

*A method based largely on Bureau of the Census data reveals that since 1910 considerable change has occurred in the timing and duration of the period of childbearing in the United States.*

## Age of Women at Completion of Childbearing

LINCOLN H. DAY, Ph.D.

**M**ORE than 90 percent of the women in the United States eventually marry (1), and 85 to 95 percent of those who marry before the age of 45 become mothers (2). Hence, changes in the length and timing of the childbearing period may have important social effects on large numbers of American women and, through them, on the other members of society as well.

This paper will discuss an attempt we have made to determine the proportion of women who had completed their childbearing by the time they had reached certain ages. An analysis of the age-specific birth rates for women in various age cohorts could afford some indication of any change which might have occurred in these proportions; but the method is somewhat inadequate because it not only fails to denote the number of women who had completed their childbearing, but because it also gives only a very crude indication of their age distribution. The method devised by us to assemble the data for this article falls prey to neither of these shortcomings. It is, however, not entirely free of certain others of its own.

The census data from which we derived our basic information are available only for the years 1910, 1940, and 1950. For purposes of

this study it was assumed that a mother had completed her childbearing if she had not borne a child for a period of at least 5 years. Although such an assumption is not invariably true, it was necessitated by the character of the relevant data, data in which mothers were subdivided by whether they were with or without children under 5 years of age.

A partial check of the validity of this assumption was made by the use of recent data on child spacing gathered by Schachter and Grabill (3), together with data from the Indianapolis study analyzed by Whelpton and Kiser (4) and a tabulation of the estimated ages of siblings of 565 freshman scholarship candidates at Mount Holyoke College. On the basis of these rather disparate materials, it appears that not more than 20 percent of the mothers had let 5 or more years elapse between births.

Admittedly, this percentage is somewhat higher than could have been hoped for. A figure closer to, say, 10 percent would have been a better validation of the assumption upon which our study is based. However, the women in each of these three studies went through their childbearing periods during the depression and subsequent war period. The only exception, and it is but a partial one, is the group studied by Schachter and Grabill. The percentage of mothers in their group who had not completed childbearing was somewhat less than the percentage for the other groups. On the basis of

---

*Dr. Day is assistant professor of sociology, department of economics and sociology, Mount Holyoke College, South Hadley, Mass.*

Whelpton's recent studies of cohort fertility (5), it is likely that this deviation of about 20 percent from our definition of completed childbearing results from the partial making up, by women born between approximately 1903 and 1915, of births postponed during the depression.

Determining the difference in years between the age by which each cohort had borne 25 percent of its births and the age by which it had borne 90 percent, it was found that the difference was greater for the cohorts of 1903-15 than for those born earlier; and that, if present trends continue, this difference will be smallest of all for cohorts born after 1915. Women born before about 1903 seem not to have "made up" for births postponed during the depression; while women born after about 1915 seem to have been little affected by the depression, so far as any necessity to make up for postponed births is concerned.

This making up of births is probably the main factor in the 20 percent deviation from our definition of completed childbearing, although there is also a certain proportion of women who bore an additional child after a period of more than 5 years in each of the census years for which we have data. On the basis of the three studies mentioned above, it would appear that most of these were women who had allowed only 6 years to elapse between successive births.

### Estimation of Error

Before making estimates of the proportions of women who had completed childbearing, adjustments were made on the census data themselves in order to lessen as much as possible the chance of error arising from any source other than the basic assumption. One adjustment was for under-enumeration of births; the other, for infant and child mortality.

The 1950 data published in the census report on fertility (2) had been partially adjusted for under-enumeration; those for 1940 and 1910 had not (6a, 6b). In the appendix to its 1945 report on differential fertility (6a) the Bureau of the Census cites certain findings from a special tabulation of schedules from the 1940 census. Undertaken to obtain information on the fertility of ever-married women who had made no report of the number of children ever born

the tabulation revealed striking differences, both in the number of children ever born and in the proportion who had remained childless, between the women who had failed to report on the number of children ever born to them and the women who had so reported. By a method involving the application of two sets of fertility ratios, that is, number of children 0-4 years old per 1,000 women in a given age category, one set from this special tabulation and the other from the regular census enumeration, we were able to make an estimate of the total number of mothers in each age group who had completed childbearing in 1940. Then, on the assumption of relative equality between the respective ratios in 1940 and 1910, we made a similar estimate for the earlier year.

An example of the difference this adjustment for under-enumeration makes is shown in table 1, which compares the proportions of "completed" childbearing derived from unadjusted and adjusted census data for native whites and Negroes. The main difference is found in the earlier ages, denoting considerable under-enumeration of children born to younger mothers. In some instances this has amounted to a decrease between the adjusted and unadjusted figures of 50 percent for native whites and 30 percent for Negroes. That the proportional changes occasioned by adjustment for the effects of under-enumeration were generally larger for whites than for Negroes is due not to a more complete enumeration of Negroes, but to the relatively greater effect on the Negro data of an additional adjustment for infant and child mortality.

An adjustment for infant and child mortality was necessary because of the importance to our calculations of data on the number of mothers with children under 5 years of age. By our method, were mortality not taken into account, if a child had been born and had died within 5 years of the census the mother would be tabulated as a woman of completed fertility if she had no other children under 5 years of age, whereas if the child had lived, the mother would have been counted as a woman of uncompleted fertility. For this reason an "adjustment factor" derived from life table  $d_x$  values (7-9) was applied to each group of mothers.

In calculating this adjustment factor, an estimation was made of the number of children born to mothers in each 5-year age group within 5 years of the census and dying before the census was taken. In its actual calculation, the adjustment factor was made a function of both the level of infant and child mortality and of the number of children born to women in each age group. The adjustment does not take into account abortions or stillbirths, although these might have been of some consequence in the duration of childbearing.

Table 2 gives a sample comparison of the difference this adjustment for mortality makes in the proportion of "completed" childbearing in each age group. As with the adjustment for under-enumeration, the largest differences are

at the younger ages. This should be expected because of the higher proportions of younger women who have borne but one child and who therefore have no other child under 5 years of age to put them in the "childbearing uncompleted" category.

From the basic findings shown in table 3, three general facts can be noted: (a) there have been changes since 1910 in the ages at which most women complete childbearing; (b) these changes have been in the direction of a greater concentration of childbearing in certain ages, that is, an earlier average age of women at completion of childbearing and a higher proportion who finish childbearing earlier, and (c) certain demographic developments during the depression decade of the 1930's differed markedly

**Table 1. Proportion of all mothers with no children under 5 years of age, adjusted and unadjusted for under-enumeration,<sup>1</sup> by age and race of mother: United States, 1940 and 1910**

Age (years)	Native white				Negro			
	1940		1910		1940		1910	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
15-19.....	19.6	9.4	28.1	18.4	24.6	17.6	35.7	28.5
20-24.....	14.6	9.7	18.0	14.4	31.2	27.4	33.0	30.0
25-29.....	29.3	26.9	24.0	22.5	50.6	48.2	43.4	41.6
30-34.....	50.6	49.6	38.6	37.9	65.1	64.3	53.2	52.3
35-39.....	69.9	69.2	53.1	52.7	74.2	73.5	60.9	60.4
40-44.....	84.9	84.5	71.4	71.2	84.3	83.8	74.6	74.2

<sup>1</sup> Figures adjusted and unadjusted for discrepancies in reported childbearing between women who reported on the number of children ever born and women who did not so report.

**Table 2. Proportion of all mothers with no children under 5 years of age, unadjusted and adjusted for infant and child mortality,<sup>1</sup> by age and race of mother: United States, 1940 and 1910**

Age (years)	Native white				Negro			
	1940		1910		1940		1910	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
15-19.....	9.4	4.7	18.4	4.8	17.6	10.0	28.5	10.3
20-24.....	9.7	5.1	14.4	.2	27.4	20.7	30.0	12.2
25-29.....	26.9	23.5	22.5	9.1	48.2	43.4	41.6	26.8
30-34.....	49.6	47.0	37.9	27.2	64.3	61.0	52.3	40.1
35-39.....	69.2	67.6	52.7	44.5	73.5	71.1	60.4	50.3
40-44.....	84.5	83.7	71.2	66.2	83.8	82.4	74.2	67.6

<sup>1</sup> All figures adjusted for under-enumeration. Those in the "unadjusted" column have only this single adjustment. Those in the "adjusted" column have been adjusted also for infant and child mortality.

**Table 3. Proportion <sup>1</sup> of all mothers with no children under 5 years old, by age, race, and residence of mother: United States, 1950, 1940, and 1910**

Race and age	Total United States			Urban			Rural nonfarm			Rural farm		
	1950	1940	1910	1950	1940	1910	1950	1940	1910	1950	1940	1910
Total: <sup>2</sup>												
25-29-----	18.9	25.6	11.7	19.3	27.8	18.6	19.9	24.7	12.1	16.1	19.4	4.1
30-34-----	39.8	48.2	28.8	40.0	52.2	39.2	40.8	47.4	28.2	37.6	38.8	16.9
35-39-----	60.6	67.9	45.2	62.5	73.7	58.3	59.0	66.7	44.0	54.5	54.6	30.4
40-44-----	81.1	83.5	66.3	83.7	88.4	77.6	79.2	83.1	66.5	72.3	72.6	52.6
45-49-----	95.5	94.9	88.9	96.7	97.0	93.8	94.6	95.1	89.0	91.3	90.2	85.8
White: <sup>3</sup>												
25-29-----	17.4	23.5	9.1	17.1	25.0	14.9	19.0	23.6	8.2	15.6	17.8	2.4
30-34-----	38.8	47.0	27.2	38.3	50.2	36.8	40.6	46.6	26.4	37.9	38.3	15.4
35-39-----	60.3	67.6	44.5	61.7	72.9	56.9	59.2	66.6	43.0	55.6	54.9	29.7
40-44-----	81.2	83.7	66.2	83.4	88.4	76.9	79.5	83.2	66.2	73.4	73.1	52.5
45-49-----	96.1	95.3	89.6	96.9	97.2	93.9	94.9	95.3	89.7	92.2	91.2	87.3
Nonwhite:												
25-29-----	34.2	41.3	26.2	38.6	52.4	46.1	30.9	36.6	30.7	19.0	27.6	11.9
30-34-----	51.4	59.5	39.5	57.5	70.3	59.6	44.0	57.6	38.7	34.8	41.7	24.8
35-39-----	63.9	70.0	49.7	70.6	79.7	69.9	57.0	67.7	50.4	46.9	53.0	34.2
40-44-----	80.9	81.9	67.1	86.9	88.4	84.5	76.0	82.2	68.7	64.1	69.6	53.1
45-49-----	92.2	91.3	84.1	94.5	95.5	93.8	90.9	93.0	84.8	84.8	83.4	76.5

<sup>1</sup> Computed from data adjusted for under-enumeration and for infant and child mortality.

<sup>2</sup> Nonwhites together with only native whites for 1940 and 1910.

<sup>3</sup> Native whites only for 1940 and 1910.

from those which preceded it, and these developments have not been extensively continued since that time.

Among these findings, those for 1940 are somewhat anomalous. On the surface it would seem that the most extensive change in the direction cited was between 1910 and 1940, with a change in the opposite direction between 1940 and 1950. Evidence of a sizable change between 1910 and 1940 can be seen not only in the data under discussion but also in the cohort data collected and analyzed by Whelpton (*5*).

But whether a change in the opposite direction occurred between 1940 and 1950 is doubtful, in view of the information we have developed from Whelpton's data. By updating his table A for the years through 1954 and then estimating the additional parity-order births which would occur before the end of the period of childbearing, it was possible to make various calculations for cohorts born as recently as 1925. These calculations were used to estimate the ages of the cohorts at the time various proportions of their children either had been born or, for cohorts whose fertility had to be estimated, will have been born.

Obviously, these estimates are subject to error. But since they were made solely for the years near the end of the childbearing period, when but a small proportion of all births occur, even substantial errors should have only a minor effect on the total for cohorts of women born before about 1918. For those born after that date, however, the risk of error in calculations of fertility rates is greater, varying directly with the year of birth.

Despite these limitations, the pattern set by the cohorts for which more data had to be estimated follows quite closely the pattern set by those cohorts for which it was necessary to estimate few or no data. These two sets of data show that, for the cohorts in the childbearing ages in 1940, there had been a generally wider distribution of childbearing in the preceding decade than there had been for cohorts in the childbearing ages in 1950. That is, the period between, for instance, the 25th and 90th percentile births was longer for the cohorts in the childbearing ages in 1940 than for those in the childbearing ages in 1950. This was partly the result of a higher incidence of delayed marriage in the depression years of the 1930's.

If to the fact of delayed marriage we add the fact that our own data are based on the assumption that a mother has completed her childbearing if she has not borne a child for 5 years, it becomes clear that what between 1940 and 1950 appears to be a reversal in the trend toward earlier completion of childbearing may actually be something quite different. Possibly the higher percentages of women who had seemingly completed childbearing by certain ages in 1940 are largely the result of an unusually high proportion of women who, because of conditions during the 1930's, allowed five or even more years to elapse between certain of their births. The increased birth rates for women above age 35 in the late 1930's and early 1940's (10) would lend credence to this view. In short, if anything, the childbearing patterns of women tabulated in the 1940 census represent not so much an advanced stage in the trend toward a shorter period of childbearing as they do a temporary plateau or even reversal of that trend. The important comparisons, then, are those which are to be made between 1910 and 1950, rather than between either of those years and 1940.

### **Socioeconomic Factors**

In considering the relation between childbearing and various socioeconomic classifications we are limited to three variables: race, rural-urban residence, and number of years of schooling.

In comparison with whites, there is a higher proportion of Negro women at either extreme of the childbearing process: on the basis of our definition, a higher proportion of Negro women than of white women complete their childbearing before age 35, while at the same time, a higher proportion also continue to bear children in the later years of the fecund period. Among women of both races, childbearing in the upper ages is most common among those who do not know how to prevent unwanted pregnancies or who are unwilling to accept planning in such a highly personal area of life. This condition, related as it is to low income and scant educational opportunity, is much more common among Negroes than among whites.

On the other hand, the social conditions in which many Negroes have been found to live are likely to lower fertility either through the separation of spouses, which lessens the chance of conception, or for other reasons, such as the contraction of venereal disease, which frequently leads to sterility and pregnancy wastage (11). Many persons who have lived under these conditions may eventually form stable marital relationships; but since fecundity in women declines gradually after about age 25 and more rapidly after about age 30, they may achieve this stability too late for them to bear any, or more than 1 or 2, children.

We have, then, a situation among Negroes in which the ignorance and poverty of a large number has tended to produce a generally longer period of childbearing while at the same time, a considerable amount of personal and social disorganization among others has tended to produce a generally shorter period of childbearing. Our data bear this out by showing, in comparison with whites, a higher proportion of childless Negro women, a higher proportion completing their childbearing in the younger ages, and a higher proportion continuing to bear children in the upper ages. What is unusual about childbearing among Negroes is not the fact that a certain number of women continue to bear children throughout the whole fecund period, whereas others bear only a few or none at all. The unusual character of Negro childbearing derives from the fact that it is dispersed over a wider age range than that of whites.

With respect to rural-urban differences in the proportion of completed fertility, the general trend among white women has been toward less diversity among the three available residential groupings (urban, rural nonfarm, and rural farm) in the proportion of women who have completed childbearing at any given age. The sources of this greater homogeneity are two: (a) a greater proportion of rural women are finishing their childbearing earlier than in the past; and (b) a greater proportion of urban women are finishing their childbearing later.

With the rural areas showing the greater change, the result has been a decrease in the considerable urban-rural differential which

formerly existed. The rural trend is part of a general decline in fertility; the trend in urban areas, however, seems to derive in large part from an increase in births during the "baby boom" after World War II. Were we able to compute the proportions of "completed fertility" on the basis of data for years more recent than 1950, we should probably find among urban women a partial return to the higher percentages of the pre-war years. But it is still likely that the urban-rural differentials will decline further in the future.

Although similar changes for urban and rural groups have occurred among nonwhites, there is not the degree of homogeneity that we find among whites. The differences between residential groupings of nonwhites were smaller in 1950 than in 1910, just as they were among whites. But the changes were considerably smaller among nonwhites than among whites.

Because there is in the United States considerable evidence of a close association between number of years of schooling and socioeconomic status, an analysis of data on childbearing, subdivided according to years of schooling, affords an indication of the differences in timing and duration of childbearing among the various social strata. Such an analysis must be limited to 1940, however, because data for 1910 do not exist, while those for 1950 are in a form unsuited to this kind of analysis.

Our studies show that, among both whites and Negroes, there is greater similarity between rates of completion of childbearing for mothers with the most schooling and for mothers with the least schooling than between the rates for either group and those for women with a grammar or high school education.

The reasons for the similarity in fertility rates between mothers with the most and mothers with the least schooling were quite different, however. Among women with few years of schooling the dominant pattern was one of continual childbearing, even into the upper ages; among women with some college education the pattern was generally one of later marriage. The result, at least in 1940, was a higher proportion of completed fertility at each age among women with some high school education than among the groups with either

less or more than a high school education. But because of generally smaller families, the actual number of years spent in childbearing was less for the groups with more schooling. On the average, the more years of schooling, the fewer years devoted to childbearing.

### Demographic Factors

In the present study the causal factors, however numerous and diverse, and however complex their interrelationship, affect the timing and duration of childbearing through only three demographic factors: (a) average size of family; (b) age of mother at birth of first child; and (c) lapse of time between successive births. To the extent that the paucity of data permits any analysis, we have found that not all of these factors have operated in the same direction.

Despite certain tendencies which lengthen the period of childbearing, women today are finishing their childbearing at earlier ages than formerly, first, because of a decline in family size, and second, because of a generally younger age of the mother at birth of the first child.

Median family size has declined considerably since the earlier part of the century, approximately 50 percent for native whites and 60 percent for Negroes (2, 5). In the 1930's this meant a high proportion of childless and one-child families. Today it means a general increase in the proportion of families with 2, 3, and 4 children. In both instances, the change has been characterized by a continual decrease in the proportion of large families, that is, those with six or more children.

With the exception of the depression decade, the average age of the mother at birth of the first child has also decreased considerably since the earlier part of the century, about  $1\frac{3}{4}$  years between 1890 and 1950 (12, 13). This is largely the result of an earlier age at first marriage, particularly since 1930.

Although the childbearing period in the United States has been shortened, the available evidence suggests that there has been a tendency in recent years for women to bear children at somewhat longer intervals. This is in keeping with the recommendations of modern obstetricians and is doubtless made possible

largely through the more widespread practice of birth control.

The increased incidence of divorce and the separation of husband and wife because of universal military conscription also apparently act more to lengthen the average period of childbearing than to decrease it through effecting any general decline in the number of children per family. This is partially compensated for to the extent that widowhood in the childbearing ages has declined. But it is our conclusion that the gain in time for childbearing which has resulted from less widowhood has not counteracted the losses occasioned by more divorce, together with separation of spouses in response to universal military conscription. The relative shortness of the 2-year term for draftees and the high remarriage rate for divorcees (14, 15) have apparently resulted, not in a smaller family size, with the attendant possibility of completing childbearing at an earlier age, but simply in postponement or prolongation of the period of childbearing among these groups.

### Discussion

In this brief summary it is not our purpose to discuss the implications of a shortening of the childbearing period among American women or of a change in its timing. Such a fundamental alteration of the basic institution of the family can, of course, have far-reaching effects on various other aspects of the society and its culture. What effects these changes have will depend on the uses to which women put the added years of relative freedom from housework and child care activities.

There is some evidence of an increase in the participation of women in both politics and the labor force. This is particularly true of women from the middle and upper social strata, which may help to explain the publicity it has received in the mass media. To what extent this participation is accounted for by changes in the pattern of childbearing we cannot presently determine. Nor can we at this time do more than speculate concerning the further effects of this participation on such social phenomena as the status of women, patterns of childrearing, and the system of social stratification. But there can be little question that each of these phenomena is at least partially influenced by

the behavior of woman in her fundamental role of wife and mother, and that such behavior is to a considerable extent a function of the timing and duration of her childbearing.

### REFERENCES

- (1) Ryder, N.: The nuptiality table. (Author's abstract.) *Population Index* 23: 192, July 1957.
- (2) U. S. Bureau of the Census: U. S. census of population, 1950. IV. Special reports, pt. 5, ch. C, Fertility. Washington, D. C., U. S. Government Printing Office, 1955.
- (3) Schachter, J., and Grabill, W. H.: Child spacing as measured from the ages of children in the households. *Milbank Mem. Fund Quart.* 36: 75-85 (1958).
- (4) Whelpton, P. K., and Kiser, C. V.: Social and psychological factors affecting fertility. VI. The planning of fertility. *Milbank Mem. Fund Quart.* 25: 63-111, January 1947.
- (5) Whelpton, P. K.: Cohort fertility. Princeton, Princeton University Press, 1954, 492 pp.
- (6) U. S. Bureau of the Census: Sixteenth census of the United States 1940. Population. Differential fertility 1940 and 1910. (a) Women by number of children ever born; (b) Women by number of children under 5 years old. Washington, D. C., U. S. Government Printing Office, 1945.
- (7) U. S. Bureau of the Census: United States life tables. Washington, D. C., U. S. Government Printing Office, 1936.
- (8) U. S. National Office of Vital Statistics: Life tables for 1949-51. *Vital Statistics—Special Reports*, vol. 41, No. 1. Washington, D. C., U. S. Government Printing Office, Nov. 23, 1954.
- (9) U. S. National Office of Vital Statistics: National summaries. Abridged life tables, United States, 1954. *Vital Statistics—Special Reports*, vol. 44, No. 2, Washington, D. C., U. S. Government Printing Office, May 15, 1956.
- (10) U. S. National Office of Vital Statistics: Is family size increasing? *Vital Statistics—Special Reports. Selected studies*, vol. 23, No. 16. Washington, D. C., U. S. Government Printing Office, Aug. 29, 1947.
- (11) Frazier, E. F.: The Negro family in the United States. Chicago, University of Chicago Press, 1939, pp. 119, 140, 318ff.
- (12) U. S. Bureau of the Census: Current population reports. Series P-20, No. 72. Washington, D. C., U. S. Government Printing Office, December 21, 1956, p. 3.
- (13) Hajnal, J.: The marriage boom. *Population Index* 18: 80-94, April 1953.
- (14) Goode, W. J.: After divorce. Glencoe, Ill., The Free Press, 1956, p. 207.
- (15) Metropolitan Life Insurance Co.: *Statist. Bull.* 26: 3-4, May 1945.



### ***Pengamats, Mantris, and Controllers***

Because Indonesia's malaria control program needed intermediate supervisors, the new position of "pengamat malaria," between the ranks of "mantri" and "controller" was created. Pengamat rank gives technicians, called mantris, an additional opportunity for advancement, as well as providing middle-echelon supervision. The first class for potential pengamats has been started.

The top-ranking supervisors, controllers, are secondary school graduates who are trained in public health and malaria control for 3 years. They then spend 9 months in India, Thailand, or the Philippines in field training and observation of malaria control programs.

Before beginning their work in Indonesia, controllers are given a month's course in public administration to bridge the abrupt psychological change from student to supervisor. The concentrated course covers recordkeeping, personnel practices, job analyses, essentials of supervision, and similar subjects.

—HAROLD A. WOOD, M.D., *chief, Public Health Division, U. S. Operations Mission, Indonesia.*

### ***Filipino Five-Year Plan***

Less than a third of the 31 engineers now employed in public health and only a small percentage of the present 2,013 inspectors in the Philippine Department of Health have had specialized training in sanitation. At least 3,400 inspectors are needed. The Philippine government presently has only one sanitary engineer per 700,000 population. The needed engineers may be graduated by the Institute of Hygiene of the University of the Philippines, which granted a master's degree in public health engineering for the first time in 1957.

To prepare inspectors, pilot projects will be launched in two areas selected for both rural and urban characteristics. The projects, demonstrating good sanitary practices in water supply, sewage and

garbage disposal, and rodent control, will be carried out by the training centers where local sanitary engineers and inspectors can gain needed experience.

Three similar pilot projects, requiring a minimum of 5 years to complete, will be set up at other centers. The broad plan for environmental sanitation culminates 2 years of work by local, ICA, and WHO personnel.

—ALBERT P. TALBOYS, *sanitary engineer, U. S. Operations Mission, Philippines.*

### ***Flowers and Privies***

In Pedro Pablo Gómez, a village of 232 houses in the coastal area of Ecuador, 217 families paid for their own sanitary pit privies. Privies were installed at the rate of 14 per day.

In nearby Jipijapa, spring floods destroyed the dam which impounded the water for the public supply system. To relieve the emergency, several wells were dug by hand under the supervision of health servicio technicians. School children fenced in small areas around the wells and planted flowers and shrubs to show their appreciation.

—JAMES D. CALDWELL, *chief, health, welfare, and housing field party, U. S. Operations Mission, Ecuador.*

### ***A Phoenix in Reyes***

Three years of effort vanished when a vandal lit the fire which destroyed Reyes' newly completed hospital-health center. Fortunately, although servicio's engineering division had finished the two-story cement and wood building in the little Bolivian town, the center's equipment was not yet installed. Only the damaged walls, the sanitary system, and the tiled first floor remained.

Since building the center was the final phase of health facilities construction, Servicio Cooperativo Interamericano de Salud Pública could not assure the town of funds to reconstruct the health center. But Reyes' 2,000 people collected enough money and material to rebuild it on a more modest scale. SCISP is providing technical engineering and administrative assistance.

—HAROLD S. FREDERIKSEN, M.D., *chief, health, housing, and welfare field party, U. S. Operations Mission, Bolivia.*