Institute for Research on Poverty
Discussion Paper no. 1035-94

The Dynamics of Homelessness

Irving Piliavin
School of Social Work
Institute for Research on Poverty
University of Wisconsin–Madison

Bradley R. Entner Wright
Department of Sociology
University of Wisconsin–Madison

Robert D. Mare
Department of Sociology
Institute for Research on Poverty
University of Wisconsin–Madison

Alex H. Westerfelt
School of Social Work
University of Kansas

May 1994

The authors gratefully acknowledge support from the National Institute of Alcohol Abuse and Alcoholism. Any opinions expressed here are solely those of the authors and not of any sponsoring institutions.

Abstract

This study explores transitions between homeless and domiciled states. It describes the timing of departures from and returns to homelessness, and it tests theoretical propositions linking individual attributes and experiences to these transitions. Four theoretical frameworks guide the analyses: institutional disaffiliation, human capital deficiencies, personal disabilities, and acculturation. The data come from a longitudinal study of homeless individuals in Minneapolis. Various individual attributes are linked with leaving homelessness, including recent employment, welfare receipt, job training, identification with other homeless people, and homeless history. Fewer attributes are linked with returns to homelessness: work history and gender. These findings provide some evidence for existing explanations for homeless transitions, and they suggest promising avenues for further research on the dynamics of homelessness.

The Dynamics of Homelessness

Empirical studies of homeless people date back at least to the nineteenth century, and may now number well into the hundreds. These studies have served the important purpose of informing policymakers of the health, shelter, and social problems of the homeless. Yet because they are almost invariably descriptive accounts based on single-wave surveys,[1] the studies have little to say about some of the most important policy and theoretical issues concerning the homeless population. These issues concern patterns of, and conditions affecting, the entry, exit, and return to homelessness.

This paper reports findings of an exploratory study dealing with the latter two phenomena, exit from and return to homelessness. Based on a two-wave panel design, the investigation asks the following questions:

1. Among individuals who have recently become homeless, what is the pattern over time of exits from these spells?

2. Among members of a cross-section of homeless people, what phenomena predict exit from current homeless spells?

3. Among individuals who have recently exited homeless spells, what is the pattern over time of returns to homelessness?

4. Among individuals who have recently exited homeless spells, what phenomena predict their return to homelessness?

The contribution of the investigation is threefold: it provides descriptive data not previously reported on the timing of transitions between homeless and domiciled states; it constitutes an initial effort to test theoretical propositions linking individual attributes and experiences to the likelihood of

[1]A few more broadly based studies are to be found, notably the nationwide study undertaken by Burt and Cohen (1989) and the statewide study of the homeless in Ohio carried out by Roth and colleagues (1985).

homeless-domiciled transitions; and its findings may provide guidelines for social policies intended to increase exits from and prevent returns to homeless spells.

THE DYNAMICS OF HOMELESSNESS: PREVIOUS RESEARCH

The interest of social scientists and policy analysts in the homeless during the course of the twentieth century has roughly paralleled the estimated size of the homeless population.[2] During the 1980s this population substantially increased in both estimated size and visibility,[3] and the number of community-level studies of homeless people surged.[4] With rare exception the studies offer univariate and, occasionally, bivariate descriptions of homeless people at a given point in time (see Shlay and Rossi 1992, pp. 154-156). Even though the descriptions have been used to infer causes of entry into homelessness, the inferences are suspect owing to the simplicity of the analyses on which they are based, sampling shortcomings, and the typical problems of causal attribution associated with single-wave surveys.[5]

---

[2]Researchers disagree as to how to specify homelessness, and the definitions given it have changed over the years (Hopper 1991; Cordray and Pion 1991). This paper adopts Rossi's concept of "literal" homelessness--individuals are homeless when they do not have regular and customary access to conventional housing (Rossi 1989).

[3]The size of the homeless population is a matter of speculation and debate (Burt and Cohen 1989; Freeman and Hall 1987; Kondratas 1991; Cordray and Pion 1991), as are the factors believed to be responsible for whatever increase is cited (Hoch and Slayton 1989; Elliott and Krivo 1991; McChesney 1990; Jencks 1994).

[4]Shlay and Rossi (1992) identify 60 such studies undertaken between 1981 and 1987.

[5]Specifically, single-wave studies of homeless onset have difficulty in distinguishing whether empirical correlates of homelessness represent its causes, its consequences, spurious correlates, or differential rates of exiting (heterogeneity). For an early discussion of this causal quandary, see Straus (1946).

The dynamics of homelessness extend beyond its initial onset. They include as well exits from and returns to homelessness, transitions which despite their relative ease of study[6] have been almost entirely neglected in the literature (e.g., Rossi 1989; Burt and Cohen 1989; Shlay and Rossi 1992).[7] The neglect is all the more surprising since several studies have indicated that as many as 50 percent of currently homeless people have been on the streets on more than one occasion (e.g., Farr, Koegel, and Burnam 1986; Piliavin et al. 1993; Rossi 1989; Morse et al. 1985). Clearly, a significant but unknown number of homeless people have been able to leave past homeless spells and a significant but also unknown number of these exiters have returned to begin new spells. Thus a fuller understanding of the dynamics of homelessness must account for not only initial entry into homelessness, but also exits from and returns to homeless spells.

Guided in part by the above findings, Sosin and his colleagues (Sosin, Piliavin, and Westerfelt 1990) undertook the only longitudinal study of homeless spell exits and returns known to us. Based on a two-wave panel design, the study provides data over a period of six months dealing with the prevalence, destinations, and durations of exits from homeless spells among a sample of 265 individuals. In addition, the investigation examined the influence of prior homelessness on the probability of exiting and, among exiters, the probability of returning to homelessness. The major findings of the Sosin study include the following:

1. At their-second wave interview, approximately six months after their first, over 75 percent of the respondents reported leaving the streets for at least two consecutive weeks during the preceding six months.

---

[6]The longitudinal study of exiting is more feasible because the population at risk of exiting (homeless people) is more easily identified than that at risk of initial entry into homelessness. Of course the study of exits and returns is not without difficulties, perhaps the most serious being maintaining contact over time with individuals who at first contact have no permanent residence.

[7]An informative exception to this neglect is Snow and Anderson's (1993) discussion of homeless careers based on their ethnographic study of homeless people in Austin, Texas.

2. The respondents who exited went primarily to the residences of friends or relatives, where most lived rent-free.

3. Slightly over half of the exiters had returned to another homeless spell by their second interview. The median length of exit among exiting respondents, including censored observations, was approximately 70 days.

4. The median time to exit for rent-paying exiters was 51 days, three times that of other exiters.

5. The homeless experience of respondents prior to their first interview did not predict subsequent exits from or returns to homelessness.

In another study, based on the same data set, Piliavin et al. (1993) explored the causal correlates of homeless career length. Analyzing a sample of 331 respondents from the first wave of the data set described above, the investigators estimated a structural equation model of homeless career onset and duration. Among their findings were the following:

1. Conditioned on age, homeless people with less continuous work histories, who had childhood foster care experience, and expressed comfort with life on the streets have longer homeless careers.

2. Homeless people with prior psychiatric hospitalization have relatively shorter homeless careers.

3. Homeless people displaying symptoms of severe alcoholism have similar homeless career durations as other sample members.

The research we report here utilizes the same data base as the above two studies. Focusing on transitions from and to homeless spells, it extends beyond them in two ways. First, it describes in richer detail the processes of exits and returns. Second, it attempts to predict these transitions utilizing four theoretical models that have been put forth to account for initial vulnerability to homelessness.

EXITS FROM AND RETURNS TO HOMELESSNESS: ISSUES OF INTERPRETATION AND MODELING

In the absence of theoretical models or speculative essays seeking to explain transitions from and returns to homeless spells, the theoretical frameworks we employ here are based on current models of individual vulnerability to the initial onset of homelessness. We assume that the attributes and experiences that increase the likelihood of initial entry into homelessness, will decrease the likelihood of exiting among the currently homeless and increase the likelihood of recidivism among those who have previously exited from homelessness.[8]

This reasoning has two potential problems. First, because current explanations for the initial onset of homelessness have yet to be seriously tested, their validity is open to question.[9] Second, the conditions that influence the likelihood of the initial onset of homelessness need not be relevant to homeless spell exits and returns (Lieberson 1985).[10] Nevertheless, the hypotheses implied by the frameworks are plausible and constitute a logical point of departure for developing a general model of homeless spell transitions. The hypotheses link homelessness to, respectively, institutional disaffiliation, human capital deficiencies, personal disabilities, and acculturation to the homeless lifestyle.

---

[8]As used here, the models for the onset of homelessness constitute theoretical frameworks, not theories. That is, they imply individual characteristics that may affect homeless transitions in general rather than postulating causes of exiting and returning in particular.

[9]It should be noted, however, that in their study of homeless career duration, Piliavin and his colleagues (1993) did confirm several hypotheses based on current models of the initial onset of homelessness.

[10]In Lieberson's (1985) discussion, reversible causation implies that the return of independent variable X to its original level will return dependent variable Y to its original level. With irreversible causation, however, the return of X to its initial level does not have the same consequence for Y. In the latter instance, initial and subsequent state transitions may be the consequence of quite different conditions.

HYPOTHESES

Institutional Disaffiliation

This is perhaps the most systematically developed thesis on the conditions leading to homelessness. As initially employed by Bahr and Caplow (1973), institutional disaffiliation refers to the weakening of an individual's bonds to conventional society. Bahr and Caplow argued the importance of this condition from their findings that homeless men were much more likely than those who were domiciled to have severed or never experienced relationships with members of a broad range of social institutions. Large percentages of their sample of homeless men had meager employment records, had never been married, had been socially withdrawn as youths, and were currently friendless or without family contact. Although the authors did not claim that institutional disaffiliation was the sole mechanism leading to or sustaining homelessness, they suggested that the disaffiliated, devoid of significant others, property, responsibility and status, were no longer responsive to the expectations of conventional society and thus were beyond its reach (Bahr and Caplow 1973, p. 58).

Although no rigorous test has been reported of Bahr and Caplow's thesis, findings paralleling those of Bahr and Caplow have been reported in a number of descriptive investigations (Straus 1946; Rossi 1989; Wright 1989; Sosin, Colson, and Grossman 1988; North, Smith, and Spitznagel 1993).[11]

We hypothesize that sample members whose attributes and experiences reflect greater disaffiliation will have lower rates of exits from their current homeless spells, and among exiters, those who evidence greater disaffiliation will have higher rates of return to homelessness.

---

[11]The Sosin group found that homeless people were more likely to have been in foster care as children as well as to be currently living without family or companions. Piliavin et al. (1993) found that a foster care experience was associated as well with the length of homeless careers among the currently homeless. Other studies have emphasized the supportive relationships that homeless people have with each other, recognizing nevertheless that they generally lack family ties (Wallace 1965; Rubington 1968; Rooney 1961; Cohen and Sokolovsky 1981; LaGory, Ritchey, and Fitzpatrick 1991).

Our assessment of institutional disaffiliation is based primarily on measures pertaining to family ties, paralleling in large part those employed by Bahr and Caplow (1973). They tap marital history, parental status, current family arrangement (alone or otherwise), and extent of current contacts with family members. We employ an additional measure indicating whether or not respondents ever experienced placement in some form of foster care.[12] We assume that children in foster care are more likely than others to have experienced parent-child relationship problems and are therefore more likely as adults to be disaffiliated from family members.

A second form of institutional disaffiliation tapped by our measures is represented by criminal behavior. Theories linking participation in crime to institutional disaffiliation have been put forth by, among others, Cloward and Ohlin (1960), Hirschi (1969), and Becker (1963). Our indicator of criminal involvement is self-reported participation in serious (i.e., felony) crimes.

Hypothesis 1: The rate of exit from homeless spells is smaller and the rate of return is greater among individuals who report at wave one that they:

(a) at some time during childhood had been in foster care;

(b) have engaged in felony crimes;

(c) were never married and had children;

(d) are living alone;

(e) have no current contact with relatives.

Human Capital Deficiencies

In his classic work *The Hobo* (1923), Nels Anderson gave scant attention to the possibility that men became "hobos," "tramps," or "bums" because they lacked employment skills in the post-World War I economy of the United States. He instead viewed the "homeless" and often destitute

[12]The measure does not include foster care placements resulting from juvenile court delinquency dispositions.

circumstances of these individuals as due largely to physical disabilities, personality "defects," drug addictions, debilitating personal crises, and "wanderlust." A decade later, during and perhaps as a consequence of the Great Depression, vulnerability to homelessness came to be seen as due in part to human capital deficits (Sutherland and Locke 1936). Even as the United States moved out of the Depression, writers continued to emphasize the importance of deficient education and training in vulnerability to homelessness (Bogue 1963; Bahr 1970). In their overview of studies on the attributes of homeless people, Burt and Cohen (1989) found correlations consistent with this argument in eight of nine investigations reporting relevant data.

Our examination of the significance of human capital deficiencies on homeless-domicile transitions is based on four indicators, two dealing with training (i.e., educational attainment, occupational skill training) and two referring to employment (i.e., overall work histories, recent employment experiences).[13]

Hypothesis 2: The rate of exiting homeless spells is smaller and the rate of returning to homelessness is greater among individuals who at wave one

(a) have less education;

(b) have not received vocational training;

(c) have spent a greater percentage of their adult life unemployed;

(d) have had fewer working days during the immediately preceding 30-day period.

Personal Disabilities

Arguments that people become homeless because of personal disabilities have had an exceptionally long history in the United States. Although nineteenth-century discussions were often cast in such judgmental terms a "laziness," "immorality," "depravity" (Bull 1886; Wayland 1877; Katz

[13]While our use of employment as an indicator of human capital may be criticized on the grounds that employment is the product of other considerations (training, health, lifestyle preferences), we assume that net of these considerations work experience remains an indicator of current ability and readiness for labor market activity.

1986), more recent versions of the general thesis argue that various physical and mental health conditions as well as addictions severely restrict individual labor market capabilities, which in turn increases the probability of chronic unemployment and vulnerability to homelessness. Moreover, personal disabilities can also attenuate personal relationships, with similar results (Rossi 1989; Wright 1989). Data from many studies are consistent with this thesis: relative to the general population, homeless people have a higher incidence of physical disabilities, alcoholism, mental illness, and drug use (Straus 1946; Rossi 1989; Wright 1989; Cohen and Sokolovsky 1989; Morse et al. 1985; Sosin, Colson, and Grossman 1988; Robertson 1991).

The measures of personal disabilities that we employ here include respondents' reports of their general health, symptoms of severe alcohol abuse,[14] prior psychiatric hospitalizations, and experience with drug abuse.[15]

Hypothesis 3: The rate of exit from homeless spells is smaller and the rate of returns to homelessness is greater for individuals who at the time of their first wave interview report that they

(a) have been patients in psychiatric hospitals;

(b) are in poor health;

(c) have symptoms associated with alcohol abuse;

(d) currently use drugs.

Acculturation

[14]This dichotomous variable was coded "1" for individuals reporting their current use of alcohol led at times to one or more of the following symptoms: passing out, blackouts, tremors, seizures; and "0" otherwise.

[15]Earlier studies of homeless people ignored their possible use of drugs because drugs were prohibitively expensive. However, with the advent of inexpensive crack cocaine in the mid-1980s, the use of drugs by homeless people has increased dramatically (Snow and Anderson 1993; Jencks 1994).

In contrast to those preceding, this thesis addresses the persistence of homelessness rather than its onset. It holds that to survive on the streets, individuals must assimilate a street culture--the information, values, associations, and lifestyle preferences that support and give meaning to life on the streets (Anderson 1923; Wallace 1965; Snow and Anderson 1993). According to Caplow (1970), in acquiring the knowledge, values, and friendships required for life within the homeless society, individuals are pulled toward that society and find it difficult to leave.

A recent empirical study (Piliavin et al. 1993) that examined the role of acculturation in remaining homeless found that a measure of individual comfort with and knowledge of street life was positively associated with the duration of homeless careers. We employ a similar measure here, as well as variables tapping respondents' interaction and identification with other homeless people.

Hypothesis 4: The rate of exiting homeless spells is smaller and the rate of returning to homelessness is greater among individuals who

(a) view themselves as having much in common with other homeless people;

(b) consider it easy to obtain food and drink on the streets;

(c) have had more contact with homeless friends in the previous 30 days.

SAMPLING METHOD AND SAMPLE ATTRIBUTES

The data we analyze here were obtained from two samples of homeless people aged 18 and older, first interviewed in the late fall of 1985. The samples were drawn from people being served by social agencies in the downtown area of Minneapolis.[16] The "recently homeless" sample (n=113) included all individuals whose homeless spell had begun within 14 days of their wave-one interview. The second sample, the "cross-section sample" (n=338), was made up of all homeless individuals present at the time the research team visited. To reduce problems of left censoring, it was originally

[16]The agencies included four drop-in centers, five free-meal providers, and eight overnight shelters.

intended that the study sample be composed solely of the recently homeless.[17] However, after two months of data collection it became clear that the flow of recently homeless individuals was insufficient to generate a sample large enough to permit the analyses we planned to carry out. This led us to sample the cross-section.

In order to be included in either sample, an individual at the time of the first-wave interview had to meet one of the following criteria:[18]

1. Current residence, without paying rent, in a social agency offering temporary shelter.

2. Current residence in unconventional accommodations, including abandoned or public buildings, automobiles, and shanties.

3. Residence for less than a week with a friend or relative, intending to stay no more than two weeks, not paying rent, and having no alternative residence.

4. Residence in selected board-and-lodge facilities for less than seven days, intending to stay no more than two weeks, rent being paid by a social service agency, and having available no alternative residence.[19]

Inclusion in the recently homeless sample required that individuals report stays in any consecutive combination of the above types of accommodation which were 14 days or less in duration.

---

[17]We assume that most homeless individuals do not exit within 14 days of spell onset. To the extent this assumption is incorrect and, furthermore, that early exiters differ from those whose homelessness persists for two weeks, left censoring becomes a more serious problem even within the recently homeless sample.

[18]Among eligible respondents, approximately 5 percent refused to be interviewed. A payment of $10, given to all those agreeing to be interviewed, probably accounted for the low refusal rate.

[19]The first two criteria represent residence in unconventional housing. The next two imply irregular access to conventional housing. All four, we believe, signify literal homelessness. A difficulty arises, however, among respondents who reported at wave one that their current housing situation was only temporary (e.g. criteria 3 or 4), but who in fact stayed for longer periods of time. Since the wave-one housing arrangements of these people, despite their initial claims, fit our criteria of being domiciled, we redefined them as domiciled at wave one and dropped them from our analyses.

Sixty-five members of the recently homeless sample and 200 members of the cross-section sample were located again and interviewed at wave two.[20] The wave-one attributes of these individuals and those among them who were located for second-wave interviews are found in Table 1. Although attrition led to changes in the composition of each sample over time, there are relatively few differences across the two samples.[21] Members of both samples are predominantly male, live alone, are on average in their early thirties, and have limited educational achievements and meager

[20]Four additional respondents were interviewed, but the interviewer did not record the sample to which they belonged. Thus, a total of 269 respondents were interviewed at both waves. Several strategies were used to locate respondents for second-wave interviews: (1) individuals were given self-addressed stamped postcards for return six months after the first interview; (2) signs were posted in the original interview locations and similar facilities; (3) two individuals, well-acquainted with a high proportion of the homeless population, were hired to locate first-wave sample members; (4) letters were sent to family friends and agency representatives previously listed by respondents as potential contacts.

[21]The most striking difference between the samples--days since last had a home--reflects the differing sample designs of the two groups.

TABLE 1
Demographic and Background Attributes (Measured at Wave One) of Respondents at Wave One and Wave Two, by Sample.

Attribute	Cross-Section		Recently Homeless	
	Wave One (N=338)	Wave Two (N=200)	Wave One (N=113)	Wave Two (N=65)
Male	85%	85%	77%	82%
Race				
White	43%	42%	48%	48%
Black	26%	21% **	25%	11% **
Native American	23%	29% **	22%	35% **
Other	8%	9%	6%	6%
Age (mean years)	32	33	31	31
Days since last had home				
Mean	452	491	9	10
Median	120	135	9	10
Previously homeless	58%	63% *	55%	60%
Days saw family last month				
Mean	6	7	7	7
Median	2	2	2	2
Convicted of crime as adult	54%	57%	51%	48%
Ever in foster placement	39%	44% *	35%	42%
Ever married with child(ren)	38%	37%	34%	34%
Physical health				
Very poor	4%	3%	3%	0%
Poor	9%	11%	7%	8%
Fair	24%	24%	24%	32%
Good	29%	28%	32%	31%
Very good	35%	34%	34%	29%
Has symptom(s) of severe alcoholism	40%	47% **	46%	57% **
Ever in mental hospital	19%	18%	11%	14%
Highest grade completed				
Median and mean	11	11	11	11
Percentage of adulthood working	55%	54%	56%	55%
Welfare received in past 30 days				
Mean	$128	$137	$153	$137
Median	$115	$201	$201	$201
Worked in past 30 days	36%	36%	38%	42%
Much in common with other homeless	70%	72%	70%	75%

Note: Percentages are rounded.

* Variable has a significant ($p<.05$) relationship with a dichotomous variable indicating whether the respondent was reinterviewed in wave two.

** Variable has a significant ($p<.01$) relationship with a dichotomous variable indicating whether the respondent was reinterviewed in wave two.

employment histories. A substantial minority of both samples are heavy users of alcohol and over one-third were as children in some form of foster care.[22]

Although the spell transitions of the recently homeless and cross-section samples were intended to reflect without bias those of the corresponding populations in Minneapolis, this intention may not have been realized. The wave-one samples were drawn from homeless people using the services of social agencies providing, singly or in combination, shelter, recreational and free meal services. The homeless spell exit patterns of these individuals may not represent the patterns of those who do not use agency services.[23] Furthermore, since the times at which our samples were drawn were not based on probability considerations, it is also possible that the transition patterns found within the samples fail to reflect those of the populations being served. Finally, as noted above, attrition from both samples between waves one and two was substantial. To the extent attrition was due to phenomena relevant to spell transitions but not tapped by the variables we include in our estimations, our results may be biased.[24]

In the presentation of our findings, we combine data from the cross-section and recently homeless samples in three ways. First, we merge data from respondents in both samples who had been homeless for 14 days or less at the time of their first interview. We use these data to examine

---

[22]Although firm data are unavailable, McDonald et al. (1993) have suggested that no more than 2 percent of the adults in the United States have ever been in foster care. The overall similarities of the recently homeless and cross-section samples may reflect the observation recorded here and elsewhere (Rossi 1989; Farr, Koegel, and Burnam 1986) that homeless people often experience several spells of life without domicile. Consequently, with the exception of people in their first homeless spell, the recently homeless may come from a population little different from that represented by a cross-section of the homeless.

[23]It should be noted, however, that Burnam and Koegel (1988) estimated that in Los Angeles 86 percent of the homeless population utilize these agencies.

[24]We ran models to employ maximum likelihood estimation procedures predicting homeless spell transitions while controlling for the probability of attrition, but they failed to converge. This may have been due in part to the small size of our samples as well as the relatively limited statistical power in the prediction of sample attrition.

the likelihood and patterning over time of exits from homeless spells. Second, we analyze data from all two-interview respondents in the two samples to explore the role of various attributes and experiences in exits from homeless spells. Finally, we employ data from all respondents who were found to have exited their wave-one homeless spell for at least 30 days to examine the patterning over time and individual attributes associated with returns to homelessness.

SPECIFICATION OF EXITS FROM HOMELESS SPELLS

We noted above that several studies of the past decade reported that many currently homeless people stated that they had exited prior homeless spells (Farr, Koegel, and Burnham 1986; Morse et al. 1985). These findings contain ambiguities, however. Because individuals were not given either duration or destination criteria by which they were to identify their exits, some may have considered overnight stays with family members as exits, others may have regarded hospital stays as exits, and others may have counted as exits only long-term stays in living quarters for which they paid the costs. These widely divergent specifications have obvious relevance for exit rates. Equally important, duration and destination specifications may identify exits with different causes and consequences.[25] In brief, research findings concerning the prevalence, causes, and consequences of homeless spell exits depend on how these events are defined.

Destination

In this study we define an exit from homelessness as a departure from the streets to conventional housing, such as apartments, houses, and hotels. We do not treat transitions to hospitals,

[25]Furthermore, because brief departures from homelessness may be substantially more frequent as well as less eventful than those of some duration, the former are likely to be much less accurately recalled than the latter.

prisons, or group homes as exits, because their implications and the conditions under which they arise are quite different from those of exits to conventional housing.[26]

Duration

Specification of a duration threshold to establish which transitions constitute exits from homeless spells is necessarily arbitrary. For several reasons we rejected the use of very brief or lengthy thresholds. Brief exits are problematic because they are likely to include a variety of transitions (e.g., visits, "vacations") which may be poorly recalled or not even seen by those experiencing them as transitions, are likely to have little if any policy significance, may well have no stable precursors or consequences, and are so frequent as to numerically dominate all others. Lengthy exits, say of a year or more, are problematic in that they consider people homeless even when their living arrangements have long become similar to those of individuals considered domiciled.

The duration threshold we employ here attempts to avoid both concerns by specifying that exits entail at minimum 30 days *continuous residence* in one or more of the conventional housing arrangements described above. We employ this threshold owing to three considerations: it is long enough to require a sustained source of support; it should entail few if any recall problems; it is short enough to permit investigation of the other phenomenon of interest to our research--returns to homelessness among those who have previously exited.

While it is possible to create several types of exit by interacting our categories of destination and duration, this is beyond the capacity of our investigation. We have chosen to study two types of exit which we believe represent relatively easily defined as well as theoretically relevant categories.

---

[26]Furthermore, very few respondents left the streets for these locations. Three went to jail from the streets; five went to a hospital.

These include *independent exits*, defined as exits to what respondents describe as their own domiciles;[27] and *dependent exits*, defined as exits to what respondents describe as housing provided by family or friends.[28]

RESULTS: EXITS FROM HOMELESS SPELLS

Distribution of Exits over Time

Table 2 contains information on the exit and return patterns of those members in the recently homeless and cross-section samples for whom we have two waves of data. There are surprising similarities. About 45 percent of the members within each sample had exited from their wave-one homeless spells; the distributions within samples of exits to various destinations were similar, and about 30 percent of the exiters in each sample eventually began a new homeless spell. The only substantial, though not statistically significant, difference is that exiters from the cross-section sample were more likely than recent-arrival sample members to pay a portion of housing costs at their exit destination.

Figure 1 shows the patterning of the exit hazard over approximately six months immediately following sample members' entry into their wave-one homeless spell. The graph is based on the

[27]The great majority of those making independent exits, 37 out of 41 (90 percent) respondents, stated that they paid at least a portion of the costs associated with their housing.

[28]We initially intended to include a category for respondents who exited to welfare hotels, but only 9 sample members did so. Although we include these individuals in our descriptive summary, because of their small number we have excluded them from our multivariate analyses of the conditions associated with exits and returns.

behavior of 58 individuals whose homeless spells had begun 14 days or less prior to their first-wave interview.[29] The first data point, at "day 0," represents the estimated hazard of exiting wave-one

[29]Forty-eight of these individuals were from the recently homeless sample and 10 were from the cross-section. It would have been desirable to graph the patterning of exits over a longer period of time, but this would have exacerbated the problem of left censoring and led to too few cell observations for the hazard rate at several years or more.

TABLE 2

Exit and Return Patterns, by Sample

	Cross-Section		Recent Arrivals	
Respondents interviewed in both waves[a]	149		48	
Respondents exiting for 30 days	70	(47%)	21	(44%)
Destination of exit:				
Board and lodge	8	(11%)	1	(5%)
Shared lodging (dependent exit)	31	(44%)	10	(48%)
Own place (independent exit)	31	(44%)	10	(48%)
Exiters paying any share of rent	46	(66%)	10	(48%)
Exiters returning to streets	22	(31%)	6	(29%)

[a]Not including 69 respondents interviewed at wave 1 but later redefined as not homeless at first interview.

Figure 1 here

homeless spells during the first 30-day interval following spell onset.[30] The second data point, at "day 30," represents the estimated hazard of exiting wave-one spells during the next 30-day interval following spell onset, and so on.[31] The graph reveals a striking decrease in the hazard over the course of the monitoring period. During the second and third months following the beginning of wave-one homeless spells, the hazard of exiting is about 60 percent of that during the first month. During the fourth, fifth, and sixth months it is reduced to about 15 percent of that in the initial month.

Although these findings must be regarded as tentative in view of the small size of our sample, they suggest several important facets of respondents' wave-one homeless spell experience. First, about half moved to conventional housing within six months following their spell onset. Second, substantial variation existed in respondents' time of exiting; transitions occurred throughout the period of observation. Third, the great majority (90 percent) of those who exited moved to their own domicile or to shared lodging, which we have termed respectively as independent and dependent exits. Fourth, the rate at which exits occurred substantially decreased with time.

In the following section we examine whether the hazard of exiting is associated, as hypothesized, with individual attributes and experiences linked to institutional disaffiliation, human capital deficiencies, personal disabilities, and acculturation.

---

[30]Note that it is not a necessary condition that an exit consist of remaining for 30 continuous days at the destination to which the transition from wave-one homeless spells was made. It is only necessary that the individual did not return to homelessness for 30 days.

[31]We reran this analysis with more observation points (e.g., every 14 days, every 20 days). The results showed a similar decrease in hazard over time, but with many more spikes. For clarity we present the analysis with 30-day observation points.

Conditions Affecting Independent and Dependent Exit Hazard Rates

To determine the conditions affecting exit hazard rates, we employ a competing-risk model, based on proportional hazard regression estimation (Cox 1972; Yamaguchi 1991).[32] We assume the hazard of exit, $h_{ij}(t)$ is given by the following:

$$h_{ij}(t)=h_0(t)[\exp(\Sigma_{jk}\beta_{jk}X_{ijk})] \quad (1)$$

where $h_0(t)$ is an unspecified baseline time-dependent hazard common to all sample members, X_{ijk} is the value of the *k*th covariate for person *i* at time *t* in the estimating equation for the *j*th competing exit, and β_{jk} is the parameter coefficient associated with the *k*th covariate. In the case of continuous predictor variables, the β's denote estimated effects of unit changes in the predictors on the log of the hazard rate. In the case of categorical predictor variables, the β's denote the deviation in the log hazard rate for the group for which $X_k=1$ from the baseline group ($X_k=0$).[33] Parameter estimates are obtained by maximizing the parameters of the partial likelihood function given by:

$$PL=\prod_{i=1}^{I}[h_i(t_i)/\sum_{j\geq i}h_j(t_i)]^{\delta_i}. \quad (2)$$

The subscript *i* designates the *i*th subject in terms of "time in state" duration, $h_j(t)$ is the value of the hazard function for the jth individual at time t_i where t_i is the time at which the *i*th individual either exited or was censored, and δ_i is a dummy variable that takes the value 1 when the *i*th individual

[32]We chose this method for two reasons. First, it assumes a time dependence of the hazard function without needing to specify its form, which is useful given the lack of theoretical justification for specifying a specific parametric model. Second, our analysis appears to meet the proportionality assumption of this model. We tested it by creating dummy variables that contrast discrete time segments against a baseline segment. The interaction effects between these dummy variables and our covariates were not significant (see Yamaguchi 1991, p. 107).

[33]Alternatively, the effects represented by the β_ks can be interpreted as follows: for interval-scale predictors, the hazard rate increases $\exp(\beta_k)$ times as much for each unit increase in X_k, controlling for the effects of time and other predictor variables; for categorical variables, the state with $X_k=1$ has $\exp(\beta_k)$ times as much hazard rate as the state with $X_k=0$.

exited and 0 if the observation of the *i*th individual was censored. When $h_i(t)$ from equation (1) is substituted into equation 2, the PL function can be written solely as a function of parameters for covariates:

$$PL=\prod_{i=1}^{I} \exp[\sum_k b_k X_{ik}]/\sum_{j\geq i} \exp[\sum b_k X_{jk}(t_i)]^{\delta_i} \quad (3)$$

We employ the model to predict the hazards of independent and dependent exits.[34] For each hazard we run three equations. The first (model 1), estimates the effects of three ascribed attributes of respondents which are employed as controls in all of our estimations. These include age, gender, and race-ethnicity. The second (model 2), adds a vector of experience-linked characteristics, one of which, experienced prior homeless spells, is employed as a control. Each of the others tests a specific hypothesis, and, we assume, describes respondents prior to the onset of their current spell of homelessness. These include education level, percentage of time employed since first adult-age job, and four dichotomous measures asking if respondents had been foster children, were ever married parents, had a felony conviction, and had ever received specialized vocational training. The third equation (model 3) adds selected recent experiences and current attributes of respondents. These include a control variable, size of current welfare receipt. The others test specific hypotheses and include current living arrangements (alone or otherwise), days in contact with a relative during the past month, the number of contacts with homeless friends in the past month, current health status, and five dichotomous measures tapping whether respondents were employed during the past month, currently

[34]Because our data are left truncated, we predict the duration of time from the first interview until an event or censoring while conditioning upon time in spell before the first event (Yamaguchi 1991, p. 8).

used drugs, currently experienced symptoms of severe alcoholism, believed they had much in common with other homeless people, and believed it easy to obtain food "on the streets."[35]

The cell entries in Table 3 are the partial likelihood estimates (β's) of the effects associated with predictor (row) variables on the log of the hazard rates of independent and dependent exits (columns). The entries in the odd-numbered columns pertain to independent exits, those in the even-numbered columns to dependent exits.

Independent Exits. Findings from model 1 (columns 1 and 2) reflect a pattern common to all models: independent exit hazard rates are more reliably predicted than are dependent exit hazard rates. Though the prediction of independent exit hazard rates is far from robust, all models that estimate the hazard of independent exits significantly improve upon a model based simply on the overall hazard of these transitions, which is true for none of the models predicting dependent exit hazard rates. The only hypothesized effects observed are those pertaining to two variables included in model 3 (column 5). Controlling for other factors, the exit hazard rate for people who worked in the 30 days preceding their wave-one interview was well over twice ($e^{1.005}$) that of people who failed to work; the exit hazard rate for individuals who viewed themselves as "having things in common with other homeless people" was 38 percent ($e^{-.963}$) that of individuals who did not.

Several variables employed as controls also significantly affect the hazard of independent exits. In model 1, these included a strong race-ethnicity effect and a marginally significant gender impact. The exit hazard rate for American Indians was 18 percent that of whites ($e^{-1.762}$), and the rate for males was 46 percent that of females ($e^{-.783}$). The race-ethnicity effect is substantially the same in model 3, while that of gender is reduced in size and becomes non-significant, its impact on the exit hazard rate apparently being mediated by welfare receipt. That is, males are less likely to receive

[35]While we assume otherwise, we recognize that some of model 3 attributes may have characterized some respondents prior to the onset of their current homeless spell.

TABLE 3
Partial Likelihood Models Predicting Independent and Dependent Exits (n=191).
(Odd equations predict independent exits, even predict dependent)

	Equation Number					
Covariate	1	2	3	4	5	6
Black	-.009	.299	-.019	.281	-.124	.544
	(-.02)	(.71)	(-.04)	(.64)	(-.25)	(1.09)
Native American	-1.762	-.011	-1.806	-.002	-1.726	.300
	(-3.25)	(-.03)	(-3.22)	(-.01)	(-2.61)	(.64)
Age	-.004	-.001	-.010	.014	.014	.018
	(-.21)	(-.08)	(-.46)	(.68)	(.48)	(.66)
Male	-.783	-.216	-1.030	-.325	-.273	-.111
	(-1.89)	(-.49)	(-2.04)	(-.62)	(-.45)	(-.20)
Prev. homeless			-.302	-.460	-.912	-.494
			(-.86)	(-1.30)	(-2.16)	(-1.24)
Married with children			-.035	-.769	-.061	-1.047
			(-.09)	(-1.90)	(-.13)	(-2.19)
Convicted of crime			.084	.105	.078	.412
			(.23)	(.30)	(.17)	(.98)
Special training			.177	.687	.169	.807
			(.50)	(2.01)	(.43)	(2.11)
Time worked			.010	.002	-.001	.003
			(1.27)	(.24)	(-.07)	(.33)
Mental illness			-.043	.378	-.738	.360
			(-.10)	(.91)	(-1.38)	(.73)
Education level			-.043	.010	-.128	-.012
			(-.66)	(.15)	(-1.70)	(-.17)
Foster care			.022	.257	.052	.324
			(.06)	(.74)	(.13)	(.85)
Spell length					-.284	-.187
					(-2.54)	(-1.72)
Welfare received					.007	.003
					(3.87)	(1.95)
Lives alone					.093	-.330
					(.18)	(-.74)
Saw family					-.026	-.005
					(-1.00)	(-.22)
Worked recently					1.005	.055
					(2.36)	(.14)
Poor health					.341	.147
					(1.77)	(.83)
Alcoholism					-.050	-.849
					(-.12)	(-2.02)
Drug use					.343	-.339
					(.90)	(-.84)

(table continues)

TABLE 3, (continued)

Covariate	Equation Number 1	2	3	4	5	6
Commonality					-.963	.237
					(-2.27)	(.56)
Easy food and drink					-.658	-.015
					(-1.58)	(-.04)
Homeless friends					-.022	.010
					(-1.40)	(.65)
Maximum log. likelihood	-196.5	-206.0	-194.2	-201.2	-173.4	-191.8
Degrees of freedom	6	6	15	15	32	32

Note: T-values in parentheses. For row definitions, see text description of hypotheses.

[a]The equations are presented in the following order: model 1 (cols. 1, 2), model 2 (cols. 3, 4), model 3 (cols. 5, 6).

welfare than females, and the size of welfare grants is positively associated with the hazard of independent exits.[36]

Two other variables employed as controls in model 3 influenced the hazard of independent exits: prior experience in homelessness and the length of respondents' current homeless spell. The hazard of exits was lower for individuals who had experienced prior spells and those who were in longer current spells.

Dependent Exits. We have noted above that none of our estimations of the hazard of dependent exits improved on the overall hazard of these transitions. This is in part a product of the exploratory character of our analyses, an approach which often leads to, among many null results, a few "significant" findings, some possibly type 1 errors. This scenario is obviously a possibility with respect to the few variables found to have "significant" effects on the dependent exit hazard. Nevertheless, in view of the paucity of data on conditions influencing the likelihood of exits from homeless spells, we believe the stability of these influences is worthy of additional study. Two of the effects were consistent with hypotheses: Net of other considerations, the estimated hazard of dependent exits among respondents with vocational training was more than twice that of respondents without training; the estimated hazard of sample members with symptoms of severe alcoholism was 43 percent that of individuals not reporting symptoms. A third effect was contrary to expectations. Again net of other factors, the hazard of dependent exits among individuals who had at some time been married and had children was about 35 percent that among individuals who had never had families. Finally, receipt of welfare had a marginally significant effect on the hazard of dependent exits.

---

[36]We estimated a tobit model in which the vector of variables from model 2 was used to predict the amount of welfare received at wave one. Three variables significantly predicted welfare received: gender, previous homelessness, and prior felony conviction. Females, those previously homeless, and those with felony convictions were all more likely to be receiving welfare at the time of their wave-one interviews.

RESULTS: RETURNS TO HOMELESS SPELLS

Distribution of Returns to Homeless Spells over Time

Our analysis is based on data from sample members who left the streets between the first- and second-wave interviews to live in conventional housing for at least 30 days (n=83). Of these respondents, 31 percent (n=26) returned to the streets before the second-wave interview. The median exit duration among those returning to homelessness was 56 days.

In Figure 2 we graph the hazard function of returning to homelessness following the wave-one exit. Because exits are not recorded as such until the 30th day of continuous residence in some form of domicile following a transition out of homelessness, the earliest respondents can return to homelessness is 31 days after their exits began. The entry at the first data point, "day 0," refers to the hazard of returning to homelessness during the period between the 31st and 60th calendar days following the beginning of exits. The entry at the second data point, "day 30," refers to the hazard of return during the period between the 61st and 90th days following the beginning of exits. The graph shows an uneven but substantial decrease over time in the hazard of homeless spell returns. During the last month of the observation period the hazard of return falls to zero. Thus, the trends over time of returns to homelessness follow those of exits: A substantial percentage of exiters reentered homeless spells during the period of observation and the hazard function of returns to homelessness among exiters generally decreases over time.

Thus, even in the brief period of observation available to us, transitions to conventional housing for homeless spell exiters within our sample are often temporary and succeeded by further spells of homelessness. The brevity of our observation period prevents us from determining whether these later spells are followed by further exits. However, the fact that many members of our samples report at wave one that they have experienced prior bouts of homelessness (Table 1) suggests that

Figure 2 here

these transitions are not rare. If so, the implication is that for many of the homeless their lives "on the streets" are not continuous states but rather comprise a series of episodes.

Conditions Affecting Return Hazard Rates

Our study of conditions affecting returns to homelessness are again based on proportional hazard regression models. We estimate three models, all but the last following the structure and content of the models we employed in the study of exit hazards.

The results of these regressions, presented in Table 4, indicate that none of the models significantly improves upon the fit of a model based solely on the average return hazard of all exiters. However, again because of the exploratory character of our study, we make note of two phenomena which have statistically significant effects in one or more equations. These are gender and recent work history. Surprisingly, given the traditional association of homelessness with single males, the hazard of homeless spell reentry for males is substantially lower than that for females. In the full model the hazard is but 17 percent that of females. On the other hand, as might be expected, the hazard of homeless spell reentry is smaller for individuals who spend larger percentages of their adult lives employed.[37] It is also worth noting that the hazard of returns to homelessness was not found to be related to type of exit.

SUMMARY AND CONCLUSIONS

This paper expands upon the findings of Sosin, Piliavin, and Westerfelt (1990), which indicated that a large segment of the homeless population experiences temporary but recurrent spells

[37]In addition, one dummy variable indexing missing cases is statistically significant in the return models. The respondents who did not indicate how often they had seen their families were more likely to be recidivists than were those who did so indicate. The interpretation to be given this finding is unclear.

TABLE 4

Partial Likelihood Models Predicting Returns to Homelessness (n=89)

Covariates	Equation Number[a] 1	2	3
Black	.069	.058	.725
	(.12)	(.09)	(.89)
Native American	.202	-.187	-1.189
	(.39)	(-.31)	(-1.30)
Age	.038	.024	.008
	(1.96)	(.89)	(.21)
Male	-1.282	-.910	-1.746
	(-2.72)	(-1.53)	(-1.99)
Prev. homeless		-.189	-1.026
		(-.38)	(-1.44)
Marriage with children		.367	.235
		(.63)	(.34)
Convicted of crime		-.112	.450
		(-.22)	(.65)
Special training		.105	.060
		(.23)	(.09)
Time worked		-.019	-.033
		(-1.76)	(-1.96)
Mental illness		-.604	-.436
		(-.97)	(-.55)
Education level		.078	.221
		(.82)	(1.46)
Foster care		-.358	.207
		(-.69)	(.31)
Spell length			.272
			(1.64)
Welfare received			-.001
			(-.38)
Lives alone			.292
			(.32)
Seen family			-.013
			(-.30)
Worked recently			-.861
			(-1.44)
Poor health			.041
			(.13)
Alcoholism			-.453
			(-.63)
Drug use			.059
			(.08)

(table continues)

TABLE 4, continued

Covariates	Equation Number[a] 1	2	3
Commonality			.737
			(1.12)
Easy food and drink			1.260
			(1.88)
Homeless friends			.001
			(.02)
Own place exit			.071
			(.11)
Maximum log. likelihood	-99.3	-97.0	-84.8
Degrees of freedom	4	13	31

Note: T-values in parentheses.

[a]The equations are presented in the following order: model 1 (col. 1), model 2 (col. 2), and model 3 (col. 3).

of homelessness. Using the same sample as those authors we (1) describe the time patterns of exits from and returns to homeless spells, and (2) test the predictive ability for these transitions of four theoretical frameworks derived from theories previously developed to explain the onset of homelessness. We study two forms of exit: independent exits, defined as transitions to what sample members identified as *their* own domiciles, and dependent exits, defined as transitions to what sample members identified as lodging shared with family or friends.

Our initial nonparametric plot of the homeless spell exit hazard rate function among recently homeless people revealed that the hazard decreased as time in the spell increased. A plot of the homeless spell return hazard among recent exiters showed a similar trend. These findings suggest that the hazards of these transitions were affected by either sample heterogeneity or state dependence.[38] Results from our study of exits provided tentative support for each possibility. Evidence for heterogeneity comes from our finding that several characteristics of sample members were associated with both forms of exits. Additional evidence for heterogeneity as well as state dependence comes from the finding that, controlling for various individual attributes, current spell length and prior homelessness were significantly and negatively associated with the hazard of independent exits. Assuming that identity with other homeless individuals results from exposure time, evidence for state dependence is given by the finding that the hazard of independent exits is lower for sample members who believe they share much in common with other homeless people.

Overall, our results provide less than robust support for any of the theoretical frameworks guiding our hypotheses. This may be due to our failure to choose and operationalize well the concepts implied by the frameworks, but we believe this unlikely since our decisions were based on concepts

---

[38]Heterogeneity assumes that variation of state transition rates over time is due to variation in transition proclivity among sample members with differing attributes. State dependence assumes that with increasing time spent in a given state, independent of individual proclivity, people are less likely to leave the state.

and indicators employed fruitfully in prior studies of poverty-stricken populations. Alternatively, it may be that, contrary to our initial assumptions, explanations for the initial onset of homelessness, however valid, fail to tap many, perhaps most, of the phenomena relevant to spell exits and returns.

Yet the search here for conditions affecting the hazard of homeless spell exits and returns was not entirely fruitless. Indeed, several of our findings suggest promising avenues for further research on these transitions. Specifically, we refer to the findings that the probability of independent exits are linked to recent receipt of welfare, length of homeless careers, duration of current spells, and identification with other homeless individuals. We comment briefly on these findings.

First we initially cast the relevance of social institutions to the dynamics of homeless spells in terms of individual experiences and attitudes that signify subjective alienation from family, the workplace, and other conventional institutions. None of these, however, was found to be significantly associated with the hazard of spell exits. However, the finding that welfare receipt was a significant predictor of independent exits suggests an alternative hypothesis, namely, that the likelihood of these exits is influenced not only or necessarily by institutional disaffiliation but also by the *accessibility and availability* of sustained institutional support. That these conditions may play a role in the initial onset of homelessness and its recurrence has already been suggested by Rossi (1989).

Second, our findings that homeless career length and wave-one spell duration are linked to the hazard of independent exits from spells suggest that some features of the homeless experience itself are relevant to these transitions. With the exception of measures of acculturation, we did not examine these features here. Several are suggested by Snow and Anderson (1993). They include (1) attenuation of work skills, (2) decrease of resources to deal with fiscal and interpersonal contingencies associated with achieving exits, (3) development of associations with homeless individuals who themselves are differentially motivated to exit, and (4) the effect of time in state on the motivation to return to conventional housing.

Our findings regarding dependent exits and returns to homelessness present additional issues. First, the predictors of dependent exits, except for welfare receipt, differ from the predictors of independent exits. While we initially recognized that such differences might occur, we have no strong theoretical justification for those we have found. Second, the fit of our estimations of dependent exits is substantially weaker than those of independent exits. Clearly, this may imply only the inappropriateness of our predictors for these transitions. Another more interesting possibility, and one that requires more detailed data than available to this investigation, is that these transitions are made by individuals whose attributes and experiences are similar to those of individuals who fail to make exits. Therefore, the ability to make dependent exits may be due more to external circumstances and less to individual characteristics. Finally, only one variable influenced returns to homelessness as hypothesized. Since the variables chosen for our analyses are those commonly associated with onset of homelessness, their lack of influence in this study suggests that either processes leading to onset differ from those leading to return or that current explanations for onset are inadequate.

A series of problems arising from this study concern methodological issues, particularly those related to sampling and sample attrition. The sampling issue has been discussed above. Sample attrition is a problem not previously discussed by investigators of the homeless, as panel studies of homeless people have only recently been undertaken. Because attriters and nonattriters may differ in their attributes and behavior, findings from longitudinal studies of the homeless may be seriously biased. Since the best approach is to minimize attrition, it is important to note that surprisingly effective, though costly, means have been achieved by Wright, Allen, and Devine (1993). Employing a variety of procedures that included reminder cards, rewards for periodic updating, and use of family members, friends, and social agency records as information sources, these researchers lost only 15 percent of a homeless sample followed over a period of 6 months. Through use of similar techniques,

future studies of homeless spell dynamics should be able to avoid at least some of the estimating problems due to attrition that we have experienced here.

References

Anderson, Nels. 1923. The Hobo. Chicago: University of Chicago Press.

Bahr, Howard. 1970. Disaffiliated Man. Toronto: University of Toronto Press.

Bahr, Howard, and Theodore Caplow. 1973. Old Men: Drunk and Sober. New York: New York University Press.

Becker, Howard. 1963. The Outsiders. New York: Free Press.

Bogue, Donald. 1963. Skid Row in American Cities. Chicago: University of Chicago Press.

Bull, William. 1886. "Trampery: Its Causes, Present Aspects, and Some Suggested Remedies." Proceedings of the National Conference of Charities and Corrections, pp. 188-206.

Burnam, Audrey, and Paul Koegel. 1988. "Methodology for Obtaining a Representative Sample of Homeless Persons." Evaluation Review 12(2): 117-152.

Burt, Martha A., and Barbara E. Cohen. 1989. America's Homeless. Report 89-3, Urban Institute, Washington, D.C..

Caplow, Theodore. 1970. "Transiency as a Cultural Pattern." American Sociological Review 5(5): 731-739.

Cloward, Richard, and Lloyd Ohlin. 1960. Delinquency and Opportunity. New York: Free Press.

Cohen, Carl I., and Jay Sokolovsky. 1981. "A Reassessment of the Sociability of Long-Term Skid Row Residents: A Social Network Approach." Social Networks 3: 93-105.

Cohen, Carl I., and Jay Sokolovsky. 1989. Old Men of the Bowery. New York and London: Guilford Press.

Cordray, David S., and Georgine M. Pion. 1991. "What's Behind the Numbers? Definitional Issues in Counting the Homeless." Housing Policy Debate 2(3): 587-616.

Cox, David. 1972. "Regression Models and Life Tables (with Discussion)." Journal of the Royal Statistical Society Series B, 34: 187-220.

Elliott, Marta, and Lauren J. Krivo. 1991. "Structural Determinants of Homelessness in the United States." Social Problems 38(1): 113-131.

Farr, Rodger K., Paul Koegel, and Audrey Burnam. 1986. A Survey of Homelessness and Mental Illness in the Skid Row Area of Los Angeles. Los Angeles, Calif.: Los Angeles County Department of Mental Health.

Freeman, Richard B., and Brian Hall. 1987. "Permanent Homelessness in America?" Population Research and Policy Review 6: 3-27.

Hirschi, Travis. 1969. Causes of Delinquency. Berkeley: University of California Press.

Hoch, Charles, and Robert A Slayton. 1989. New Homeless and Old. Philadelphia: Temple University Press.

Hopper, Kim. 1991. "Homeless Old and New: The Matter of Definition." Housing Policy Debate 2(3): 757-813.

Jencks, Christopher. 1994. The Homeless. Cambridge, Mass.: Havard University Press.

Katz, Michael B. 1986. In the Shadow of the Poorhouse. New York: Basic Books.

Kondratas, Anna. 1991. "Estimates and Public Policy: The Politics of Numbers." Housing Policy Debate 2(3): 631-647.

LaGory, Mark, Ferris J. Ritchey, and Kevin Fitzpatrick. 1991. "Homelessness and Affiliation." Sociological Quarterly 32(2): 201-218.

Lieberson, Stanley. 1985. Making It Count. Berkeley: University of California Press.

McChesney, Kay Young. 1990. "Family Homelessness: A Systemic Problem." Journal of Social Issues 46(4): 191-205.

McDonald, Thomas P., Reva I. Allen, Alex Westerfelt, and Irving Piliavin. 1993. "Assessing the Long-Term Effects of Foster Care: A Research Synthesis." Institute for Research on Poverty, Special Report 57, University of Wisconsin-Madison.

Morse, Gary, Nancy Shields, Christine Hanneke, Robert Calsyn, Gary Burger, and Bruce Nelson. 1985. Homeless People in St. Louis: A Mental Health Program Evaluation, Field Study, and Follow-up Investigation. Jefferson City, Mo.: Missouri Department of Mental Health.

North, Carol S., Elizabeth M. Smith, and Edward L. Spitznagel. 1993. "Is Antisocial Personality a Valid Diagnosis among the Homeless?" American Journal of Psychiatry 150(4): 578-583.

Piliavin, Irving, Michael Sosin, Alex Westerfelt, and Ross L. Matsueda. 1993. "The Duration of Homeless Careers: An Exploratory Study." Social Service Review 67(4): 576-598.

Robertson, Marjorie. 1991. "Homeless Women with Children: The Role of Alcohol and Other Drug Abuse." American Psychologist 46(11): 1198-1208.

Rooney, James F. 1961. "Group Processes among Skid Row Winos: A Reevaulation of the Undersocialization Hypothesis." Quarterly Journal of Studies on Alcohol 22(3): 444-460.

Rossi, Peter. 1989. Down and Out in America. Chicago: University of Chicago Press.

Roth, Dee, Jerry Bean, Nancy Lust and Traian Saveanu. 1985. Homelessness in Ohio: A Study of People in Need. Columbus: Ohio Department of Mental Health.

Rubington, Earl. 1968. "The Bottle Gang." Quarterly Journal of Studies on Alcohol 29: 943-955.

Shlay, Anne, and Peter Rossi. 1992. "Social Science Research and Contemporary Studies of Homelessness." Annual Review of Sociology 18: 129-160.

Snow, David, and Leon Anderson. 1993. Down on Their Luck. Berkeley: University of California Press.

Sosin, Michael, Paul Colson, and Susan Grossman. 1988. Homelessness in Chicago: Poverty and Pathology, Social Institutions, and Social Change. Chicago: The Chicago Community Trust.

Sosin, Michael, Irving Piliavin, and Herb Westerfelt. 1990. "Toward a Longitudinal Analysis of Homelessness." Journal of Social Issues 46(4): 157-174.

Straus, Robert. 1946. "Alcohol and the Homeless Man." Quarterly Journal of Studies on Alcohol 7(3): 360-404.

Sutherland, Edwin, and Harvey Locke. 1936. Twenty Thousand Homeless Men. Chicago: J. B. Lippincott.

Wallace, Samuel. 1965. Skid Row as a Way of Life. Totova, N.J.: Bedminister Press.

Wayland, Francis. 1877. "A Paper on Tramps Read at the Saratoga Meeting of the American Social Science Association before the Conference of State Charities." New Haven: Hoggs and Robinson, Printers.

Wright, James D. 1989. Address Unknown: Homelessness in Contemporary America. Hawthorne, N.Y.: Aldine de Gruyter.

Wright, James D., Tupper Allen, and Joel A. Devine. 1993. "Tracking Non-Traditional Populations in Longitudinal Studies." Paper presented at the Meetings of the American Public Health Association, Toronto.

Yamaguchi, Kazuo. 1991. Event History Analysis. Newbury Park, Calif.: Sage Publications.

3/30/94: This version, exit6brw.wpe, adds two things to exit5fin.wpe. 1) table x about here markers, 2) a clearer explanation of the left-hand censoring.

4/5/94: This version, exit7brw.wpe, responds to mare's comments. The underlined sections of it are my changes to the draft given to mare. On 4/13 I give this to irv, exit7irv.wpe, for his revision.

5/3/94: This version has Irv's most recent changes. The plan is to correct it for accuracy, then send it off.

5/5/94: Exit8brw.wpe has my few typo corrections to Irv's exit7irv.wpe. I will give this to betty for final proofing.

5/10/94: Exit8bet.wpe includes Betty's corrections typed in by me. It also adds an abstract. This is the version we send off to ASR on May 13th.