University of Waterloo STAT 220 – W. H. Cherry

## Figure 2.15. MEASURING PROCESSES: Counting the Homeless

EM9030: Toronto Star, March 20, 1990, pages A1 and A28

## 15,000 census-takers count U.S. homeless

## **By Bob Hepburn** TORONTO STAR

WASHINGTON – In the moonlight tonight, a census-taker will walk up to the heating grates on E Street across from the U.S. state department headquarters and start counting.

He will be checking on how many homeless men and women are asleep under blankets on the grates.

And if any are awake, he's got a few questions he'd like to ask them.

A few blocks away, other census-takers will be counting how many people are asleep on benches in Lafayette Park in front of the White House, under bushes on Capitol Hill, in subway entrances and in hundreds of abandoned buildings in Washington.

It's all part of the first nationwide effort by the U.S. Census Bureau to count as accurately as possible the number of homeless people in the United States.

From 6 p.m. tonight until 8 a.m. tomorow, an army of 15,000 census-takers will check for homeless Americans in state and local shelters, street corners, subway stations, city parks, shelters for abused women, commercial campgrounds, drug and alcohol treatment centres, hospital emergency rooms, train and bus stations, all-night theatres, and farm fields where migrant workers sleep.

From 2 a.m. to 4 a.m., they will check street locations such as subway stations and heating grates.

From 4 a.m. to 8 a.m., they will sit in their cars or stand outside abandoned buildings and count people who leave after waking up in the morning.

When it's over, the number of homeless counted may vary anywhere from 250,000 to more than 3 million.

And that huge difference in estimates of how many people are homeless in America is the reason the census bureau agreed to undertake the \$2.7-million survey.

U.S. administration officials claim the number of homeless ranges between 250,000 and 500,000. Advocates for the homeless, such as the National Coalition for the Homeless, claim the real number is 3 million.

They fear the White House will deliberately underestimate the homeless to avoid pumping more federal money into low-cost housing and other programs for the poor.

Former president Ronald Reagan drastically cut federal spending on programs for the poor, claiming the need wasn't as great as advocates suggested.

Cynthia Taueber, the census bureau official responsible for the survey, says the bureau will make its best effort to count the homeless.

The main census of about 250 million Americans will be conducted April 1.

But she admits many "hidden homeless" will not be found because they live doubled-up with friends or relatives, in tunnels or abandoned cars, or in isolated rural areas.

Federal and state governments will use the survey's findings to devise policies, such as low-rent housing, for the homeless. Washington returns billions of tax dollars to state and local governments based in part on population data.

By one estimate, each person is worth about \$150 in federal funds to a city or town.

Also, planners will use the census results

to determine where to locate facilities such as homeless shelters. As well, they require the data to help assess needs for senior citizens, students and infants in day-care centres.

After the last official census in 1980, there were 37 lawsuits filed against the census bureau charging undercounting.

In the Canadian census next year, Statistics Canada "will very definitely" use new techniques to count the homeless in the country, according to Mike Sheridan, collection manager of the 1991 census.

In fact, Statistics Canada conducted a test last week in Toronto to see whether counting homeless at "soup kitchens" would be effective.

Sheridan said researchers found in a similar test in San Francisco that up to 95 per cent of the homeless in an area came to a "soup kitchen" for a meal over a two-day period.

Statistics Canada has sent observers to several U.S. cities to watch the experiment.

Tonight, U.S. census-takers will ask the homeless simple questions about their age, sex and race.

However, they won't wake anyone who is sleeping on the streets. In those cases, the census people will guess the answers as best they can.

If a sleeping person is completely covered by cardboard or blankets, the person will be merely counted without estimating the age, sex or race.

When the final report is ready, the census bureau will not release a single number of how many homeless there are in the United States.

Instead, it will say how many homeless were found in shelters, on street corners, in abandoned buildings and in other spots where they gather.

- ☐ The number of U.S. homeless, the focus of the article EM9030 reprinted above, is a *size*; briefly describe the (target) population of which this size is an attribute.
- We would classify a population element's response variate in the article EM9030 reprinted above as a binary (discrete or categorical) variate with categories of 'homeless' or 'not homeless'. Components of overall error in the count include the difficulty of finding every potential population element and then deciding if its category is 'homeless'. Describe concisely how these difficulties differ from those for elements in the investigations described in Figures 2.12, 2.13 and 2.14.
- 3 Define what is meant by *homeless*. What are the difficulties in formulating a working definition?
  - Discuss briefly sources of (measurement) error when using your definition to categorize:
    - a 30-year-old woman with two young children in a shelter for abused women;
    - a 45-year-old man in a tent in a commercial campground;
    - an 18-year-old man in a drug treatment centre;
       an 80-year-old widow in an old-age home.

(continued overleaf)

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- 4 Describe briefly why as many as 15,000 census-takers were used to count the U.S. homeless.
  - What source(s) of (measurement) error might arise from using such a large number of 'operators' in the measuring process.
    How might the U.S. Census Bureau try to overcome these error source(s)?
  - Suggest an approximate number of census-takers needed to make a similar count of the homeless in Canada; explain your reasoning briefly.
- What part(s) of the article EM9030 reprinted overleaf on page 2.45 are concerned with factor(s) affecting the *accuracy* of the counting process? Identify the paragraph of the article in which each factor occurs, and describe briefly the issue(s) involved.
  - If an answer were to be given for the number of homeless in the U.S., which categories of error would you expect to impose *severe* limitations on this answer? Explain briefly.
- The *second* paragraph in the right-hand column of the article EM9030 reprinted overleaf on page 2.45 mentions 37 lawsuits charging *under* counting in the 1980 U.S. census.
  - What factor(s) might be responsible for this undercounting?
  - Are there factor(s) that might lead to *over* counting? Explain briefly.
- Describe briefly what you see as the advantage(s) and the *disadvantage*(s) of using the "soup kitchen" method, mentioned in the fifth paragraph (near the middle) of the right-hand column of the article EM9030 reprinted overleaf on page 2.45, to obtain an answer to the Question of the number of homeless people in an area.
- The last two paragraphs of the article EM9030 reprinted overleaf on page 2.45 state that .... the census bureau will not release a single number .... Instead, it will say how many homeless were found in .... spots where they gather.
  - Suggest why the Census Bureau will not release a single number for the U.S. homeless.
  - Suggest why the numbers will be released by *type of location*.
- 9 For the three items of additional information mentioned in the fifth-last paragraph (near the middle) of the right-hand column of the article EM9030 reprinted overleaf on page 2.45, what difficulties might arise in obtaining *correct* information from a homeless person about their age, sex and race? Deal with the three items separately.
  - Of all the items of information that could potentially be requested from the homeless, suggest why *these* three were chosen.
  - How would a person's age, sex and race in this investigation be described in the terminology of the FDEAC cycle?

The article EM9030 reprinted overleaf on page 2.45 is also used, together with EM0202, in Statistical Highlight #37.

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