as well as in unemployment) first became observable in an objective, quantified manner through the operation of the Monthly Report on the Labor Force and the continuity inherent in its sampling procedures as well as in its conceptual structure. Even the cursory examination of the phenomenon in this paper shows it to be an important factor in the analysis of current developments, and perhaps even strategic at certain stages of the employment and unemployment situation.

B. Although perhaps more complicated than some of the other variables reported and analyzed each month, the importance of these data warrants a recommendation that they be presented on a regular, sustained basis and used in the analysis of current, as well as trend information on the employment situation. This presupposes the resolution of the technical problem involved in estimating gross changes from only that part of the sample which can be matched for two consecutive months.

C. The analyst always presses for more information and for more analytical time, and this paper is no exception. Even within the confines of this presentation it would have been very valuable to know, for example, the age differentials in gross change (is it the young who are the most volatile group? Is it the men in the central age groups, however, who become more affected during a business downturn? Is it the older men who move in greater proportions from unemployment outside the labor force altogether (labor force disappearance)?) Similarly, another important dimension of gross change must be in the occupational and industrial (at least farm vs. nonfarm) differentials. Where, in the occupational ladder, does most of the gross change take place? Is it the unskilled? Or perhaps the professional personnel who are so much more mobile? Do these patterns change with the cycle?

One final word: The forces of gross change, as illustrated in this paper, are part of the overall picture of the great mobility of the American labor force. It is a pleasure to present this paper under the chairmanship of Dr. Gladys Palmer, who for such a long time has urged us on to research efforts in this field and who has, herself, conducted some of the most perceptive work in this important aspect of the dynamics of the labor force.

This acknowledges the assistance of Robert L. Stein of the Bureau of Labor Statistics in organizing the basic data and thinking through some of the concepts of gross change.

1/ cf. e.g., "Who Are the Unemployed?" U.S. Dept. of Labor June 1958; "The Unemployed Spring 1959" U.S. Dept. of Labor May 1959; "The Extent and Nature of Frictional Unemployment" by Bureau of Labor Statistics (Study Paper No. 6 of Joint Economic Committee, Congress of United States) 1959; "Unemployment in America," address by Under Secretary of Labor James T. O'Connell, Newark, N. J., May 1, 1959.

TABLE 1
Rate of Gross Change in Unemployment
By month 1957-1959 By sex

Month	Total			Male			Female		
	1957	1958	1959	1957	1958	1959	1957	1958	1959
J	145%	149%	143%	143%	145%	138%	147%	159%	153%
F	145	142	138	141	140	135	152	152	145
M	145	138	137	141	135	132	155	146	147
A	146	137	143	142	132	138	153	149	151
M	152	141	143	147	137	141	160	149	147
J	159	146	155	155	141	153	164	155	158
J	149	140	153	147	136	150	153	147	151
A	154	141	149	151	137	147	159	149	154
S	156	139	149	157	134	145	155	148	155
O	151	143	154	149	139	152	153	151	155
N	156	143		153	139		160	150	
D	148	142		145	139		156	148	

Rate of gross change: Total number of persons entering, leaving and remaining unemployed divided by number of unemployed in each month.
Source: Monthly Report on the Labor Force

TABLE 2
Persons Still Unemployed from Previous Month
As a Percent of Current Month's Unemployment
By month 1957-1959 By sex

Month	Total			Male			Female		
	1957	1958	1959	1957	1958	1959	1957	1958	1959
J	55.5	50.6	57.5	56.8	54.6	61.9	52.7	41.2	47.4
F	55.3	56.5	61.9	58.7	60.4	64.9	48.3	47.6	54.7
M	54.8	62.2	63.4	59.4	65.5	68.0	45.1	53.9	53.4
A	54.3	62.7	57.4	58.1	67.9	61.9	46.7	51.4	49.4
M	47.6	58.9	56.6	52.6	63.0	59.1	39.6	50.6	52.5
J	41.2	53.8	44.8	44.8	58.8	46.9	35.5	44.6	41.6
J	50.5	60.1	47.4	42.7	63.6	49.8	47.3	53.1	43.3
A	45.8	58.9	50.7	48.7	63.3	53.3	41.3	50.6	46.4
S	43.9	60.8	51.0	43.3	66.1	54.8	44.8	51.6	44.7
O	49.4	56.6	46.5	50.6	61.1	47.6	47.5	48.6	44.6
N	44.5	57.2		46.8	60.9		40.3	50.2	
D	52.0	58.3		55.2	61.0		44.3	52.0	

TABLE 3
Additions to Unemployment in the U. S.:
% Entering Unemployment from Employment
By month 1957-1959 By sex

Month	Total			Male			Female		
	1957	1958	1959	1957	1958	1959	1957	1958	1959
J	70.0	74.2	69.8	79.5	86.7	81.7	53.0	51.9	50.2
F	63.4	64.2	65.9	74.3	76.3	78.8	45.7	42.8	41.9
M	58.4	63.8	56.3	69.1	74.7	72.6	42.0	42.9	32.3
A	63.2	61.0	53.3	73.6	71.9	66.7	46.4	45.5	35.4
M	56.6	57.6	56.6	66.4	68.0	68.2	44.5	41.9	40.5
J	47.3	48.1	44.2	52.9	57.2	52.2	39.5	35.5	33.2
J	61.5	59.3	58.3	74.6	71.8	70.2	44.0	40.1	41.2
A	63.9	61.3	65.1	79.2	75.7	80.6	42.9	40.8	42.8
S	63.0	60.0	59.9	76.8	78.3	78.2	40.4	37.6	34.8
O	65.7	61.9	62.0	76.8	73.4	78.4	47.5	46.0	37.5
N	64.4	62.2		78.4	79.7		42.0	36.4	
D	71.0	68.9		82.0	80.0		49.5	47.3	

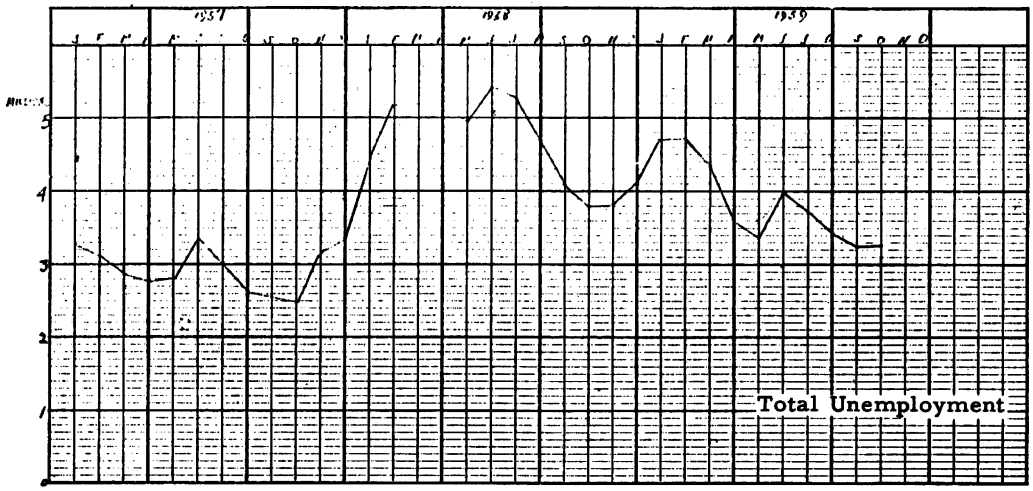
The difference between the percentage shown in this table and 100% represents proportion entering unemployment from outside the labor force.

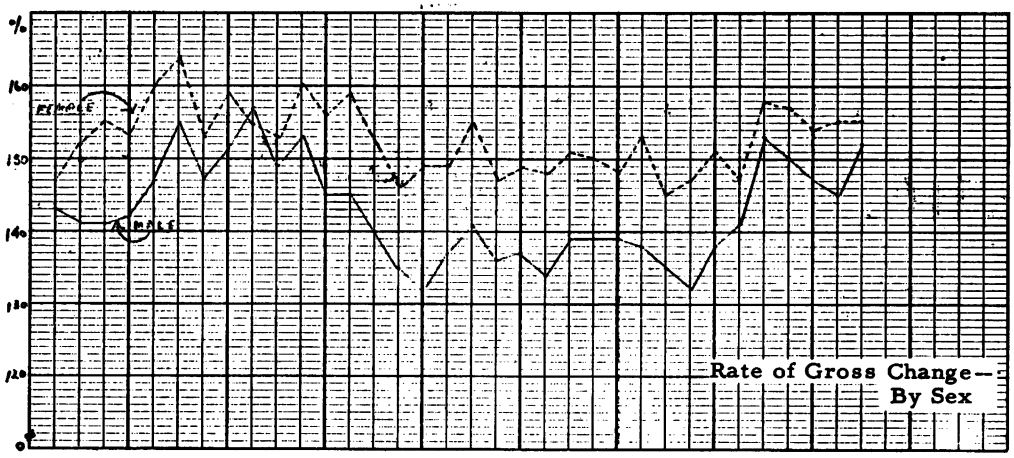
TABLE 4
Exits from Unemployment in the U. S.:
% Leaving Unemployment for Employment
By month 1957-1959 By sex

Month	Total			Male			Female		
	1957	1958	1959	1957	1958	1959	1957	1958	1959
J	51.6	56.6	62.4	62.6	68.2	71.1	35.3	38.0	48.1
F	68.3	64.4	63.0	78.2	73.3	75.3	54.5	51.0	45.0
M	67.2	67.2	68.3	79.8	80.0	78.5	46.8	47.1	47.9
A	66.8	71.4	71.0	76.0	80.9	83.0	52.3	51.6	46.6
M	70.8	71.5	64.2	82.1	84.1	78.1	51.6	52.0	43.4
J	69.3	67.1	69.7	80.0	78.4	81.8	55.4	49.6	53.0
J	66.5	64.1	65.8	73.7	75.8	72.1	55.8	48.4	57.7
A	60.5	65.7	60.9	69.8	77.2	70.1	49.5	48.7	48.3
S	68.5	66.1	66.2	75.7	75.0	73.6	58.4	54.0	56.8
O	70.5	71.6	69.3	82.1	84.6	80.9	55.9	54.8	52.0
N	62.0	61.6		74.6	73.4		44.9	46.8	
D	59.8	62.8		70.1	75.7		48.9	48.0	

The difference between the percentage shown in this table and 100% represents the proportion leaving unemployment to go outside the labor force.

CHART 1


1957
1958
1959
Total Unemployment


%
FEMALE
MALE
Rate of Gross Change--
By Sex

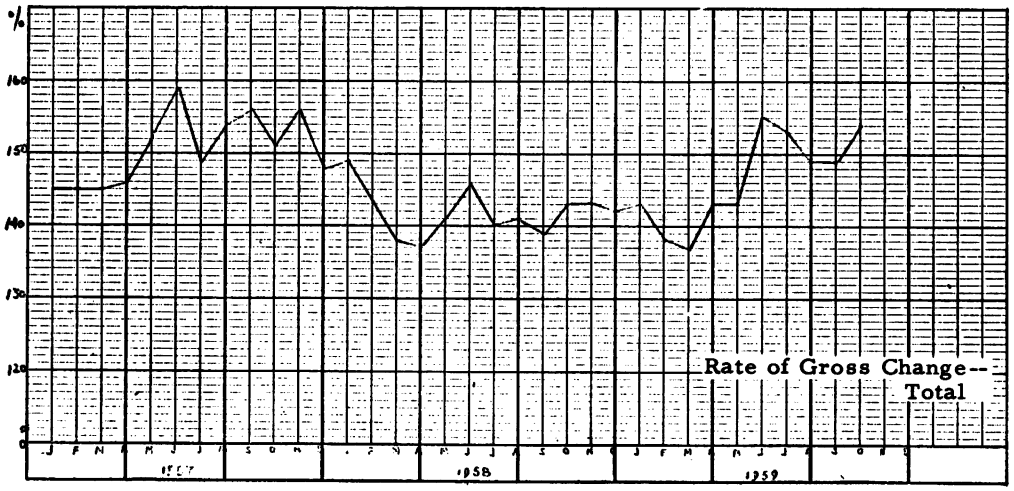

%
Rate of Gross Change--
Total
1957
1958
1959

CHART 2

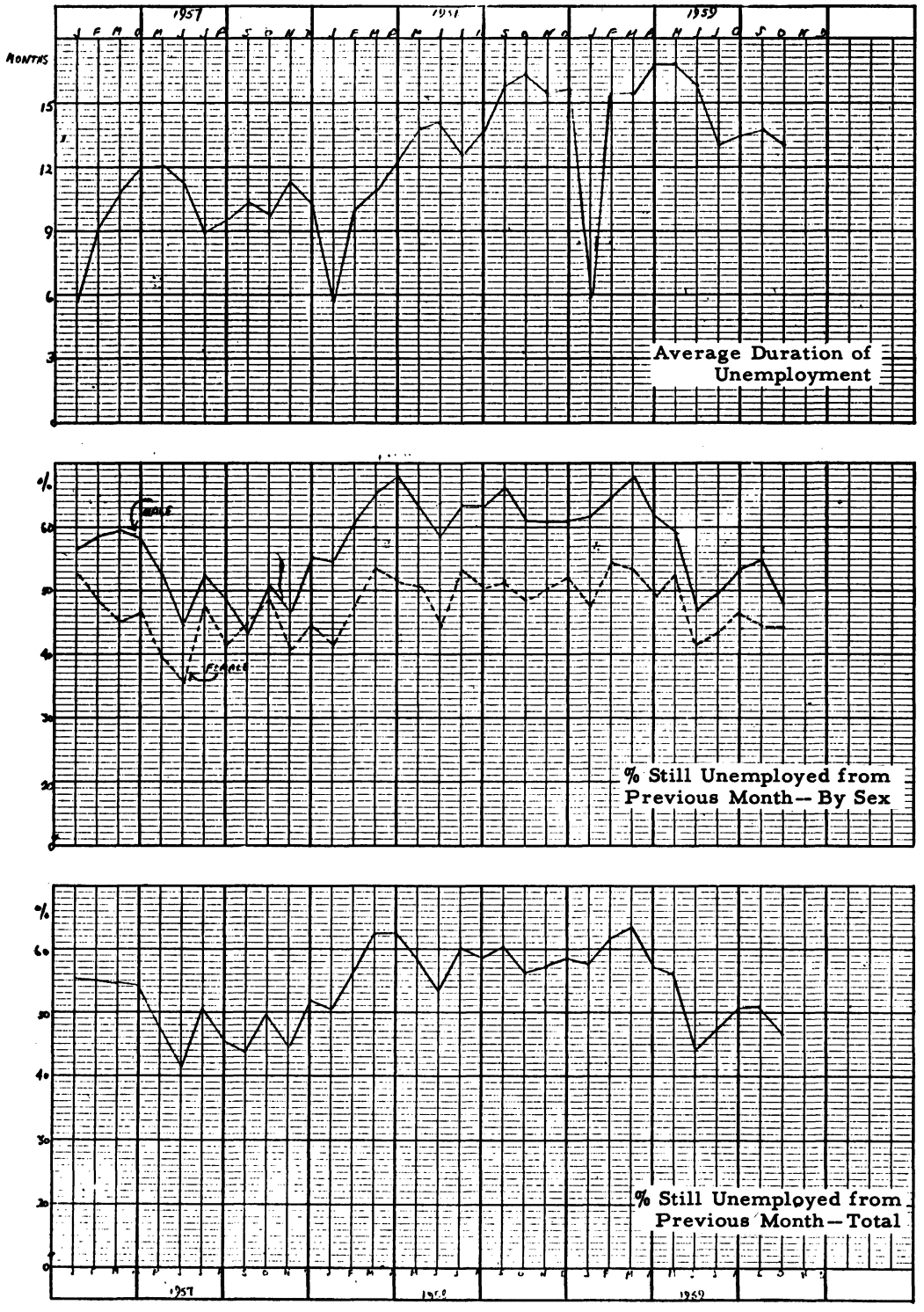

1957
1958
1959
MONTHS
15
12
9
6
3
0
Average Duration of Unemployment
%
60
50
40
30
20
10
0
MALE
FEMALE
% Still Unemployed from Previous Month-- By Sex
%
60
50
40
30
20
10
0
% Still Unemployed from Previous Month—Total
1957
1958
1959

CHART 3

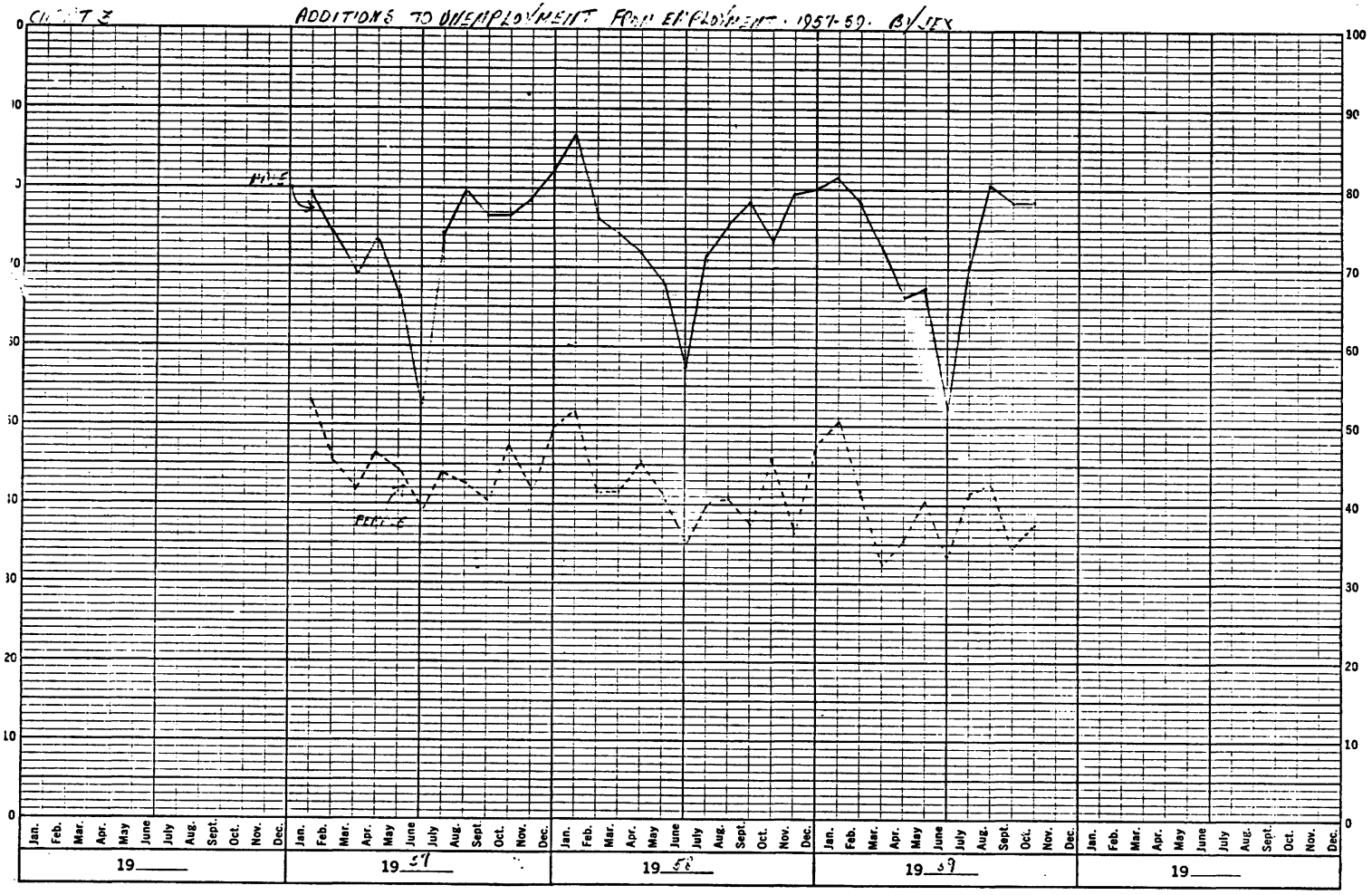


CHART 3
ADDITIONS TO UNEMPLOYMENT FROM EMPLOYMENT - 1957-59. BY SEX
MALE
FEMALE
0
10
20
30
40
50
60
70
80
90
100
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
19____
19 57
19 58
19 59
19____

CHART 4

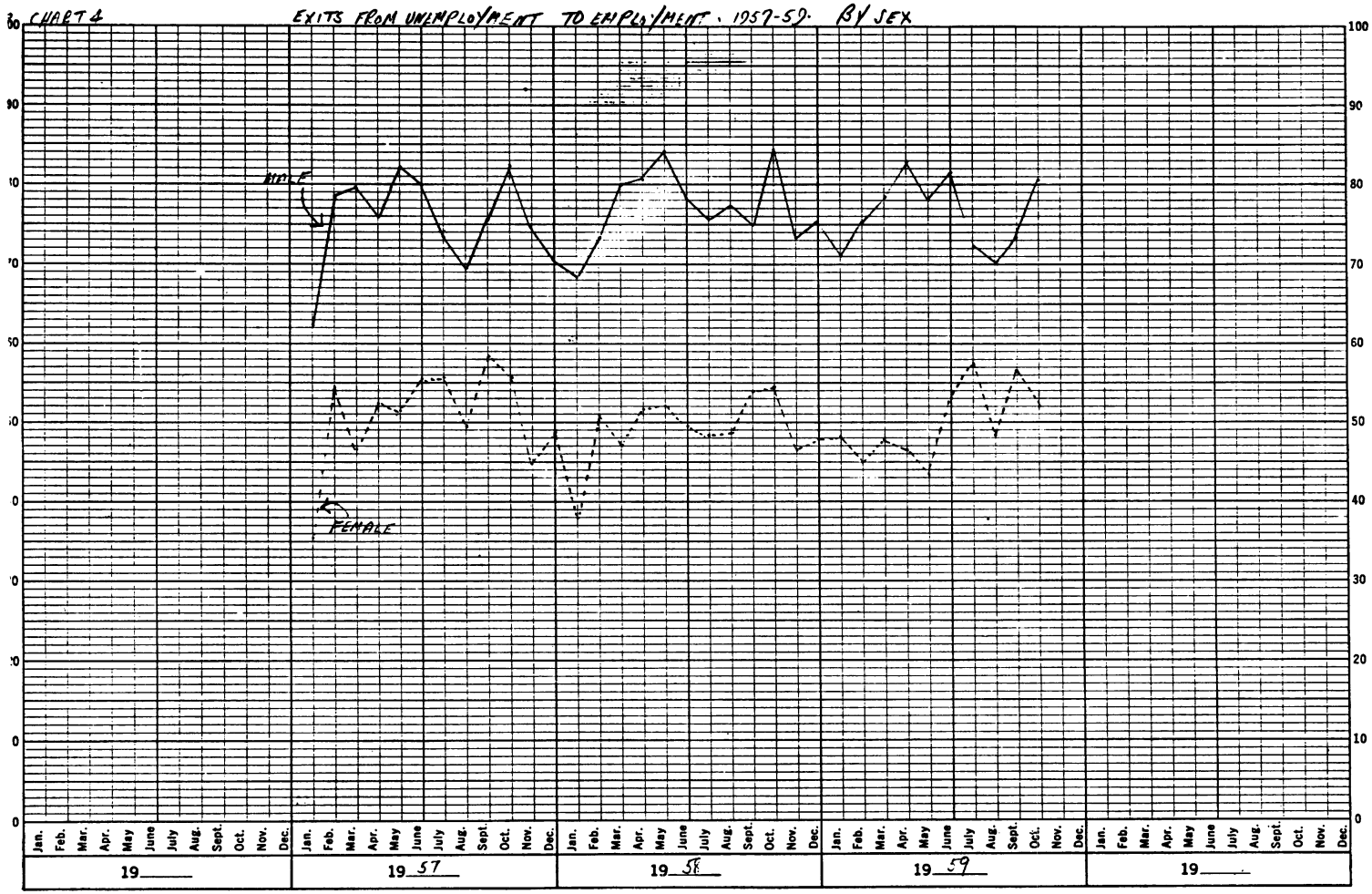


CHART 4
EXITS FROM UNEMPLOYMENT TO EMPLOYMENT, 1957-59. BY SEX
MALE
FEMALE
100
90
80
70
60
50
40
30
20
10
0
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
19____
19 57
19 58
19 59
19____