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## TOPICAL REVIEW

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### NEW HYPOTHESES FOR STATISTICAL RESEARCH IN RECENT MEXICAN HISTORY\*

by

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ALTHOUGH AT ONE TIME SOME LATIN AMERICANISTS MAY HAVE SUPPOSED THAT "(a) useful historical material from Latin America does not exist in statistical form, and (b) even if it did exist, the mystical qualities of Latin culture defy all efforts at measurement,"<sup>1</sup> today we are aware of such fallacies. Leaving aside useful, relatively reliable data, however, we still face the question of how to handle figures which apparently are unreliable and unusable. This article approaches the latter problem by presenting some *debatable* hypotheses in order to suggest examples of little-examined descriptive statistics which might be investigated fruitfully to reveal new political, economic, and social aspects of Mexican life.

#### I

A major source of data which often has been overlooked in Mexico is election statistics. Perhaps because the honesty of some elections has been questioned, scholars generally have not examined, for example, patterns in presidential voting by state;

\* An earlier version of this study was delivered in Mexico at Oaxtepec, Morelos, on November 4, 1969, and will be published as "New Approaches in Contemporary Historical Research" in Romeo Flores Caballero and Luis González (eds.), *Memoria de la III Reunión de Historiadores Mexicanos y Norteamericanos* (approximate title) (México, D.F.: Universidad Nacional Autónoma de México, with El Colegio de México, and The University of Texas at Austin). In contrast to the Oaxtepec study, the present work (a) presents some alternative data for historical analysis (including 1970 population census figures as related to an extended series on projected Central Government capital investment); (b) gives additional data (including a critique of election figures by the Partido de Acción Nacional; and (c) provides some updated data (including 1970 presidential results and unemployment figures). Further, discussion and notes take up aspects not developed in the Oaxtepec paper.

apparently researchers assume that altered results will not help them to determine regional interests and influences upon policy or to answer questions concerning the nature of constituencies, such as those that have intrigued political analysts in other countries. In order to suggest a way of using presidential voting statistics, however, for the sake of argument let us hypothesize that, though time-series election data have been manipulated, they may reveal the strength of regional opposition to the official party, now called the Partido Revolucionario Institucional (PRI). In this regard, we may view the number of votes conceded to opposition presidential candidates as being related to the government's desire to make the election appear to be valid, yet take into account varying amounts of dissent.<sup>2</sup>

Table 1 shows the percentage of vote won by the official candidate for the presidency in 11 presidential elections since 1917; low percentages (*italics*) portray the extent of major dissent. In Mexico, low percentages won by the official party include all figures below 80 per cent, a figure that would be considered a landslide victory in the United States. Marte R. Gómez, Minister of Agriculture under President Manuel Avila Camacho, has noted that in 1940 Avila Camacho won the national vote but lost the Distrito Federal.<sup>3</sup> Table 1 reveals, however, that official election results gave Avila Camacho 72 per cent of the votes of the Distrito Federal! If a generalization might be drawn from this case, amounts less than about 70 per cent could be considered a loss to the government.

It is interesting to note that in 356 cases given in Table 1, only 60, or 16.9 per cent, are presented in *italics* (if the cut-off point for *italics* were reduced to amounts under 70 per cent, only 29 cases, or 8.1 per cent, would be included). Incredibly, the official tally of votes shows that only in 2 cases (Baja California and Sinaloa in 1924) was the official candidate not supported by a majority of voters. Among Mexico's 32 federal entities, only in Baja California, Chihuahua, and the Distrito Federal has the percentage of victory fallen below 80 per cent as many as 6 times.

A glance at Table 1 raises a number of questions. Did national discontent with the "economic revolution" of the period 1940–1960 force the government to admit in 1946 and 1952 to the greatest amount of election dissent since 1924?<sup>4</sup> (The year 1924 witnessed an outright rebellion against the government's candidate.) Given widespread social disorders after the election of 1958, did a renewed lack of voting opposition in that year represent a return to "authoritarianism"<sup>5</sup> reminiscent of the very controversial election of 1940? What were the circumstances that would permit the government to announce in 1917 and 1934 that the lowest percentage won by the official party did not go below 80 per cent in any entity? Was the total in 1964 chosen at 89 per cent in order to take advantage of relative political peace, yet fix an amount for advertising purposes? (Certainly the validity of 89 per cent might be more credible than 90 per cent). Or did the introduction of opposition "diputados de partido" in the Chamber of Deputies obviate the need for concessions in presidential voting results?

According to data for the 1970 election, only in two political entities did the official presidential candidate win less than 80 per cent of the vote, a feat unequalled

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	1917	1920	1924	1929	1934	1940	1946	1952	1958	1964	1970
Total	97.1	95.8	84.1	93.6	98.2	93.9	77.9*	74.3*	90.4	89.0	86.0
Aguascalientes	89.9	98.0	77.7*	94.0	96.0	93.9	70.4*	67.9*	93.2	91.2	87.4
Baja Calif.	95.3	96.4	44.7*	91.6	97.2	93.9	63.6*	61.7*	60.7*	78.6*	74.4*
Baja Calif. Terr.	b	b	b	b	100.0	b	91.7	82.3	93.4	96.8	94.6
Campeche	98.8	99.9	100.0	94.2	100.0	98.1	75.1*	87.1	87.7	95.9	98.1
Coahuila	98.7	99.5	72.2*	80.4	93.5	95.1	81.4	80.7	94.9	93.4	91.2
Colima	98.7	74.4*	94.0	96.0	94.8	93.3	66.8*	80.1	89.7	87.3	90.8
Chiapas	100.0	98.3	99.9	99.6	100.0	98.1	87.3	90.5	98.0	98.9	98.9
Chihuahua	98.2	99.7	68.9*	78.9*	99.8	92.6	75.7*	63.9*	64.6*	78.7*	81.0
Distrito Federal	96.6	96.0	94.9	97.0	97.3	72.0*	57.0*	51.4*	79.9*	74.9*	69.6*
Durango	88.5	97.8	69.8*	84.1	99.7	96.8	65.4*	65.0*	84.8	90.0	86.7
Guanajuato	92.0	96.0	66.4*	91.6	98.1	95.9	64.0*	64.1*	89.5	79.6*	80.8
Guerrero	100.0	99.9	83.2	99.5	100.0	95.4	85.0	82.5	98.2	97.0	95.7
Hidalgo	98.4	99.7	87.1	96.0	100.0	99.5	90.4	88.7	98.1	98.4	97.2
Jalisco	99.7	73.2*	87.4	93.9	99.1	98.7	78.8*	64.7*	89.0	87.0	82.8
México	96.0	98.5	86.3	100.0	99.7	94.9	84.1	81.1	98.9	91.7	84.7
Michoacán	93.9	97.4	79.4*	92.1	99.8	92.9	67.3*	55.4*	87.2	86.0	86.9
Morelos	b	91.7	93.6	87.1	99.8	98.1	57.3*	68.5*	95.8	94.2	90.3
Nayarit	98.3	87.4	59.0*	100.0	100.0	97.0	85.3	76.0*	98.7	91.6	96.5
Nuevo León	99.9	96.8	96.7	95.5	84.5	89.3	70.4*	80.8	90.3	84.3	84.1
Oaxaca	99.5	96.9	98.8	99.7	100.0	99.4	90.2	79.8*	95.6	96.9	96.6
Puebla	97.6	93.7	90.6	98.0	99.3	98.8	81.9	80.9	95.2	93.7	85.5
Querétaro	95.0	96.5	90.8	95.4	99.5	98.7	84.3	82.0	89.5	91.3	90.7
Quintana Roo	99.4	100.0	98.5	91.5	b	95.7	91.4	95.3	79.9*	96.6	98.2
San Luis Potosí	98.5	99.3	93.0	99.7	100.0	98.2	80.2	88.9	94.3	91.6	90.0
Sinola	98.2	99.9	34.7*	75.9*	97.7	89.5	89.9	73.9*	98.1	92.1	94.3
Sonora	97.9	96.2	84.5	68.9*	100.0	92.4	81.5	81.1	97.3	98.4	93.5
Tabasco	99.7	100.0	100.0	93.1	100.0	98.8	95.6	79.3*	98.9	99.3	98.9
Tamaulipas	95.5	100.0	90.3	94.9	97.1	88.1	72.4*	69.5*	94.8	96.5	91.6
Tlaxcala	98.4	99.6	81.4	97.9	99.6	95.7	81.1	81.2	98.4	98.4	94.3
Veracruz	98.8	98.3	88.1	89.3	94.9	94.8	90.5	91.5	97.6	96.8	92.7
Yucatán	99.7	100.0	99.8	100.0	99.4	88.1	75.9*	81.5	77.4*	85.8	85.0
Zacatecas	97.9	90.7	54.6*	93.8	93.8	94.3	67.6*	71.8*	91.7	79.5*	91.0

\* Ital. indicates amount less than 80.0 per cent. <sup>a</sup> Includes votes cast through non-official parties for the official-party candidate; includes legal votes only; excludes election of 1928 when Alvaro Obregón ran unopposed. <sup>b</sup> No data given in source.

Source: México, Cámara de Diputados, *Diario de los debates*, April 26, 1917; Oct. 26, 1917; Oct. 26, 1920; Sept. 27, 1924; Nov. 28, 1929; Sept. 12, 1934, 1940, 1946, 1952; Sept. 10, 1958; *Dictamen* published in *El Día*, Sept. 9, 1964; *El Día*, July 18, 1970.

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since 1940. Though many observers detected much unrest in Mexico (especially after the student-government clashes of 1968), election results indicate great regional support of the official party. Were national results manipulated in order to make up for a low percentage in the Distrito Federal, which could not be credibly denied by the government? Or were some citizens of the capital perhaps dissatisfied with a lack of public services, development of which has been sacrificed to resolve investment needs throughout Mexico?

The Partido de Acción Nacional (PAN, the principal opposition party) claims that the voting registry is falsified to permit the government to inflate its victory totals with ballots for persons who do not exist, let alone vote. For example, in PAN's view of the 1964 elections (Table 2), the 10 highest vote totals won by the PRI were not plausible given the geographic characteristics of the electoral districts where those victories were recorded.<sup>6</sup>

TABLE 2  
*PAN's View of Election Data, 1946-1964*  
 (For Chamber of Deputies)  
*A. National, 1964*  
 (Official Data)

10 Highest PRI Votes	District by State	Geographic Characteristics
84,198	5th of Tamaulipas	jungle region
82,362	4th of Hidalgo	completely mountainous
79,948	1st of Tabasco	completely jungle
74,925	2nd of Hidalgo	completely mountainous
74,372	5th of Guerrero	completely mountainous
69,372	4th of Coahuila	desert region
69,182	3rd of Yucatán	semi-desert region
69,067	1st of México	completely mountainous
69,066	5th of San Luis Potosí	mountain and jungle region
67,107	10th of Jalisco	completely rural area

*B. Distrito Federal, 1946-1958*  
 (Official and Approximate "Authentic" Data)

	1946	1949	1952	1955	1958
Official Vote Total	204,910	377,562	392,427	748,132	1,024,915
Officially Won by PAN	38,298	116,887	62,572	245,435	281,406
False Registrations	88,345	210,102	195,491	295,026	431,509
False Votes	48,589	136,566	136,843	221,269	345,207
Authentic Votes	156,321	240,996	255,584	526,863	679,708
Authentic PAN Vote	38,298	116,887	62,572	245,435	281,406
Official PAN Per Cent	18.7	31.0	15.9	32.8	27.5
Authentic PAN Per Cent	24.5	48.5	24.5	46.6	41.4

Source: Partido de Acción Nacional.

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The PAN argues that not only are the regions isolated and sparsely populated, but that even if as many voters as claimed lived in such electoral districts, communications are so difficult that it would be impossible for such large numbers of people to get to the polls.

PAN's analysis in Table 2 also presents time-series data for the years 1946–1958, which distinguish between false and authentic votes. This data is limited to the Distrito Federal, the only area for which the party's investigators have claimed such a detailed study might be developed over time. It is interesting to note that in the congressional elections of 1949 and 1955, the PAN's official percentage of votes for deputies was double that for presidential-election years in 1946 and 1952, a pattern which led the PAN to claim that the official party was so worried about the image of its presidential candidate that it tightened up its control over the vote count to the detriment of any opposition. Since 1958, however, presidential-election year votes for PAN's candidates to the Chamber of Deputies officially has risen from 27.5 per cent to 29.4 per cent in 1964, and 32.9 per cent in 1970.<sup>7</sup>

In spite of official gains, the PAN estimates that false votes consistently have deprived its candidates of its fair share of the votes. Nevertheless, even discounting "false" votes, the PAN's own analysis shows that while it might not have lost ground in 1952 compared to 1946, it only held even. In any case, the PAN analysis does not explain the strange results for 1949, which fit more into the trajectory after 1955 than in the period from 1946 to 1952.

In suggesting that Mexican election statistics might be utilized to understand political development in Mexico, it is important to note that a variety of hypotheses could be tested against aspects of official party strength in state and municipal elections, and could also be related to the number of members in government-affiliated labor unions, or the number of beneficiaries of land reform, by state. In this manner we could revise and refine our concepts of the Mexican electoral process.

## II

An example of economic data which has been involved in controversy for a number of years includes expenditure of Central Government income. Many observers have felt that Central Government capital investment has been overly concentrated in the Distrito Federal. One possible implicit corollary of this argument is that the population in the country is being taxed to support the growth of a great metropolis in the Distrito Federal, which thus attracts ever greater concentrations of capital and population. Because little "hard data" have been available to support such contentions,<sup>8</sup> it is important to consider several factors.

By comparing data on actual origin of income taxes to projected capital expenditures and population by entity given in Table 3, we may hypothesize that the Distrito Federal has received less than an equitable share of capital in relation to its contribution of income and population to national totals. If the 1960's, when data are available, are indicative of earlier years, the Distrito Federal has provided tax revenue to

TABLE 3

*Share of Central Government Income Tax Revenue by Federal Entity  
Compared to Population and Projected Central Government  
Capital Investment, Selected Years, 1959-1970\**  
(In Percentages)

Collections by Entity	Population (1970)	Investment (1959-1966) <sup>a</sup>	Income <sup>a</sup> Tax 1961	Tax Revenue <sup>b</sup> 1964	1967 <sup>c</sup>
Revenue (millions of pesos)			4,036	7,254	10,168
Total Per Cent	100.0	100.0	100.0	100.0	100.0
North	16.1	16.2	18.5	16.8	15.0
Baja California	1.8	1.9	2.4	2.2	1.6
Chihuahua	3.3	4.8	3.1	2.3	1.6
Coahuila	2.3	2.3	3.3	2.7	1.8
Nuevo León	3.4	1.5	6.4	6.4	6.9
Sonora	2.3	2.5	1.9	1.9	1.9
Tamaulipas	3.0	3.2	1.4	1.3	1.2
West	13.9	16.0	4.7	4.5	4.3
Aguascalientes	.7	.5	.1	.2	.3
Baja Calif. Terr.	.3	1.0	.1	.1	.1
Colima	.5	.8	.1	.1	.1
Durango	1.9	1.8	.3	.3	.3
Jalisco	6.8	3.1	2.8	2.7	2.7
Nayarit	1.1	.6	.2	.1	.1
Sinaloa	2.6	8.2	1.1	1.0	.7
West Central	18.7	9.5	5.9	7.4	9.2
Guanajuato	4.7	2.1	.7	.9	.9
México	7.9	3.3	4.4	5.4	7.5
Michoacán	4.8	3.6	.4	.7	.4
Morelos	1.3	.5	.4	.4	.4
East Central	14.3	7.0	2.7	2.7	3.2
Hidalgo	2.5	1.2	.5	.3	.5
Puebla	5.2	1.1	1.1	1.2	1.2
Querétaro	1.0	1.0	.3	.5	.7
San Luis Potosí	2.7	2.0	.6	.5	.6
Tlaxcala	9.	.4	.1	.1	.1
Zacatecas	2.0	1.3	.1	.1	.1
South	11.0	12.4	.8	.9	.8
Chiapas	3.2	5.4	.3	.3	.2
Guerrero	3.3	2.9	.3	.4	.4
Oaxaca	4.5	4.1	.2	.2	.2
Gulf	11.8	9.1	2.3	3.1	2.4
Campeche	.5	1.2	.1	.1	.1
Quintana Roo	.2	1.0	d	d	d
Tabasco	1.6	2.1	.2	.2	.2
Veracruz	7.9	3.6	1.5	1.9	1.8
Yucatán	1.6	1.2	.5	.9	.3
Distrito Federal <sup>b</sup>	14.2	29.8	65.1	64.6	65.1

\* For notes to Table, see p. 9.

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support development in the rest of Mexico by a margin which leaves relatively little funds to meet its own great needs generated by growth of the population and expansion of productive capacity.

Though projected outlay may have little to do with actual investment,<sup>9</sup> Table 3 suggests that in 1961, 1964, and 1967 only Mexico's North Zone had anywhere near a balance of federal investment in relation to population and collection of revenue. In contrast, the South, which contributed the least in revenue, was projected to receive investment approximately in proportion to its share of population in 1970, about 11 per cent. If this pattern has historical validity (a supposition which needs investigation), heavy capital investment in the North during earlier years probably was in excess of collections; thus we might assume that if such a policy were applied to the South, in the long run that poor area might show increased economic development and tax collections. The present data, however, do not tell us how much investment might be required for the South (even assuming that the areas have the same requirements for development) because we have no idea about the level of investment to income tax collections in the North prior to 1961.

None of this discussion answers the question as to where capital investment might better be spent in order to encourage economic production. If development of a national market for goods is dependent upon social affluence in the entire country, then the Government must traverse a difficult path which will encourage balanced growth. What share of scarce resources can be devoted to a poverty-stricken South Zone, which because of its isolation and lack of transport infrastructure does not enjoy the North's border advantages of market and tourism? Also, given scarce resources, one could argue that the Mexican policy of offering tax incentives to industry initiated outside of the Distrito Federal has been the wisest policy, except that some intellectuals now claim that funds must be massively diverted from Mexico City to the countryside. Thus, the real "dilemma of Mexico's economic development" may not stem from the fact that the Central Government has been eased into a "political strait jacket," as Raymond Vernon would have us believe, but that it must conduct a "balanced revolution" which will encourage social justice along with economic growth. Though Vernon views presidential actions of the early 1960's as evidence of weak and vacillating policy, I have portrayed the same actions as indicating a strong shift in policy from economic to balanced revolution which would attempt to meet some of the problems posed by uneven economic and social development.<sup>10</sup>

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<sup>a</sup> Excludes amounts not distributed by federal entity. <sup>b</sup> Excludes payments made directly to the Federal Treasury. <sup>c</sup> Excludes collections for prior years. <sup>d</sup> Less than .05 per cent.

Source: Actual tax revenue is from México, Secretaría de Hacienda y Crédito Público, *Cuenta Pública* (blue edition), 1961, 1964, 1967. Population is from Mexico, Dirección General de Estadística, *Resumen del Censo, 1970* (48,377,363 persons). Projected investment is from México, Dirección de Inversiones Públicas, *Inversión Pública Federal, 1964-1965-1966*; and James W. Wilkie, *The Mexican Revolution: Federal Expenditure and Social Change Since 1910* (2nd ed., rev.; Berkeley: University of California Press, 1970), Table 10-1, a work which also gives the methodology for regional division of Mexico presented here.

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Has recent Mexican governmental policy slowed the growth of the Distrito Federal? Has Mexico City's share in industry, commerce, services, motor transportation and gasoline consumption decreased? As I have shown elsewhere, these total shares did not increase between censuses in 1960 and 1965. Slight decreases in 1965 reversed a trend of increasing importance of the Distrito Federal in Mexico's economic life. Given the overwhelming economic importance of Mexico City, perhaps we might ask ourselves the following question: Why has the population of the capital grown so slowly? By 1965 the Distrito Federal had only an estimated 15 to 16 per cent of the population and persons economically employed compared to over one-half of commercial and service activity, over one-third of industrial activity, and over one-quarter of all motor vehicles and gasoline consumption.<sup>11</sup>

In addition to the above figures which suggest that Mexico City's importance might soon reach a plateau, Table 3 shows that in 1961, 1964, and 1967, the capital's share of income tax revenues remained about 65 per cent. Thus, if we are to understand the regional development process, we must suggest a number of factors about which study might be undertaken. We not only need to investigate the historical relation of regional tax collection and investment but to examine the relation of migration patterns to regional share in GNP and economically active population. It is interesting to note that perhaps the capital's disaffection with the official party at election time may be related to the unbalanced ratios shown in Table 3. In electoral terms, unless the PRI can channel more capital investment into Mexico City, it may well stand to lose votes by margins which it cannot deny.

### III

An example of socio-economic data which has been overlooked for historical analysis involves the interpretation of statistics on unemployment. Table 4 gives total figures on unemployment for the 1930's and for 1940, 1950, 1960, and 1970, when data are available. Most observers think that these figures are too low to be meaningfully compared to time series for a more developed country like the United States. The following oral history interview with Jesús Silva Herzog, however, reveals one possible approach to these statistics:

*JW*: [James Wilkie]: ¿Hubo mucha desocupación en México [durante la crisis mundial de los años de 1930]? . . .

*JSH* [Jesús Silva Herzog]: Aquí en México, como en otros países subdesarrollados, hay siempre desocupación oculta. Pero aquí sucede algo que no sucede en los países altamente desarrollados; lo que sucedió entonces y que se puede repetir en distintos momentos es que el hermano que tiene trabajo acoge al otro hermano; que hay una familia, el padre, la madre, tres hijos. Si un hermano no tiene trabajo, le dicen: "Vente acá; aquí repartiremos los frijolitos." Y llega el hermano, muchas veces con la esposa y dos hijos. Y se avienen a vivir en un pequeño cuarto o en dos pequeñas habitaciones. De suerte que no hubo manifestaciones de desocupados ni el gobierno de México tuvo que acudir durante la crisis en auxilio de los desocupados. Eso es muy interesante apuntar. . . .

*JW*: Bueno. Hablando de la estadística de desocupación: se comenzaron a reunir las



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estadísticas de desocupación al venir la Depresión en México y subió mucho el número—el porcentaje de la población de trabajadores—del dos por ciento, más o menos, al cinco o al seis por ciento de la población. Pero no dicen las estadísticas qué son los desocupados, quiénes son los que tenían trabajo, y ya no lo tienen. ¿Perdieron su trabajo por culpa de la Depresión? No se dice nada de estas estadísticas ocultas de que usted habla. Y las estadísticas de hoy tampoco. . . . ¿El gobierno no puede tratar de averiguar cuánto es el porcentaje?

*JSH*: Es sumamente difícil. Son casos verdaderamente interesantes estos de la desocupación oculta. Miren ustedes, a medida que el nivel económico en este país es más

TABLE 4  
*Unemployment, Available Years, 1930–1970<sup>a</sup>*

Year	Mexico <sup>b</sup>			United States	
	Unemployed <sup>c</sup> (1)	Economically Active Pop. (2)	Per Cent Unemployed <sup>d</sup>	Total <sup>e</sup> Per Cent Unemployed <sup>f</sup> (3)	Ratio U.S./Mexico
1930 <sup>g</sup>	89,690	5,150,667	1.7	8.7	5.1
1931 <sup>h</sup>	287,462	5,188,245	5.5	15.9	2.9
1932 <sup>h</sup>	339,378	5,238,124	6.5	23.6	3.6
1933 <sup>h</sup>	275,774	5,307,090	5.2	24.9	4.8
1934 <sup>h</sup>	234,538	5,386,192	4.4	21.7	4.9
1935 <sup>h</sup>	191,371	5,428,121	3.5	20.1	5.7
1936 <sup>h</sup>	186,904	5,482,307	3.4	16.9	5.0
1937 <sup>h</sup>	180,128	5,573,809	3.2	14.3	4.5
1938 <sup>h</sup>	209,332	5,649,142	3.7	19.0	5.1
1939 <sup>h</sup>	198,593	5,787,109	3.4	17.2	5.1
1940 <sup>h</sup>	184,247	5,858,116	3.1	14.6	4.7
1950 <sup>g</sup>	105,177	8,345,240	1.3	5.0	3.8
1960 <sup>g</sup>	182,088	11,253,297	1.6	5.6	3.5
1970 <sup>g</sup>	485,982	12,948,795	3.7	4.3 <sup>i</sup>	1.2

<sup>a</sup> No data available for 1941–1949, 1951–1959, and 1961–1969.

<sup>b</sup> Age 12 and over; women included beginning in 1950.

<sup>c</sup> Unemployed for more than 1 month in 1930 and 1940 and for 12 weeks or less as well as 13 weeks or more after 1950.

<sup>d</sup> Women unemployed constituted .2, .2, and 1.5 per cent of the economically active population in 1950, 1960, and 1970, respectively.

<sup>e</sup> Age 14 and over; women included beginning in 1940.

<sup>f</sup> Civilians not at work during the survey week.

<sup>g</sup> Census. <sup>h</sup> Monthly average (criteria may differ from census). <sup>i</sup> Age 16 and over.

Sources: Columns 1 and 2: México Dirección General de Estadística, *Anuario Estadístico*, 1938, p. 158 and 1940, p. 431; *Resumen del Censo*, 1940, p. 17; 1950, p. 58; 1960, pp. 1, 3, 362a; 1970, pp. xix, 115; and Roberto Santillán López and Aniceto Rosas Figueroa, *Teoría general de las finanzas públicas y el caso de México* (México, D.F.: Universidad Nacional Autónoma de México, 1962), 258.

Column 3: *Statistical History of the United States from Colonial Times to the Present* (Stamford, Conn.: Fairfield Publishers, [1965], pp. 73, 100a; and United States, Bureau of the Census, *Statistical Abstract*, 1970, p. 213.

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bajo, hay una mayor solidaridad entre los componentes de las personas de ese bajo nivel económico y se ayudan unos a otros. Por ejemplo, nosotros tenemos aquí una criada que tiene bastantes años con nosotros. Tiene una casita y seguido sabemos que tiene recogido a un señor o a una mujer en su casa, que "porque están más pobres que ella". . . . Sería necesario hacer una encuesta de muestreo en varias regiones del país para poder tener una idea de este fenómeno.<sup>12</sup>

A second possible approach to statistics in Table 4 might involve a hypothesis that at certain stages in a less developed country high unemployment rates occur only with increasing affluence or serious depression. Alternatively, low rates occur because unemployment benefits are not available, and persons must find a way to make a living even if it involves selling lottery tickets in the streets or becoming a professional beggar. Thus a rate of 1 to 2 per cent male unemployment in 1930, 1950, and 1960 would offer a rough gauge of low Mexican social affluence. Increase of this rate to between 3.1 and 6.5 per cent in the Mexico of the period of 1931–1940 would indicate a lingering aftermath of depression in the early 1930's, rather than affluence. The nomination of Lázaro Cárdenas to the presidency in 1933 and the nature of his government between 1934 and 1940 can be related to this social and economic problem.

Variation of the above hypothesis might be developed to relate historical unemployment in Mexico to the United States, a ratio showing the difference in the level of social affluence in the two countries. Examination of data prior to 1970 in Table 4 reveals that the United States had 3 to 5 times as much unemployment as Mexico.<sup>13</sup> Assuming that unemployment is related to relative affluence, theoretically in 1930, 1940, 1950, 1960, and 1970 when data are available,<sup>14</sup> the Distrito Federal should have had greater unemployment than the national average. In fact, most cases did exceed the national average; figures for the D.F. were 3.6 in 1930; 1.7 in 1940 (incomplete); 2.1 in 1950; 2.5 per cent in 1960, and 5.0 per cent in 1970.<sup>15</sup>

Unemployment also is related to a political factor. Until a political decision is made in Mexico to provide unemployment benefits, it may be argued that some persons cannot afford to be unemployed regardless of the level of affluence in the society. Furthermore, given the view presented by Jesús Silva Herzog, we may suspect that the decision to expand unemployment benefits will intrude upon Mexico's tradition of extended family solidarity, a tradition that in the United States did not withstand the impact of urbanization and industrialization.

A third hypothesis is related to change in family life patterns. It concerns the remarkable rise of women as a factor in Mexico's unemployment situation. In 1950 and 1960, women made up only .2 per cent of the unemployed economically active population. (The census figure for 1940—not given in Table 4—was only .1 per cent.) By 1970, however, this figure had jumped to 1.5 per cent, with the male unemployment rate rising to 2.2. These figures can be interpreted in at least two ways. On the one hand, although many women have freed themselves from their traditional place in the home in order to join the labor market, they can declare themselves to be unemployed, regardless of the lack of unemployment insurance which is more crucial to

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men who generally are the heads of family who maintain the home. On the other hand, as the 1970 Mexican census shows, between 1960 and 1970, the percentage of urban population (communities of over 2,500 persons) increased from 50.7 to 58.5 per cent); thus as both men and women who formerly worked in the fields or on subsistence-oriented *ejidos* move to larger size communities, they no longer necessarily are considered to be employed. In either event, these alternatives are not mutually exclusive.

Table 5 shows women's rising percentage in the economically active population. These data point up the problematic nature of the time series because in 1940 servants were not included in the economically active population. Adjusting for this factor, it may be seen that by 1970 the percentage of women officially listed as active in the labor market had not reached the level of the United States percentage in 1930. (With United States women now comprising about 38 per cent of the civilian population economically employed, it is no wonder that they increasingly are in a position to demand equal rights with men.)

Although Mexican women constituted about 21 per cent of the economically active population in 1970, the growth rate has decreased by decade. Compared to the

TABLE 5  
*Women as a Per Cent of the Economically Active Population, 1930-1970*

	Mexico			United States
	Economically Active Total	Women	Per Cent <sup>a</sup>	Per Cent Women <sup>a</sup>
1930	5,150,667	238,558	4.6	24.3
1940	6,039,146 <sup>b</sup>	585,369 <sup>c</sup>	9.7	25.4
1950	8,345,240	1,137,646	13.6	29.6
1960	11,253,297	2,018,275	17.9	33.4
1970	12,948,795	2,660,706	20.5	38.2 <sup>d</sup>

<sup>a</sup> Age 14 and over.

<sup>b</sup> Table 4 adjusted by adding a total of 181,030 salaried servants to total economically active population.

<sup>c</sup> Includes adjustment which adds 152,912 women servants.

<sup>d</sup> Age 16 and over.

Sources: Table 4 and the following sources from México, Dirección General de Estadística: for 1930, *Resumen del Censo*, 1960, p. 1; for 1940, *Resumen del Censo*, 1940, p. 29 and *Anuario Estadístico*, 1942, p. 59; for 1950, *Resumen del Censo*, 1950, p. 58; for 1960, *Resumen del Censo*, 1960, p. 362a; and *Resumen del Censo*, 1970, p. xix. For other views and alternative adjustments of the economically active population see, Luis Unikel and Federico Torres, "La Población económicamente activa en México y sus principales ciudades," *Demografía y Economía* (Mexico City) 4:1 (1970) 1-42, especially, 38-42; and Clark W. Reynolds, *The Mexican Economy: Twentieth Century Structure and Growth* (New Haven: Yale University Press, 1970), 386-387.

U.S. data are from Bureau of the Census, *Statistical Abstract*, 1950, p. 173; and 1970, p. 213.

1930's when the percentage more than doubled, during the 1940's, 1950's, and 1960's the growth rate was 40, 32, and 15 per cent, respectively. (Not surprisingly, it was during the World War II years that the United States women made their biggest increase, 17 per cent.)

Hypotheses that the employment situation in Mexico is related to hidden unemployment, relative affluence (especially by 1970), or to change in patterns of living involve matters which are open to question. Nevertheless, even with deficient data (or with possible improvement in 1970 census coverage) these suggestions as well as many other possible hypotheses indicate that data need not be disregarded simply because of many apparent problems. Indeed, alternative views of the problem point to some interesting topics for historical inquiry, especially the role of the Mexican woman during the 1930's. In any case, it is interesting to note that the historical ratio between Mexican and United States unemployment may have passed into history by 1970.

#### IV

There are a great number of historical time series which have not been investigated for purposes of historical research. Almost all Central Government agencies and decentralized institutions have generated statistics. Several guides to this material have been prepared by the Dirección General de Estadística, one of the most useful being the *Inventario de estadísticas nacionales, 1966*.<sup>16</sup> This work gives information on the nature and coverage of data, frequency of tabulation, initiation of series, and where published or unpublished figures may be obtained.

Though the Mexican population census is one of the best in Latin America with regard to coverage and consistency of time series, it could be greatly expanded to provide data on political attitudes as well as social modernization. In order to suggest possible improvements in national population censuses (and local surveys) in Latin America, a Social Census Conference recently met at the University of California in Los Angeles to consider a questionnaire developed from the point of view of historians who generally have not made their views known concerning data needed for analysis.<sup>17</sup>

In spite of limitations, existing census data could serve as a guide to researchers in several disciplines who are interested in such fields as local and regional investigation. Twenty years ago, for example, Howard F. Cline showed that if statistics on the size and location of communities which have been studied were taken into account, scholars might advantageously investigate a greater variety of villages in Mexico.<sup>18</sup> We might add here that social and economic characteristics from the population and agricultural censuses could be used for developing parameters by which individual communities could be selected and introduced in a national setting. Yet one of the most innovative community studies published in recent years, economist Michael Belshaw's valuable work on Huecorio, Michoacán, excludes the use of census data which would allow us to understand the *municipio* context of village life in a country which in 1960 had 2,377 *municipios*. Indeed, Belshaw not only implicitly

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assumes that Huecorio is representative of Mexican village life, but explicitly suggests that it has an "uncanny resemblance to an underdeveloped country in miniature." This latter assertion is made without supporting data and despite his findings that one-third of the adult males of the community had been to the United States to work as braceros!<sup>19</sup>

Examination of consistency and meaning in census materials themselves provide opportunity for scholars. An example of the kind of work which should be encouraged is found in Robert G. Greer's M.A. thesis at the University of Texas. Writing on "The Demographic Impact of the Mexican Revolution, 1910–1921," Greer concluded in 1966 that the period of violence of the 'teens held Mexico's population at a virtual standstill for 10 years, in which time the country could have been expected to increase by about 2 million persons. His calculations and review of the literature lead him to the interesting view (pp. 9, 21) that only about 75,000 to 100,000 persons were killed in military action in contrast to previous estimates reaching as high as 1,200,000 deaths.

In the political and administrative appointments of the "permanent revolution" since 1910, we have an example of information from which data can be generated to test hypotheses about outcomes of the Revolution. Has the Revolution opened opportunity for advancement through a dynamic bureaucracy?

During the past several years I have encouraged several individual scholars to examine the role of bureaucracy in Mexico in order to trace patterns in the way the government fills its positions. Though some observers maintain that the Mexican political system is "open" compared to the closed Porfirian system, others feel that this year's middle-aged senator will be next year's director of a decentralized agency, and a future cabinet minister before he returns to the Senate. Such generalizations might be tested by establishing a pool of important positions for which appointees could be listed in a year-by-year scheme cross-related to individual career biographies. In this manner we could develop statistics in order to pinpoint periods of bureaucratic expansion as well as investigate the "openness" of an expanding system. Such an analysis might begin by considering a bureaucratic pool of 1,048 offices given in the *Directorio del poder ejecutivo federal, 1961* (including ministerial and departmental offices, embassies, consulates, etc.), and 316 organizations given in the *Directorio general de organismos descentralizados, empresas de participación estatal, establecimientos públicos, comisiones, juntas, e institutos dependientes del Gobierno Federal* (1964).<sup>20</sup> A work contributing to the feasibility of this analysis is the extremely useful *Manual de organización del Gobierno Federal, 1969–1970*, which deals with the public sector in general.<sup>21</sup>

## CONCLUSION

Historical statistics provide threads by which many aspects of contemporary Mexican history can be reexamined.<sup>22</sup> One advantage which we enjoy in working with data in our own age is that frequently we are able to question persons who have

compiled such materials, in order to clarify meaning and formulation of time series. Nevertheless, few aspects of Mexican history have been investigated in light of patterns in time series; whole fields of political, social, and economic history are open to this type of research. In offering some debatable hypotheses about time-series data which many have found particularly questionable, I have tried to suggest that statistics may be useful for interpreting history in new ways. Examples are given here to indicate approaches which need research, and several series are presented here for the first time in order to make figures available to scholars.

NOTES

1. See Thomas E. Skidmore and Peter H. Smith, "Notes on Quantitative History: Federal Expenditure and Social Change in Mexico since 1910," *Latin American Research Review*, 5:2 (1970): 71–85.
2. The hypothesis that the results of Mexican presidential elections have been manipulated ignores possibilities that generally the Mexican populace has supported official candidates by massive majorities, especially because of economic development in the last 30 years. Further, for a hypothesis which accepts election statistics at face value and develops multiple regression coefficients on the assumption that figures have not been manipulated according to individual cases, see Barry Ames, "Bases of Support for Mexico's Dominant Party," *American Political Science Review*, 64 (1970): 153–167.
3. James W. Wilkie and Edna Monzón de Wilkie, *México visto en el siglo XX: Entrevistas de historia oral: Ramón Beteta, Marte R. Gómez, Manuel Gómez Morín, Vicente Lombardo Toledano, Miguel Palomar y Vizcarra, Emilio Portes Gil, Jesús Silva Herzog* (México, D. F.: Instituto Mexicano de Investigaciones Económicas, 1969), 120. In the same volume, p. 598, Emilio Portes Gil has stated that although Avila Camacho did not win 94 per cent of the Mexican vote, as claimed by official statistics, he did win with more than 75 per cent of the ballots cast.
4. In this regard, one could hypothesize that presidents of the period of economic revolution attempted to develop a more democratic count of the vote.
5. Philip B. Taylor, "The Mexican Elections of 1958: Affirmation of Authoritarianism?" *Western Political Science Quarterly*, 13 (1960): 722–744.
6. Contrariwise, the PAN uses official voting data for the Distrito Federal to argue that if it were a "banker's party," as many observers have claimed, it would fare poorly in lower-middle class and proletarian electoral districts. Actually, in the elections of 1964 and 1970, PAN notes that it gained important shares of votes in poor as well as rich districts. In 1964, for example, the PAN's share of votes for the Chamber of Deputies was 32 per cent in the wealthy Lomas de Chapultepec area (district 8), an amount similar to the total Distrito Federal figure of 30 per cent.
7. Data for 1964 were supplied by PAN; data for 1970 are from *El Día*, July 18, 1970. For discussion of the 1967 electoral results in Yucatán, see Karl M. Schmitt, "Congressional Campaigning in Mexico: A View from the Provinces," *Journal of Inter-American Studies*, 11 (1969): 93–110.
8. Cf. Ifigenia M. de Navarrete, *Política fiscal de México* (México, D.F.: Universidad Nacional Autónoma de México, 1964), 38.
9. See James W. Wilkie, *The Mexican Revolution: Federal Expenditure and Social Change since 1910* (2nd ed., rev., Berkeley: University of California Press, 1970), Part I.
10. See Raymond Vernon, *The Dilemma of Mexico's Development: The Roles of the Private and Public Sectors* (Cambridge: Harvard University Press, 1963), Ch. 7, especially p. 188.

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The shift from economic to balanced revolution is analyzed in Wilkie, *The Mexican Revolution*, Part I.

11. James W. Wilkie, "La Ciudad de México como imán de la población económicamente activa, 1930-1965," in *Historia y sociedad en el mundo de habla española; Homenaje a José Miranda* (México, D.F.: El Colegio de México, 1970), 379-395. For valuable analyses of regional disequilibrium problems in Mexico see Rodrigo A. Medellín, "La dinámica de distanciamiento económico social de México," *Revista Mexicana de Sociología*, 31 (1969): 513-546; and Paul W. Drake, "Mexican Regionalism Reconsidered," *Journal of Inter-American Studies and World Affairs*, 12 (1970): 401-415. Much of the recent bibliography on standards of living in Mexico City is noted in Wayne A. Cornelius, Jr., "Urbanization as an Agent in Latin American Political Instability: The Case of Mexico," *American Political Science Review*, 68 (1969): 833-857.
12. Wilkie and Wilkie, *México visto en el siglo XX*, 677-678. For a limited sample study of such problems see Comisión México-Estados Unidos de Norteamérica para el Desarrollo de la Amistad Fronteriza en Colaboración con la Comisión Nacional de Salarios Mínimos, "Informes sobre desocupación y subocupación de la mano de obra y algunas características culturales, económicas y sociales en Ciudad Juárez, Chih.; Nogales, Son.; Tijuana, B.C.; Mexicali, B.C.; Matamoros, Tamps.; Nuevo Laredo, Tamps.," *Revista Mexicana del Trabajo*, Sept. 1969, 105-188.
13. Given the 1970 data which has been released recently, a third hypothesis is developed below. I am indebted to Edmundo Flores for some suggestions in this regard.
14. Data on economically unemployed population for the D.F. are not available for the period 1931-1939.
15. Calculated from sources in Table 4; and *Anuario Estadístico*, 1938, 52. Data on unemployment for 1940 are contradictory; the monthly average during the year was higher than figures given on the date of the census (1.0 per cent), except for the D.F. where the monthly average was incomplete or not measured during the period 1931-1940. I have used the monthly average as more representative of the entire year for national totals of unemployed but have used census data for the D.F.
16. See the *Catálogo general de las estadísticas nacionales* and its separate *Índice* (1960). See also Rubén Gleason Galicia, *Las estadísticas y censos de México: su organización y estado actual* (México, D.F.: Universidad Nacional Autónoma de México, 1969).
17. See James W. Wilkie, John C. Super, Edna M. Wilkie (eds.), "A Social Census for Latin America," Draft, Jan. 1970.
18. Howard F. Cline, "Mexican Community Studies . . ." *Hispanic American Historical Review*, 32 (1951): 212-242.
19. Michael Belshaw, *A Village Economy: Land and People of Huecorio* (New York: Columbia University Press, 1967), xi-xvi, 123.
20. Both directories are published by the Secretaría del Patrimonio Nacional.
21. Prepared by the Secretaría de la Presidencia, Comisión de Administración Pública. For examples of other positions see Marvin Alisky, *The Governors of Mexico* (El Paso: Texas Western College Press, 1965); and Marvin Alisky (ed.), *Who's Who in Mexican Government* (Tempe: Center for Latin American Studies, Arizona State University, 1969).
22. For an example of a recently published work which uses religious data, see James W. Wilkie, "Statistical Indicators of the Impact of National Revolution on the Catholic Church in Mexico, 1910-1967," *Journal of Church and State*, 12 (1970): 89-106.