INFANT MORTALITY IN MISSISSIPPI, 1976-1987

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There are two United States of America: The favorable U.S.A. which is portrayed, televised, and narrated in the American information centers around the world; and the unfavorable U.S.A. which is menaced by all kinds of evils that characterize developing nations. Put differently, the U.S.A. is an example of "status inconsistency" in the developed world with regard to the relatively high level of its population's infant mortality. This paper analyzes infant mortality in Mississippi counties, a single menace that has persisted for decades.

Infant mortality has been, and still is, a measure of societies' population social and economic well-being (United Nations, 1988: 116) as well as the biological and environmental conditions (United Nations, 1973: 122). Table 1 presents rates of county infant mortality for white and non-white populations in Mississippi based on an aggregated 12-year period (1976-1987).

The twelve-year cumulative mortality county rates are the sum of infant deaths for a 12-year period per 1,000 live births reported for the same period. Data for "non-white" events can roughly express same events for the "black" population since the percentage of non-black population is very small.

Although Mississippi has made significant progress over the past decade in reducing the number of infant deaths, the state's

infant mortality rate is still among the highest in the nation. At 13.3 deaths for every 1,000 births (Mississippi State Department of Health, 1988), an infant born in East Germany (9.2), Spain (9.0), or even Singapore (9.4) has a much better chance to survive her/his first year than an infant born in Mississippi (Population Reference Bureau, 1988) or even in the United States (10.0) at large (National Center for Health Statistics, 1989). The 12-year aggregated data give the state's infant mortality rate (IMR) at 16.2 (Table 1). The cumulative nonwhite IMR (21.8) is almost twice that of the white (10.9). The counties with the highest and lowest IMR are Humphreys (37.5) and Benton (10.8) for nonwhite and Humphreys (20.1) and Carroll (3.3) for white, respectively.

County Infant Mortality Structure

Tables 2 and 3 give county distributions of infant mortality (IM) in Mississippi for the 12-year period which has been aggregated into two six-year categories (1976 to 1981) and (1982-1987). for white and nonwhite populations. The overall change in IM in the state is a decline of 25.5 percent as compared with 20.6 and 28.1, for white and nonwhite, respectively.

The concentration index (CI) is utilized in order to assess the entire change in the IM structure during the assumed period. Tables 2 and 3 present the calculations of that index and the summary is presented in Table 4. The CI is obtained by computing for the two formulated periods the difference, county by county, in the percentage distribution of the given population throughout

all counties. The resulting differences, which are positive and negative , constitute the specific coefficient of concentration. Their algebraic sum is zero, but the total of either the positive or negative differences provide the overall index of concentration or distribution (Hoover, 1941). To illustrate, Table 2 shows that the percentage of white IM in Adams county increased from 0.83 in 1976-81 to 0.97 in 1982-87, yielding a county CI of 0.14. Its nonwhite counterpart is 0.07 (Table 3). The entire shift (sum of negative or positive values) in the redistribution of IM in the state amounted to 13.32 and 10.75 percentage points in the 12-year period for white and nonwhite, respectively. In other words, gaining counties increased by 1,332 and 1,075 infant deaths for every 10,000 infant deaths they experienced in 1976-81 for white and nonwhite, respectively. The reverse was true for losing counties. These computations indicate that, although the overall percentage change in the state's IM shows a decline of 20.6 and 28.1 (Tables 2 and 3), Table 4 indicates that the relative gain in IM in certain counties (18.2 and 37.3, (for white and nonwhite) significantly exceeds that of losing counties (16.8 and 24.9, for white and nonwhite). These data indicate that the suffering of the nonwhite population in this regard is as twice as that of the white, which becomes conspicuous when considered in the light of relative size of births (Table 4) for each group (28.0 and 29.5 percent for white and nonwhite, respectively).

BLE 1.-- COUNTY NONWHITE AND WHITE INFANT MORTALITY AND BIRTHS, MISSISSIPPI, 1976 TO 1987

County	Nonwhite			White		
	Infant Deaths	Births	Infant Mort. Rate	Infant Deaths	Births	Infant Mort. Rate
State	5,600	256,600	21.8	3,017	276,536	10.9
Adams	103	4651	22.14	27	3357	8.042
Alcorn	13	840	15.47	43	4573	9.403
Amite	30	1409	21.29	8	1820	4.395
Attala	38	1863	20.39	12	1616	7.425
Benton	8	793	10.08	6	738	8.130
Bolivar	229	9410	24.33	36	2726	13.20
Calhoun	27	1090	24.77	16	2606	6.139
Carroll	29	857	33.83	2	614	3.257
Chickasaw	49	2043	23.98	25	1954	12.79
Choctaw	13	816	15.93	7	922	7.592
Claiborne	53	2210	23.98	5	444	11.26
Clarke	28	1608	17.41	19	1791	10.60
Clay	67	3079	21.76	20	1753	11.40
Coahoma	206	7203	28.59	26	2059	12.62
Copiah	81	3593	22.54	17	2126	7.996
Covington	51	1843	27.67	20	1783	11.21
DeSoto	31	2237	13.85	91	7689	11.83
Forrest	102	5167	19.74	108	7911	13.65
Franklin	18	865	20.80	14	824	16.99
George	10	514	19.45	35	2931	11.94
Greene	11	573	19.19	20	1439	13.89
Grenada	52	2304	22.56	19	1977	9.610
Hancock	9	644	13.97	37	4019	9.206
Harrison	164	9570	17.13	267	26003	10.26
Hinds	571	37570	15.19	165	21573	7.648
Holmes	113	5050	22.37	15	966	15.52
Humphreys	109	2907	37.49	16	795	20.12
Issaquena	8	331	24.16	2	145	13.79
Itawamba	5	308	16.23	32	2718	11.77
Jackson	141	6620	21.29	196	18505	10.59
Jasper	54	2380	22.68	18	1324	13.59
Jefferson	34	2049	16.59	0	442	
Jeff. Davis	32	1945	16.45	8	977	8.188
Jones	105	4252	24.69	96	7854	12.22
Kember	30	1318	22.76	4	634	6.309
Lafayette	29	2074	13.98	26	2530	10.27
Lamar	11	744	14.78	34	4210	8.076
Lauderdale	150	7299	20.55	100	8704	11.48
Lawrence	21	1091	19.24	9	1523	5.909
Leake	51	1984	25.70	15	1684	8.907
Lee	95	3823	24.84	98	8423	11.63
LeFlore	204	6980	29.22	49	3009	16.28
Lincoln	47	2267	20.73	29	3427	8.462
Lowndes	118	5682	20.76	80	7254	11.02
Madison	122	6242	19.54	31	3892	7.965
Marion	39	2040	19.11	38	3261	11.65
Marshall	77	3975	19.37	31	2456	12.62
Monroe	59	2998	19.67	64	4262	15.01
Montgomery	31	1529	20.27	14	1046	13.38
Neshoba	49	2235	21.92	24	2559	9.378
Newton	32	1709	18.72	28	3423	8.179
Noxubee	64	2501	25.58	9	795	11.32
Oktibbeha	85	3681	23.09	33	3102	10.63
Panola	118	2519	46.84	23	2380	9.663
Pearl River	33	1338	24.66	75	5462	13.73

LE 2 CHANGES AND CONCENTRATION OF NONWHITE INFANT MORTALITY, MISSISSIPPI, 1976-1987

County	Number		Change		Distribution		
	1976-1981	1982-1987	Number	Pct.	1976-1981	1982-1987	Index
State	3,257	2,343	-914	28.06	100.00	100.00	-
Adams	59	44.00	-15.00	-25.42	1.81	1.88	.07
Alcorn	9	4.00	-5.00	-55.56	.28	.17	-.11
Amite	19	11.00	-8.00	-42.11	.58	.47	-.11
Attala	24	14.00	-10.00	-41.67	.74	.60	-.14
Benton	4	4.00	.00	.00	.12	.17	.05
Bolivar	148	81.00	-67.00	-45.27	4.54	3.46	-1.09
Calhoun	18	9.00	-9.00	-50.00	.55	.38	-.17
Carroll	19	10.00	-9.00	-47.37	.58	.43	-.16
Chickasaw	34	15.00	-19.00	-55.88	1.04	.64	-.40
Choctaw	5	8.00	3.00	60.00	.15	.34	.19
Claiborne	35	18.00	-17.00	-48.57	1.07	.77	-.31
Clarke	20	8.00	-12.00	-60.00	.61	.34	-.27
Clay	39	28.00	-11.00	-28.21	1.20	1.20	.00
Coahoma	117	89.00	-28.00	-23.93	3.59	3.80	.21
Copiah	46	35.00	-11.00	-23.91	1.41	1.49	.08
Covington	36	15.00	-21.00	-58.33	1.11	.64	-.46
DeSoto	21	10.00	-11.00	-52.38	.64	.43	-.22
Forrest	67	35.00	-32.00	-47.76	2.06	1.49	-.56
Franklin	9	9.00	.00	.00	.28	.38	.11
George	5	5.00	.00	.00	.15	.21	.06
Greene	6	5.00	-1.00	-16.67	.18	.21	.03
Grenada	30	22.00	-8.00	-26.67	.92	.94	.02
Hancock	4	5.00	1.00	25.00	.12	.21	.09
Harrison	91	73.00	-18.00	-19.78	2.79	3.12	.32
Hinds	305	266.00	-39.00	-12.79	9.36	11.36	1.99
Holmes	52	61.00	9.00	17.31	1.60	2.60	1.01
Humphreys	59	50.00	-9.00	-15.25	1.81	2.13	.32
Issaquena	7	1.00	-6.00	-85.71	.21	.04	-.17
Itawamba	1	4.00	3.00	300.00	.03	.17	.14
Jackson	82	59.00	-23.00	-28.05	2.52	2.52	.00
Jasper	33	21.00	-12.00	-36.36	1.01	.90	-.12
Jefferson	19	15.00	-4.00	-21.05	.58	.64	.06
Jeff. Davis	19	13.00	-6.00	-31.58	.58	.56	-.03
Jones	56	49.00	-7.00	-12.50	1.72	2.09	.37
Kember	19	11.00	-8.00	-42.11	.58	.47	-.11
Lafayette	17	12.00	-5.00	-29.41	.52	.51	-.01
Lamar	5	6.00	1.00	20.00	.15	.26	.10
Lauderdale	86	64.00	-22.00	-25.58	2.64	2.73	.09
Lawrence	12	9.00	-3.00	-25.00	.37	.38	.02
Leake	24	27.00	3.00	12.50	.74	1.15	.42
Lee	51	44.00	-7.00	-13.73	1.57	1.88	.31
LeFlore	118	86.00	-32.00	-27.12	3.62	3.67	.05
Lincoln	29	18.00	-11.00	-37.93	.89	.77	-.12
Lowndes	72	46.00	-26.00	-36.11	2.21	1.96	-.25
Madison	70	52.00	-18.00	-25.71	2.15	2.22	.07
Marion	26	13.00	-13.00	-50.00	.80	.56	-.24
Marshall	43	34.00	-9.00	-20.93	1.32	1.45	.13
Monroe	32	27.00	-5.00	-15.63	.98	1.15	.17
Montgomery	18	13.00	-5.00	-27.78	.55	.56	.00
Neshoba	27	22.00	-5.00	-18.52	.83	.94	.11
Newton	20	12.00	-8.00	-40.00	.61	.51	-.10
Noxubee	41	23.00	-18.00	-43.90	1.26	.98	-.28

TABLE 2, Continued

Oktibbeha	57	28.00	-29.00	-50.88	1.75	1.20	-.55
Panola	76	42.00	-34.00	-44.74	2.33	1.79	-.54
Pearl River	14	19.00	5.00	35.71	.43	.81	.38
Perry	10	2.00	-8.00	-80.00	.31	.09	-.22
Pike	54	40.00	-14.00	-25.93	1.66	1.71	.05
Pontotoc	8	5.00	-3.00	-37.50	.25	.21	-.03
Prentiss	13	3.00	-10.00	-76.92	.40	.13	-.27
Quitman	45	26.00	-19.00	-42.22	1.38	1.11	-.27
Rankin	22	24.00	2.00	9.09	.68	1.02	.35
Scott	27	32.00	5.00	18.52	.83	1.37	.54
Sharkey	23	16.00	-7.00	-30.43	.71	.68	-.02
Simpson	17	18.00	1.00	5.88	.52	.77	.25
Smith	20	6.00	-14.00	-70.00	.61	.26	-.36
Stone	5	4.00	-1.00	-20.00	.15	.17	.02
Sunflower	115	64.00	-51.00	-44.35	3.53	2.73	-.80
Tallahatchie	61	33.00	-28.00	-45.90	1.87	1.41	-.46
Tate	25	12.00	-13.00	-52.00	.77	.51	-.26
Tippah	17	6.00	-11.00	-64.71	.52	.26	-.27
Tishomingo	0	2.00	2.00	100.00	.00	.09	.09
Tunica	40	26.00	-14.00	-35.00	1.23	1.11	-.12
Union	10	7.00	-3.00	-30.00	.31	.30	-.01
Walthall	22	16.00	-6.00	-27.27	.68	.68	.01
Warren	75	53.00	-22.00	-29.33	2.30	2.26	-.04
Washington	134	127.00	-7.00	-5.22	4.11	5.42	1.31
Wayne	26	15.00	-11.00	-42.31	.80	.64	-.16
Webster	12	7.00	-5.00	-41.67	.37	.30	-.07
Wilkinson	16	13.00	-3.00	-18.75	.49	.56	.06
Winston	21	23.00	2.00	9.52	.64	.98	.34
Yalobusha	19	9.00	-10.00	-52.63	.58	.38	-.20
Yazoo	65	49.00	-16.00	-24.62	2.00	2.09	.10

Source: Mississippi State Department of Health, Vital Statistics, different years, Jackson, Mississippi.

TABLE3. CHANGES AND CONCENTRATION OF WHITE INFANT MORTALITY, MISSISSIPPI, 1976-1987

County	Number		Change		Distribution		
	1976-1981	1982-1987	No.	Pct.	1976-1982	1982-1987	Index
State	1682	1335	-347	-20.6	100.00	100.00	0.00
Adams	14	13	- 1	- 7.1	0.83	0.97	0.14
Alcorn	27	16	-11	-40.7	1.61	1.20	-0.41
Amite	1	7	6	600.0	0.06	0.52	0.46
Attala	7	5	- 2	28.6	0.42	0.38	-0.04
Benton	2	4	2	100.0	0.12	0.30	0.18
Bolivar	24	12	-12	-50.0	1.43	0.90	-0.53
Calhoun	13	3	-10	-76.9	0.77	0.23	-0.54
Carroll	1	1	-	-	0.06	0.08	0.02
Chickasaw	7	18	11	157.1	0.42	1.35	0.93
Choctow	4	3	- 1	-25.0	0.24	0.23	-0.01
Claiborne	3	2	- 1	-33.3	0.18	0.15	-0.03
Clarke	11	8	- 3	-27.3	0.65	0.60	-0.05
Clay	11	9	- 2	-18.2	0.65	0.67	0.02
Coahoma	17	9	- 8	-47.1	1.01	0.67	-0.34
Copiah	7	10	3	42.9	0.42	0.75	0.33
Covington	11	9	- 2	-18.2	0.65	0.67	0.02
De Soto	42	49	7	16.7	2.50	3.67	1.17
Forrest	66	42	-24	36.4	3.92	3.15	-0.77
Franklin	10	4	- 6	-60.0	0.59	0.30	-0.21
George	19	16	- 3	-15.8	1.13	1.20	0.07
Greene	15	5	-10	-66.7	0.89	0.38	-0.51
Grenada	13	6	- 7	-53.8	0.77	0.45	-0.32
Hancock	14	23	9	64.3	0.83	1.72	0.89
Harrison	144	123	-21	-14.6	8.56	9.21	0.65
Hinds	86	79	- 7	- 8.1	5.11	5.92	0.81
Holmes	9	6	- 3	-33.3	0.54	0.45	-0.09
Humphreys	6	10	4	66.7	0.36	0.75	0.39
Issaquena	2	-	- 2	100.0	0.12	-	-0.12
Itawamba	18	14	- 4	-22.2	1.07	1.05	-0.02
Jackson	115	81	-34	-29.6	6.84	6.07	-0.77
Jasper	9	9	-	-	0.54	0.67	0.13
Jefferson	-	-	-	-	-	-	-
Jeff. Davis	5	3	- 2	-40.0	0.30	0.23	-0.07
Jones	57	39	-18	-31.6	3.39	2.92	-0.47
Kemper	2	2	-	-	0.12	0.15	0.03
Lafayette	17	9	- 8	-47.1	1.01	0.67	-0.34
Lamar	15	19	4	26.7	0.89	1.42	0.53
Lauderdale	59	41	-18	-30.5	3.51	3.07	-0.44
Lawrence	6	3	- 3	-50.0	0.36	0.23	-0.13
Leake	8	7	- 1	-12.5	0.48	0.52	0.04
Lee	58	40	-18	-31.0	3.45	3.00	-0.45
Leflore	29	20	- 9	-31.0	1.72	1.50	-0.22
Lincoln	16	13	- 3	-18.8	0.95	0.97	0.02
Lowndes	50	30	-20	-40.0	2.97	2.25	-0.72

TABLE 3, Continued

Madison	13	18	5	38.5	0.77	1.35	0.58
Marion	17	21	4	23.5	1.01	1.57	0.56
Marshall	20	11	- 9	-45.0	1.19	0.82	-0.37
Monroe	35	29	- 6	-17.1	2.08	2.17	0.09
Montgomery	9	5	- 4	-44.4	0.54	0.38	-0.16
Neshoba	11	13	2	18.2	0.65	0.97	0.32
Newton	18	10	- 8	-44.4	1.07	0.75	-0.32
Noxubee	6	3	- 3	-50.0	0.36	0.23	-0.13
Oktibbeha	21	12	- 9	-42.9	1.25	0.90	-0.35
Panola	14	9	- 5	-35.7	0.83	0.67	-0.16
Pearl River	36	39	3	8.3	2.14	2.92	0.78
Perry	17	3	-14	-82.4	1.01	0.23	-0.78
Pike	19	20	1	5.3	1.13	1.50	0.37
Pontotoc	18	9	- 9	-50.0	1.07	0.67	-0.40
Prentiss	19	20	1	5.3	1.13	1.50	0.37
Quitman	3	3	-	-	0.18	0.23	0.05
Rankin	46	42	- 4	-8.7	2.73	3.15	0.42
Scott	19	19	-	-	1.13	1.42	0.29
Sharkey	3	4	1	33.3	0.18	0.30	0.12
Simpson	15	21	6	40.0	0.89	1.57	0.68
Smith	14	7	- 7	-50.0	0.83	0.52	-0.31
Stone	7	2	- 5	-71.4	0.42	0.15	-0.27
Sunflower	12	4	- 8	-66.7	0.71	0.30	-0.41
Tallahatchie	9	5	- 4	-44.4	0.54	0.38	-0.16
Tate	19	12	- 7	-36.8	1.13	0.90	-0.23
Tippah	25	21	- 4	-16.0	1.49	1.57	0.08
Tishomingo	19	19	-	-	1.13	1.42	0.29
Tunica	4	2	- 2	-50.0	0.24	0.15	-0.09
Union	17	13	- 4	-23.5	1.01	0.97	-0 04
Walthall	6	5	- 1	-16.7	0.36	0.38	0.02
Warren	39	40	1	2.6	2.32	3.00	0.68
Washington	40	18	-22	-55.0	2.38	1.35	-1.03
Wayne	13	15	2	15.4	0.77	1.12	0.35
Webster	11	10	- 1	- 9.1	0.65	0.75	0.10
Wilkinson	2	4	2	100.0	0.12	0.30	0.18
Winston	10	10	-	-	0.59	0.75	0.16
Yalobusha	9	2	- 7	-77.8	0.54	0.15	-0.39
Yazoo	17	13	- 4	-23.5	1.01	0.97	-0.04

TABLE 4. CONCENTRATION INDEX OF WHITE AND NONWHITE INFANT MORTALITY, MISSISSIPPI, 1976 TO 1987

Item	Mortality Relativly					
	Increased		Decreased		No change	
	White	NW	White	NW	White	NW
Index	13.32	10.75	-13.32	-10.75	-	-
No. of counties(	40	39	42	40	-	3
Percentage (	49.8	47.6	51.2	48.8	-	3.7
Infant mortality:						
rate	10.5	20.5	11.3	24.3	-	21.3
(State=10.9 white 21.8 nonwhite)						
Number	1570	3216	1447	2145	-	239
Percentage	18.2	37.3	16.8	24.9	-	2.8
Births:						
Number	149,033	157,258	127,503	88,114	-	11,228
Percentage	28.0	29.5	23.9	16.5	-	2.1
Pop., 1980						
Number	849,824	490,156	765,366	375,892	-	39,400
Percentage	33.7	19.4	30.4	14.9	-	1.6