

DAVID B. SUGARMAN AND MURRAY A. STRAUS

INDICATORS OF GENDER EQUALITY FOR
AMERICAN STATES AND REGIONS*

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ABSTRACT. The indicators described in this paper are measures of status *equality* (as compared to measures of status *attainment*). Status equality was operationalized by expressing the status attainment scores for women as a percentage of the scores for men. Indicators of equality in the economic, political, and legal spheres of life were computed for each of the 50 U.S. states. The indicators were combined to create an overall Gender Equality Index and a subscale for each of the three spheres. Analyses of internal consistency reliability and construct validity are presented. Large state-to-state and regional differences were found for all three spheres. In respect to the overall Gender Equality Index the scores ranged from a low of 19 (i.e. 19% of what is needed for equality with men) to a high of only 60%.

Social indicators research in the United States has tended to focus on historical trends and on cross-national comparisons of social indicators. Regional and state-to-state comparisons within the United States have received relatively little attention. Perhaps this is because it is assumed that the process of national integration and national development has reached the point where such differences are no longer important. For example, the economic backwardness that characterized the South from the Civil War to the post World War II era has been substantially reduced (Wright, 1986). However, the extent of regional and state differences in respect to key social indicators, such as the status of women, needs to be determined by empirical research. Consequently, this paper seeks to answer the question of whether there are important differences between the states and regions of the United States in the extent to which women have achieved equality with men in the economic, political, and legal systems. The answer to this question is important both for the information it provides about an important national goal, but also as a means of understanding the homogeneity-heterogeneity of American society.

The paper is also intended to make a theoretical and a methodological contribution. The theoretical contribution consists of decomposing

the concept of "status of women" to identify and describe two key aspects: "gender attainment" and "gender equality". The methodological contribution consists of making available to the social indicators research community the measures of "gender equality" developed for this study. The paper therefore devotes considerable attention to describing the methods used to create these indicators and to providing preliminary evidence of reliability and convergent and discriminant validity.

THE CONCEPT OF THE STATUS OF WOMEN

The "status of women" has been conceptually and operationally defined in a number of different ways. Mason (1986) describes it as a "much used but ill-defined term." Rather than weighing the merits of one approach over others, it is more useful to conceptualize the status of women as a multidimensional phenomenon. This first section of the paper argues for differentiating between approaches which focus on the *absolute* degree to which women have attained valued social characteristics versus approaches which focus on the status of women *relative* to men; and between research which focuses on cross-societal comparisons versus historical or time-series comparisons. The interrelations of these two dimensions are then used to identify four types of research on the status of women.

Gender Attainment and Gender Equality

A key dimension in understanding the differences and similarities among various studies of the status of women concerns whether the conceptualization and measurement focuses on gender status *attainment* (from now on referred to as *gender attainment*) or on *gender equality*.

Gender Attainment. Gender attainment, as used in this paper, refers to the extent to which members of a particular gender have achieved such society valued statuses as education, economic resources, and physical and mental health (Bianchi and Spain, 1983; Curtin, 1982; Powers, 1983). Empirical studies of the gender attainment aspect of the

status of women are illustrated in the Population Reference Bureau's publication 'Status of Women: A Comparative Analysis of Twenty Developing Countries' (Curtin, 1982). The status of women in that study refers to the extent to which women in these countries have achieved literacy or some other level of education, the percentage of women employed in the paid labor force, or life expectancy.

Gender Equality. Feminist scholars, and some of the literature on social stratification, tend to use the idea of women's status in a different sense. They are concerned with whether women have as much education as men, earn as much, and live as long. Hommes (1978: 27), for example, defined the status of women as ". . . the position women have as a group, compared with men as a group, in different fields of society." The term "patriarchy" as used by several feminist writers (e.g. Dobash and Dobash, 1979) refers to gender inequality as an institutionalized aspect of the social structure typical of all social institutions, including the family, church, political, educational, and legal institutions. This facet of the status of women refers to the degree to which there is equality between the sexes, i.e., to "gender equality".

Relation Between Gender Attainment and Gender Equality. The gender attainment and gender equality conceptualizations are related, but by no means unidimensional. The stereotype upper middle class suburban woman of the 1950s had a high absolute level of educational attainment, lived in affluence relative to most of the world, and had a very low risk of dying in childbirth. Thus, the level of gender attainment was high. At the same time, but under the influence of the "feminine mystique" (Friedan, 1963) middle class housewives occupied subordinate roles relative to their husbands, and relative to middle class men in almost all spheres of life.

The opposite combination is also possible. Education, material standard of living, and life expectancy can be low, but gender equality can be high. When viewed as an aspect of social stratification, women can have high status relative to men but low levels of gender attainment if both men and women are equally uneducated, equally poor, and have an equally short life expectancy. Thus, women are said to have high status in foraging societies such as the Kung!, even though neither men or women are literate (Blumberg, 1978). They are more equal in areas valued by Kung! society than in valued areas of most other societies:

family and household matters, subsistence activities, and political power influencing the larger group.

We do not mean to suggest that gender equality and gender attainment are in conflict, or even that they are completely separate. In fact, an issue of major theoretical and practical importance is the extent to which equality between men and women is associated with the absolute level of gender attainment and other indicators of social and psychological well-being.¹ Still, few researchers have focused directly on measuring gender equality; however, it shall be the primary focus of the remainder of the present paper.

Correlates of Equality. There is a growing body of empirical evidence supporting the idea that equality is not only desirable as an end in itself, but that it also brings other benefits to society. Jacobs and Britt (1977), for example, compared the states of the United States and found that the greater the degree of economic equality, the lower the crime rate. Within the family, it has been found that equalitarian marriages (as opposed to male dominant marriages) have the lowest incidence of violence (Coleman and Straus, 1986; Straus, 1973; Straus *et al.*, 1980). Another example is research which suggests that women's subordinate position and restricted social roles partly explains their high rate of depression (Aneshensel *et al.*, 1981; Barnett and Baruch, 1985; Gove, 1979; Gove and Tudor, 1973). Each of these are empirical questions which might be addressed using a measure of gender equality such as the one described in this paper.

Societal Comparisons

The second dimension which differentiates different types of status of women research focuses on the specific design strategy used to compare societies. This is a key dimension because the status of women is inherently a societal characteristic. Consequently, empirical research is facilitated by the use of some type of macro-level comparative design. The two main types of comparative research designs are cross-cultural designs (which compare nations, states, or cities), and historical or time series designs (which focus on social change). Both these designs permit an examination of factors which might account for differences in the status of women (such as urbanization), and factors

which might follow from differences in the status of women (such as the frequency of wife-beating).

Four Types of Status of Women Studies

Both cross-society and time-series studies of the status of women can be conducted using either gender attainment or gender equality indicators. The interrelation of these two dimensions, is shown in Figure 1.

		TYPE OF INDICATOR	
		Gender Attainment	Gender Equality
RESEARCH DESIGN	Historical Comparison	A (Bureau of the Census, 1980)	B (US Commission On Civil Rights, 1978)
	Cross-Society Comparison	C (Boulding, 1976; Curtin, 1982)	D (Andrews, 1981; Yllo & Straus, 1984; this paper)

Fig. 1. Four types of status of women studies and illustrative studies.

Because of the limited space within the context of this article, we will comment on only two aspects of Figure 1. First, although all four types of studies are, in principle, possible, most of the existing research falls into Types A and C of Figure 1, that is, research which uses gender attainment rather than gender equality indicators of the status of women. Second, Figure 1 is intended as an expository tool, not as a logically complete taxonomy of all possible research designs for investigating the status of women. For example, cross-sectional and longitudinal designs are not mutually exclusive and can be combined into a “cross-sequential” design (Schaie, 1965).

METHOD OF CONSTRUCTING THE GENDER EQUALITY INDEX

As the name Gender Equality Index indicates, this instrument is intended to measure the attainments of women *relative to men*. There are several reasons for choosing this aspect of the status of women.

First, equality between the sexes is presumed to be an issue of broad concern in almost all societies. Second, it is a universally applicable comparative frame. Third, it focuses on the status of women as an aspect of social stratification, and therefore makes available the theoretical and methodological tools developed for research on social class and other aspects of social stratification.

Computation of Equality Indicators

Guided by the conceptualization outlined up to this point, we selected measures that could be used to assess the extent to which women have the same access to economic resources, legal rights, or positions of political power as men in each of the 50 states. In the case of the economic and political dimensions, this was achieved by expressing the gender attainment score of women in the state as a percentage of the gender attainment score of men in the state.² For example, one of the economic equality indicators is the median income of employed women in a particular state divided by the median income of employed men in the same state times 100. For the United States as a whole, this was 59% in 1980. However, as will be seen, there are large differences among states.³

The indicators of the legal equality consist of statutes which grant legal rights to women, or legislation which protects existing but previously ignored rights, such as a fair employment practices act or legislation which prohibits sex discrimination in housing.

Composite Indexes

In addition to considering each of the separate indicators, we investigated the degree to which they formed a consistent pattern, and calculated composite indexes to represent the cumulative effect of the economic indicators, the political indicators, the legal indicators, and all three of these combined to form an overall "Gender Equality Index" for each of the states of the United States.

ECONOMIC EQUALITY

Given the considerable attention that researchers have focused on gender differences in the economic sphere (e.g., Friedl 1975; Roos, 1983; Treiman and Roos, 1983), a gender economic equality index was created. Eight indicators of gender equality with respect to economic status were compiled. These are listed in Table I. Tables IIa and IIb array the states in rank order according to each of these indicators. There are large state-to-state differences in respect to most of the eight economic equality indicators.

State-to-State Differences

Labor Force Participation and Professional Employment. The first column of Table IIa shows that the women's labor force participation ranged from 56% of the rate for men (in West Virginia) to 81% of the male rate (District Of Columbia). The second column of Table IIa, which gives female employment in professional and technical occupations as a percentage of the male employment in these occupations, also shows large differences among states. However, column 2 also shows some surprising statistics: most of the figures are greater than 100, which indicates a larger percentage of women than men are employed in professional and technical occupations. This is because so many women are employed as teachers and nurses — occupations which, although professions, are not highly rewarded, either in money or prestige. On the other hand, when employment as managers or administrators is considered, column 3 of Table IIa shows that the female rate is only half that of the male rate in the median state, and only 38% of the male rate in three states (Conn., R. I., N. Carolina).

Employment. The last column of Table IIa presents data on the employment rate (the percentage of women in the labor force who actually have jobs, i.e. are not unemployed) as a percentage of the male employment rate. The median score is 100.6, indicating that women have slightly more freedom from unemployment than men. Two factors can be contributing to this finding. First, this low comparative unemployment rate probably reflects the sale of skilled and dependable female labor at bargain rates, and specifically at an average of 59% of

TABLE I
Initial pool of economic gender equality indicators

Indicator*	Description	Year
Civilian Labor Force (SWRE 1)	Percent of 16 years and older females who are in the civilian labor force relative to the percent of 16 years and older males who are in the civilian labor force	1982
Professional and Technical Occupations (SWRE 2)	Percent of women in professional and technical occupations relative to the percent of men in professional and technical occupations	1982
Managers and Administrators (SWRE 3)	Percent of women who are managers and administrators in non-farm occupations relative to the percent of men who are managers and administrators in non-farm occupations	1982
Employed Labor Force (SWRE 4)	Percent of 16 years and older female labor force members who are employed relative to the percent of 16 years and older male labor force members who are employed	1982
Median Income (SWRE 5)	The median income of 15 years and older full-time female workers relative to the median income of 15 years and older full-time male workers	1979
Loans by Small Business Admin. (SWRE 6)	The percent of Small Business loans given to women relative to the percent of Small Business loans given to men	1977
Amount Loaned by S.B.A. (SWRE 7)	The percent of Small Business Loan money loaned to women relative to the percent of Small Business Loan money loaned to men	1977
Above-poverty level households (SWRE 8)	The percent of female headed households with incomes above the poverty level relative to the percent of male headed households above the poverty level	1979

* The "variable names" in parentheses are needed to unambiguously identify a variable from among the more than 12 000 in the State and Regional Indicators Archive. Copies of the codebook, or xeroxes of the codebook pages for specific variables, can be obtained by writing the State and Regional Indicators Archive, 128 Horton Social Science Center, University of New Hampshire, Durham, NH 03824. The codebooks fully document each variable, including the source of the data, the formula used to compute rates and indexes, adjustments for outliers, etc.

the male wages. Second, it is possible that unemployed women may withdraw from the labor force more rapidly and consequently may not be mirrored in the unemployment rate.

TABLE IIa
States arrayed in order of economic gender equality indicators

Rank	% In civil labor force 16 + yrs.		% In prof. tech. occupations		% In Admin, non-firm occupations		% In civil labor force who employed	
	State	swre 1	State	swre 2	State	swre 3	State	swre 4
1	D.C.	80.9	W.VA	178.3	D.C.	82.6	W.VA	104.4
2	HAWA	78.0	N.D.	163.5	NEV	70.6	IOWA	103.8
3	MINN	75.3	S.D.	162.7	OREG	64.7	PA	103.6
4	ALAS	75.0	KY	147.9	ALAS	64.4	WIS	102.7
5	NEV	74.6	IOWA	139.6	N.M.	61.3	D.C.	102.6
6	WIS	73.2	GA	135.0	WASH	60.0	ALAS	102.6
7	N.C.	73.1	N.C.	133.0	MONT	60.0	OHIO	102.3
8	VA	72.3	MISS	132.0	HAWA	59.4	MONT	102.0
9	WYO	72.2	ARK	124.7	ARIZ	58.2	WYO	102.0
10	DEL	72.0	WYO	121.9	KY	58.2	DEL	101.8
11	VT	71.8	NEBR	121.4	IDA	57.6	KANS	101.7
12	S.C.	71.7	INDI	120.9	CAL	57.3	OKLA	101.5
13	MD	71.6	MONT	120.7	MO	57.1	WASH	101.4
14	MASS	71.5	LA	117.5	OKLA	56.9	INDI	101.3
15	R.I.	71.3	ME	115.6	IOWA	56.9	ILL	101.3
16	NEBR	71.0	TEX	114.6	FLA	55.7	IDA	101.2
17	COLO	70.8	FLA	114.1	TEX	54.7	HAWA	101.2
18	ARIZ	70.8	WIS	113.1	COLO	53.1	MINN	101.1
19	CAL	70.7	OKLA	111.1	ME	52.3	MASS	101.1
20	FLA	70.7	ALA	110.8	VA	52.2	KY	101.1
21	CONN	70.5	OHIO	109.7	TENN	52.1	COLO	101.0
22	GA	70.4	VT	109.6	S.C.	52.1	NEBR	100.7
23	N.H.	70.3	TENN	108.5	WYO	51.5	NEV	100.6
24	S.D.	69.7	N.J.	108.3	ALA	51.1	CAL	100.6
25	WASH	69.5	ALAS	108.3	W.VA	50.8	MICH	100.6
26	ARK	69.5	MICH	108.2	MD	50.6	ARIZ	100.5
27	KANS	69.5	OREG	108.0	VT	50.6	CONN	100.2
28	IDA	69.2	S.C.	107.8	MINN	50.0	ME	100.2
29	ME	68.9	UTAH	107.0	MISS	49.7	MD	100.2
30	IOWA	68.9	ILL	106.4	LA	49.6	UTAH	100.1
31	INDI	68.8	MO	106.1	WIS	49.1	MO	100.1
32	OREG	68.7	PA	104.7	GA	49.0	OREG	100.1
33	N.D.	68.4	N.Y.	104.4	OHIO	48.5	N.Y.	99.8
34	MO	68.3	VA	102.6	MICH	47.6	VT	99.8
35	MICH	68.1	KANS	102.6	S.D.	47.1	FLA	99.7
36	MONT	67.9	IDA	102.2	N.J.	47.0	N.D.	99.7
37	ILL	67.5	R.I.	101.2	UTAH	47.0	S.C.	99.7
38	N.J.	67.4	MASS	100.0	ILL	46.6	N.H.	99.7
39	TENN	67.3	NEV	100.0	ARK	45.8	S.D.	99.5
40	TEX	67.2	ARIZ	98.4	INDI	45.2	TEX	99.5
41	OHIO	66.9	N.M.	98.1	MASS	44.8	MISS	99.2
42	MISS	66.7	HAWA	97.8	PA	44.6	N.J.	99.1
43	OKLA	66.2	WASH	97.8	N.Y.	44.2	R.I.	98.9

Table IIa (continued)

Rank	% In civil labor force 16 + yrs.		% In prof. tech. occupations		% In Admin, non-firm occupations		% In civil labor force who employed	
	State	swre 1	State	swre 2	State	swre 3	State	swre 4
44	KY	66.1	MD	97.8	KANS	43.8	ALA	98.9
45	N.M.	65.8	D.C.	97.4	N.D.	43.8	GA	98.8
46	UTAH	65.5	N.H.	96.5	NEBR	43.1	VA	98.6
47	PA	65.5	CONN	95.7	N.H.	42.5	LA	98.5
48	N.Y.	65.3	MINN	91.1	DEL	41.6	N.M.	98.2
49	ALA	64.2	CAL	90.8	CONN	37.7	TENN	98.1
50	LA	60.2	COLO	87.3	R.I.	37.7	N.C.	97.5
51	W.VA	55.8	DEL	85.5	N.C.	37.7	ARK	97.0

TABLE IIb
States arrayed in order of economic gender equality indicators (cont.)

Rank	Median income workers 15 yr +		SBA loans — % of loans		SBA loans — % of amount loaned		Head family above poverty level	
	State	swre 5	State	swre 6	State	swre 7	State	swre 8
1	D.C.	79.1	IDA	58.7	IDA	53.8	NEV	83.5
2	HAWA	69.2	KANS	56.2	KANS	40.8	N.D.	82.3
3	N.C.	66.0	ALAS	49.2	DEL	36.9	MINN	82.2
4	S.C.	64.6	OREG	44.9	MD	31.5	NEBR	81.6
5	VT	64.4	DEL	38.8	OREG	31.5	ARIZ	81.4
6	N.Y.	64.3	MD	35.1	ALAS	28.2	IOWA	80.6
7	ALAS	63.9	ARIZ	33.3	ARIZ	26.5	WYO	80.5
8	ME	63.5	D.C.	33.3	OKLA	23.4	MO	80.0
9	MASS	62.5	OKLA	31.5	MO	21.9	CAL	79.6
10	VA	62.2	KY	28.2	MONT	19.0	UTAH	78.9
11	GA	62.0	PA	25.0	HAWA	19.0	HAWA	78.5
12	MD	61.9	MO	25.0	WIS	19.0	ALAS	78.4
13	S.D.	61.7	N.H.	25.0	PA	17.6	VT	78.2
14	ARK	61.6	R.I.	23.4	R.I.	17.6	MD	78.1
15	NEV	61.6	MONT	23.4	OHIO	17.6	D.C.	77.7
16	CAL	61.2	WIS	23.4	N.H.	17.6	OREG	77.4
17	FLA	60.5	OHIO	23.4	CONN	16.2	KANS	77.4
18	COLO	60.1	VA	21.9	KY	14.9	COLO	77.1
19	MISS	60.1	N.Y.	21.9	D.C.	14.9	N.H.	76.9
20	R.I.	59.5	N.J.	21.9	VA	13.6	W.VA	76.8
21	N.H.	59.3	W.VA	20.4	N.Y.	13.6	FLA	76.5
22	TENN	59.3	CONN	20.4	W.VA	12.3	PA	76.3
23	CONN	59.0	S.C.	20.4	N.C.	12.3	WIS	76.2

Table IIb (continued)

Rank	Median income workers 15 yr +		SBA loans — % of loans		SBA loans — % of amount loaned		Head family above poverty level	
	State	swre 5	State	swre 6	State	swre 7	State	swre 8
24	KANS	58.9	GA	19.0	N.J.	12.3	MASS	75.8
25	MINN	58.4	ALA	19.0	ILL	12.3	ME	75.8
26	IDA	58.9	HAWA	17.6	MISS	12.3	INDI	75.8
27	ARIZ	58.8	N.C.	17.6	WYO	12.3	OKLA	75.3
28	WIS	58.6	N.D.	17.6	LA	11.1	TEX	75.3
29	NEBR	58.6	WYO	17.6	S.C.	11.1	KY	75.0
30	OREG	58.5	WASH	16.2	GA	11.1	OHIO	75.0
31	IOWA	58.5	MISS	16.2	WASH	9.8	N.C.	74.8
32	OKLA	58.4	ARK	14.9	UTAH	9.8	DEL	74.7
33	N.M.	58.3	LA	14.9	CAL	9.8	S.C.	74.5
34	DEL	58.3	ILL	14.9	FLA	9.8	S.D.	74.4
35	PA	58.3	S.D.	13.6	S.D.	9.8	WASH	73.9
36	TEX	57.7	NEV	12.3	N.D.	8.7	CONN	73.9
37	MO	57.6	MASS	12.3	ARK	8.7	N.J.	73.4
38	N.J.	57.5	CAL	12.3	NEV	8.7	ARK	73.2
39	WASH	57.3	INDI	12.3	INDI	7.5	R.I.	72.8
40	KY	57.1	TEX	12.3	ALA	7.5	MONT	72.3
41	N.D.	57.0	FLA	12.3	TEX	6.3	MICH	72.1
42	ALA	56.8	UTAH	9.8	MASS	6.3	ALA	72.0
43	MICH	56.7	MICH	9.8	MICH	6.3	GA	71.6
44	ILL	56.6	IOWA	9.8	IOWA	6.3	VA	71.2
45	OHIO	56.5	TENN	9.8	ME	5.2	ILL	71.1
46	MONT	55.7	COLO	9.8	COLO	4.1	TENN	71.0
47	INDI	55.6	NEBR	7.5	TENN	4.1	IDA	70.3
48	UTAH	54.2	TV	6.3	N.M.	4.1	N.Y.	68.4
49	LA	53.2	N.M.	5.2	VT	3.0	N.M.	67.4
50	W.VA	51.4	MINN	5.2	MINN	3.0	LA	64.3
51	WYO	50.2	ME	5.2	NEBR	3.0	MISS	60.4

Income. Turning to Table IIb, the first column arrays the states according to the most widely used measure of the economic equality of women — the percent that the earnings of women employed full-time are of the earnings of men who are employed full-time. The median is the well known figure of 59%. What is not well known is that there are large state-to-state differences. The range is from 50% in Wyoming to 79% in Washington, D.C. Nowhere do women come close to equality with men, not even in the District of Columbia, which has the benefit of a high level of female employment by the Federal government.

Access to Capital. The second and third columns of Table IIb show extremely large differences in the extent to which women have secured business capital through the Small Business Administration. In most states women obtain less than a fifth of the loans and less than 12% of the funds. Even in the top ranking state — Idaho — the figure is only 59% of the loans and 54% of the amount loaned to men.

Above Poverty Households. Although women are moving toward economic equality with men in certain ways, they are losing ground in other ways. One example of their “feminization of poverty” (Pearce and McAdoo, 1981) is the proportion of female-headed households with income below the federal poverty line. In every state, a smaller proportion of female-headed households have incomes above the poverty line than is true of households containing an adult male. The range is from 60% in Mississippi to 84% in Nevada. In the median state, rate of non-poor female-headed households is only 75% of the male rate.

Summary. With respect to six of the eight indicators of economic status, women are far from reaching equality with men. This is not only the typical situation, but also applies to the states in which women fare best. The maximum female attainment of these six economic statuses among the states fall short of gender equality with men. Moreover, a closer examination of the two indicators which manifestly indicate equality, suggests that even this situation may be illusory.

Regional Patterns

Table III shows the extent to which the four major regions of the United States differ with respect to economic equality. One point of particular interest concerns the South. The low per capita income in the South (U.S. Department of Commerce, 1984) might lead one to expect a tendency for Southern states to have low economic status scores. That would be a reasonable expectation if the indicators measured economic attainment. Because all eight of the indicators measure economic equality, not economic attainment, there is no necessary correlation. In fact, examination of Tables II and III provides only the most minimal support for regional differences in economic gender equality partic-

TABLE III
Regional differences in economic gender equality indicators¹

Economic equality indicator*	Year	North East	North Central	South	West
F%M: % Pop in civil labor force 16+yrs. (swre 1)	82	69.21	69.67	68.64	70.73
F%M: In prof. tech. occupations (swre 2)*	82	104.04	120.48	118.79	102.97
F%M: In mang. admin, non-firm occuppns (swre 3)***	82	44.64	48.28	52.42	58.89
F%M: Civil labor force who employed (swre 4)	82	100.30	101.28	99.88	100.93
F%M: Median income F-T workers 15yr.+ (swre 5)	79	60.97	57.98	60.64	59.12
F%M: SBA loans — % of loans (swre 6)	77	17.98	18.28	21.56	23.93
F%M: SBA loans — % of amount loaned (swre 7)	77	12.22	13.08	14.27	18.26
F%M: Head family above poverty level (swre 8)*	79	74.65	77.44	73.14	76.90
SWX Economic P-Index (swxe 2)	77—82	54.28	55.15	55.79	58.39

* See footnote to Table I for more complete description of each indicator. Asterisks indicate a statistically significant *F* test for differences between regions: * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.

¹ The states in each region are for North East: ME, NH, VT, MA, RI, CT, NY, NJ, PA; North Central: OH, IN, IL, MI, WI, MN, IA, MO, ND, SD, NE, KS; South: DE, MD, DC, VA, WV, NC, SC, GA, FL, KY, TN, AL, MS, AR, LA, OK, TX; West: MT, ID, WY, CO, NM, AZ, UT, NV, WA, OR, CA, AK, HI.

ularly with regard to comparing the South to other regions. Martin, Wilson and Dillman (1986) reached similar conclusions.

This paucity of regional differences on the economic equality indicators illustrates the difference between gender attainment and gender equality. Omitting Washington, D.C., the first column in Table IIb, shows that women come closest to equality with men in Hawaii and North Carolina. The median income of women in Hawaii (\$10910 in 1979) was over \$2000 more than in North Carolina (\$8781). However, the percent that women's income is of men's income is not very different in the two states (69% and 66% of male income). In Hawaii,

wage rates are relatively high for women as well as men, and in North Carolina wage rates are low for both men and women. At the other end of the continuum, women in West Virginia earn only 52% of male income, and women in Wyoming only 50% of male income, despite the fact that one is a low income state and the other a high income state.

Economic Equality Index

Each of the eight indicators measures a different aspect of gender equality in economic status. Consequently, it seemed desirable to determine if a composite measure could be constructed — one which would measure the cumulative effect all eight indicators. An internal consistency reliability analysis was therefore computed using the SPSS reliability program (Hull and Nie, 1981), as shown in Table IV.

Two criteria were required for the inclusion of an indicator in the creation of the final index. First, the “corrected item-total correlation”

TABLE IV
Reliability analysis of economic gender equality index

Economic indicator*	Inter-item correlations							All indicators		Final set of indicators	
	1	2	3	4	5	6	7	r**	alpha if item is deleted	r**	alpha if item is deleted
SWRE1Z	—							0.36	0.43	0.48	0.58
SWRE2Z	-0.43	—						-0.30	0.65	—	—
SWRE3Z	0.29	0.14	—					0.32	0.44	0.35	0.62
SWRE4Z	0.03	0.05	0.26	—				0.32	0.44	0.29	0.64
SWRE5LZ	0.67	-0.26	0.24	-0.20	—			0.17	0.50	0.23	0.65
SWRE6LZ	0.11	-0.15	0.18	0.27	0.06	—		0.44	0.40	0.46	0.58
SWRE7LZ	0.11	-0.23	0.08	0.27	0.02	0.94	—	0.36	0.43	0.41	0.60
SWRE8Z	0.42	-0.03	0.19	0.41	0.06	0.01	0.02	0.32	0.44	0.31	0.63
									Alpha coef.	0.51	0.65

* See Table I for more complete identification of the variables. The letter, Z, on the name of each indicator signifies that the indicator has undergone z-transformation. The letter, L, denotes that outliers have been corrected. See Note 5.

** r = Corrected item-total correlation. See text for explanation.

(the correlation between the indicator and the sub-index after adjusting for the fact that the indicator is part of the index) must be equal to or greater than 0.30. Second, the exclusion of the indicator would result in an increase in the alpha coefficient of reliability for the index. Both of these requirements had to be satisfied before an indicator was eliminated from a sub-index.

The correlation of the eight economic equality indicators with each other is presented in the left panel of Table IV. The two right panels show the "corrected item-total correlation" (in the columns headed r), and the *alpha* coefficients of reliability if the item were to be deleted.

The second row in the panel headed "All Indicators" shows that the variable SWRE2 (Professional and Technical Occupations) has a negative correlation of -0.30 with the other indicators. This is consistent with the fact that a large proportion of the professional positions held by women are as teachers and nurses. In addition, the "Alpha if them is deleted" coefficient of 0.65 shows that elimination of this indicator would result in an index with a high reliability than if it were retained as part of the Economic Equality Index. We therefore computed the index by summing the z-scored version of the seven remaining indicators. The right hand panel of Table IV shows the item analysis statistics for the final version of the Economic Equality Index, and the fact that it has an alpha coefficient (Cronbach, 1970) of reliability of 0.65. This index has a mean of 56.04 and a standard deviation of 4.14.

POLITICAL EQUALITY

Another sphere in which it is important to assess gender equality is the political. The low female representation in legislatures and other elected offices is probably one of the factors maintaining inequality in other spheres. In addition, a number of researchers (Huber, 1986; Sacks, 1974; Sapiro, 1983) have suggested, the more women are involved in nondomestic work, the greater their ability to participate in societal decision-making and thus their political power. Although it is beyond the scope of the present paper, the indicators presented in this section might be used as one means of testing this hypothesis.

Table V identifies the six indicators of political equality, and Tables

TABLE V
Initial pool of political gender equality indicators

Indicator*	Description	Year
Congress (SWRP 1)	Percent of U.S. Congress members who are women relative to the percent of U.S. Congress members who are men	1983
State Senate (SWRP 2)	Percent of State Senate members who are women relative to the percent of State Senate members who are men	1983
State House (SWRP 3)	Percent of State House members who are women relative to the percent of State House members who are men	1983
Judges (SWRP 4)	Percent of major trial and appellate court judges who are women relative to the percent of major trial and appellate court judges who are men	1979
Mayors (SWRP 5)	Percent of mayors who are women relative to the percent of mayors who are men	1983
Governing Boards (SWRP 6)	Percent of Governing Board members who are women relative to the percent of Governing Board members who are men	1983

* The codes in parentheses are needed to identify the data in the State and Regional Indicators Archive. See footnote to Table I.

Vla and VIb show the states arrayed in rank order on these six variables. Examination of Tables VIa and VIb suggests that, in general, women have achieved even less political equality than economic equality. In the median states, for these six variables, women have

TABLE VIa
States arrayed in rank order of political gender equality indicators

Rank	Members U.S. Congress		Members State Senate		Members State House	
	State	swrp 1	State	swrp 2	State	swrp 3
1	NEV	50.0	N.H.	33.3	COLO	44.4
2	MD	42.8	FLA	29.0	WYO	42.2
3	ME	33.3	CONN	28.5	N.H.	40.3
4	CONN	33.3	OREG	25.0	CONN	31.3
5	R.I.	33.3	HAWA	25.0	HAWA	30.7
6	NEBR	25.0	ME	22.2	MD	30.5
7	KANS	16.6	ARIZ	20.0	OREG	30.4

Table VIa (continued)

Rank	Members U.S. Congress		Members State Senate		Members State House	
	State	swrp 1	State	swrp 2	State	swrp 3
8	COLO	16.6	WASH	19.5	ARIZ	30.4
9	LA	11.1	ALAS	17.6	WIS	30.2
10	TENN	11.1	MASS	17.6	ME	30.1
11	OHIO	8.7	COLO	16.6	WASH	25.6
12	INDI	8.3	DEL	16.6	VT	23.9
13	ILL	8.3	ILL	15.6	IDA	20.6
14	FLA	6.2	MINN	15.5	DEL	20.5
15	N.J.	6.2	VT	15.3	KANS	20.1
16	CAL	4.6	NEBR	13.9	ILL	19.1
17	N.Y.	2.5	IDA	12.9	IOWA	19.0
18	HAWA	0.0	N.C.	11.1	MONT	19.0
19	N.H.	0.0	R.I.	11.1	N.C.	18.8
20	MONT	0.0	WYO	11.1	FLA	18.8
21	ALAS	0.0	NEV	10.5	S.D.	18.6
22	VT	0.0	W.VA	9.6	CAL	17.6
23	WIS	0.0	S.D.	9.3	MINN	16.5
24	MASS	0.0	N.Y.	8.9	N.D.	16.4
25	IOWA	0.0	INDI	8.7	MO	16.4
26	UTAH	0.0	N.D.	8.1	R.I.	16.2
27	OKLA	0.0	KANS	8.1	INDI	16.2
28	TEX	0.0	N.M.	7.6	W.VA	16.2
29	KY	0.0	S.C.	6.9	MICH	14.5
30	MINN	0.0	MD	6.8	ALAS	14.2
31	N.C.	0.0	WIS	6.4	MASS	14.2
32	DEL	0.0	MONT	6.3	N.Y.	12.7
33	S.C.	0.0	MO	6.2	N.J.	12.6
34	S.D.	0.0	KY	5.5	OHIO	12.5
35	WASH	0.0	MICH	5.5	VA	12.3
36	PA	0.0	VA	5.2	OKLA	12.2
37	W.VA	0.0	CAL	5.2	UTAH	11.9
38	ARK	0.0	GA	3.7	NEV	10.5
39	OREG	0.0	UTAH	3.5	GA	10.4
40	GA	0.0	OHIO	3.1	TEX	9.4
41	MICH	0.0	TENN	3.1	N.M.	9.3
42	ALA	0.0	ALA	2.9	TENN	8.7
43	MISS	0.0	ARK	2.9	KY	8.7
44	VA	0.0	N.J.	2.5	S.C.	7.8
45	MO	0.0	OKLA	2.1	ARK	6.3
46	WYO	0.0	IOWA	2.0	ALA	5.0
47	IDA	0.0	PA	2.0	PA	4.6
48	ARIZ	0.0	LA	0.0	LA	2.9
49	N.M.	0.0	TEX	0.0	MISS	2.5
50	N.D.	0.0	MISS	0.0	NEBR	-999.0
51	D.C.	-999.0	D.C.	-999.0	D.C.	-999.0

TABLE VIb
States arrayed in rank order of political gender equality indicators (*cont.*)

Rank	Judges on major courts		Mayors		Municiple governing board	
	State	swrp 4	State	swrp 5	State	swrp 6
1	HAWA	9.8	DEL	28.2	D.C.	85.1
2	R.I.	9.8	CAL	19.0	MICH	66.6
3	WIS	8.7	WASH	17.6	CONN	26.5
4	CONN	8.7	N.M.	14.9	ARIZ	26.5
5	KANS	7.5	OREG	14.9	OREG	25.0
6	ARK	6.3	INDI	14.9	WYO	23.4
7	N.M.	6.3	MASS	13.6	ALAS	23.4
8	MD	5.2	N.J.	13.6	N.M.	21.9
9	ARIZ	5.2	ME	13.6	COLO	20.4
10	MINN	5.2	KY	12.3	R.I.	20.4
11	MICH	5.2	N.H.	12.3	WASH	19.0
12	MASS	5.2	WYO	12.3	KY	19.0
13	OREG	4.1	ARIZ	12.3	W.VA	17.6
14	CAL	4.1	IDA	11.1	MD	17.6
15	N.Y.	4.1	MICH	11.1	MONT	17.6
16	PA	4.1	COLO	11.1	CAL	17.6
17	FLA	4.1	MONT	9.8	FLA	16.2
18	MISS	3.0	CONN	9.8	DEL	16.2
19	N.J.	3.0	N.C.	8.7	ALA	16.2
20	WASH	3.0	MINN	8.7	VA	14.9
21	OKLA	3.0	FLA	8.7	IDA	14.9
22	TEX	2.0	MD	8.7	MISS	13.6
23	S.D.	2.0	ALAS	8.7	UTAH	13.6
24	OHIO	2.0	W.VA	8.7	N.J.	13.6
25	COLO	2.0	S.D.	7.5	KANS	13.6
26	KY	2.0	OKLA	7.5	TEX	13.6
27	INDI	2.0	ARK	7.5	IOWA	13.6
28	N.C.	2.0	N.Y.	7.5	HAWA	12.3
29	ILL	2.0	TEX	7.5	N.C.	12.3
30	IOWA	1.0	NEV	6.3	S.C.	12.3
31	TENN	1.0	VA	6.3	ARK	11.1
32	ALA	1.0	VT	6.3	OKLA	11.1
33	GA	1.0	KANS	6.3	LA	11.1
34	WYO	0.0	ALA	6.3	N.D.	9.8
35	ME	0.0	MISS	6.3	ME	9.8
36	MONT	0.0	S.C.	5.2	NEV	9.8
37	UTAH	0.0	UTAH	5.2	MASS	9.8
38	NEV	0.0	NEBR	5.2	S.D.	9.8
39	VA	0.0	LA	5.2	TENN	8.7
40	ALAS	0.0	ILL	5.2	OHIO	7.5
41	W.VA	0.0	N.D.	5.2	NEBR	7.5
42	MO	0.0	WIS	4.1	ILL	6.3
43	N.D.	0.0	MO	4.1	MO	6.3

Table VIb (continued)

Rank	Judges on major courts		Mayors		Municipal governing board	
	State	swrp 4	State	swrp 5	State	swrp 6
44	S.C.	0.0	IOWA	4.1	N.H.	6.3
45	DEL	0.0	GA	3.0	GA	6.3
46	IDA	0.0	PA	2.0	PA	6.3
47	VT	0.0	TENN	2.0	MINN	5.2
48	LA	0.0	OHIO	2.0	VT	5.2
49	N.H.	0.0	D.C.	0.0	INDI	4.1
50	NEBR	0.0	R.I.	0.0	WIS	-999.0
51	D.C.	-999.0	HAWA	-999.0	N.Y.	-999.0

achieved only 0, 2, 8, 8, 14, and 16 percent of equality with men. In addition, the state-to-state differences are greater for the political equality indicators than they are for the economic equality indicators, mainly because there are a large number of states where the political power of women is at or near zero.

The zero, or near zero, level of political office holding by women is well illustrated by the first of the variables in Table VIa. This shows that in two thirds of the 50 states, there are no women members of either the U.S. House of Representatives or U.S. Senate.

Women do somewhat better in terms of membership in *state* legislatures. The second and third columns of Table VIa show that there are half a dozen states where women have about 25% of the state Senate positions needed for equality with men. With respect to the lower houses, there are about a dozen states where women have 24% or more of the positions held by men. Nevertheless, in the median state, women occupy only about eight percent as many state Senate seats as men, and only sixteen percent of the number of state House seats which would be necessary for equal representation.

The situation is not greatly different in respect to mayoralities (Table VIb, second column) where women have only about eight percent of the mayoral positions held by men. Even in the state with the largest ratio of women to men mayors — Delaware — women have only 28% of the mayoralities which would be needed for equality in this aspect of political status. In respect to judgeships on major appeal and trial

courts, the figures in the first column of Table VIb show that the appointment of Sandra Day O'Connor to the U.S. Supreme Court is far from indicative of the situation in the state courts. In the median state, women have only 2% of the seats needed for equality with men, and even in the top ranking state — Hawaii — women are only ten percent of the way toward equal status with men.

The indicator of political status on which women come closest to men is positions on municipal governing boards. But although women are 85% of the way toward equality with men in Washington, D.C., and 66% of the way in Michigan, these relatively high figures are outliers. In the next highest ranking state — Connecticut — women have only 27% of the seats needed for equality with men. Moreover, the median is only 14%. Finally, seats on municipal governing boards, although important, are not usually positions of great political prestige or power.

Regional Differences

In contrast to the lack of a clear regional pattern in economic equality, the means for each region in Table VII do reveal some consistent tendencies for political equality. Specifically, the South has the lowest score of any region on five of the six indicators, and the Northeast and West tend to be regions in which women have achieved far more political equality than either the South or the North Central Region. Taking all six indicators together in the form of a composite index (described below) gives the edge to the western states.

Political Equality Index⁴

As with the economic equality index, we investigated the feasibility of combining the six indicators to form a composite index which might measure the political equality of women in a more comprehensive and reliable way than is possible with any one of the indicators by itself.

The initial reliability analysis of the six indicators is presented in Table VIII, in the panel headed "All Indicators." Examination of this analysis suggests that two indicators be dropped from the sub-index: SWRP1 (membership in the U.S. Congress) and SWRP4 (judges). After this was done, the panel headed "Final Set Of Indicators" shows that

TABLE VII
Regional differences in political gender equality indicators

Political equality indicator*	Year	North East	North Central	South	West
F%M: Members U.S. Congress (swrp 1)	83	12.08	5.59	4.46	5.49
F%M: Members State Senate (swrp 2)*	83	15.76	8.58	6.62	13.94
F%M: Members State House (swrp 3)**	83	20.72	18.19	11.98	23.65
F%M: Judges on major appeal + trial cts (swrp 4)	79	3.92	2.99	1.95	2.69
F%M: Mayors (swrp 5)	83	8.79	6.58	7.81	11.98
F%M: Municipal governing board (swrp 6)	83	12.31	13.72	17.87	18.93
SWX Political P-Index Ver. A (swxp 2a)**	79-83	12.29	9.19	7.83	13.00
SWX Political P-Index Ver. B (swxp 2b)**	79-83	14.43	11.64	10.14	17.45

* See Table V for more complete labels. The asterisks indicate *p* values: * = < 0.05, ** = < 0.01.

the resulting four item index has an *alpha* coefficient of 0.71, which is high for an index containing only four indicators.⁵ This index has a mean of 13.17 and a standard deviation of 5.87.

LEGAL EQUALITY

The laws which a community enacts regarding the rights of women as compared to the rights of men, offer another perspective on the equality of the gender. Lerman and Livingston (1983) and Stanko (1981) noted wide variation in state statutes designed to protect women from domestic violence. Williams (1982) reviewed the rape laws of 15 countries. She noted that those countries which had rape laws which derogated rape victims and treated women as sexual objects had significantly lower female participation in the labor force, in general and in the professional labor force in particular, than those countries

TABLE VIII
Reliability analysis of political gender equality index

Political indicator*	Inter-item correlations					All indicators		Final set of indicators	
	1	2	3	4	5	r**	alpha if item is deleted	r**	alpha if item is deleted
SWRP1MZ	—					0.11	0.68	—	—
SWRP2MZ	0.15	—				0.58	0.51	0.61	0.58
SWRP3MZ	0.18	0.68	—			0.56	0.51	0.60	0.59
SWRP4MZ	0.15	0.17	0.14	—		0.27	0.63	—	—
SWRP5MZ	-0.15	0.46	0.38	0.16	—	0.38	0.59	0.50	0.65
SWRP6MZ	0.04	0.20	0.25	0.25	0.31	0.34	0.60	0.31	0.76
					Alpha coef.		0.64		0.71

* See Table V. The letter, Z, on the name of each indicator signifies that the indicator has undergone z-transformation. The letter, M, denotes that missing values have been substituted for.

** r = Corrected item-total correlation. See text for explanation.

with rape laws which were less biased against the victim. In the present paper, primary focus was directed towards sex discrimination statutes in and out of the workplace and domestic violence statutes.

The indicators used to measure the legal equality of women differ from those used for the economic and political equality in two important respects. First, each indicates the presence or absence of a statute which grants legal rights to women, or which protects existing but presumably ignored rights. Second, it follows from this that these are measures *intended* to provide for equality, rather than measures of actual equality.

State and Regional Differences

The distinction between the indicators used for the economic or political dimensions and the legal indicators can be grasped from considering the first of the indicators listed in Table IX — whether the state has passed a fair employment practices act. It is all too obvious

TABLE IX
Initial pool of legal gender equality indicators

Legal indicator	Description
SWL1	State passed fair employment practice act
SWL2	Women may file lawsuit personally under fair employment practices act
SWL3	State passed equal pay laws
SWL4	Women may file lawsuit personally under equal pay laws
SWL5	Sex discrimination law in the area of public accommodations
SWL6	Sex discrimination law in the area of housing
SWL7	Sex discrimination law in the area of financing
SWL8	Sex discrimination law in the area of education
SWL9 ^R	State requires that wife must change name when married
SWL10	Statutes provide for civil injunction relief for victims of abuse
SWL11	Statutes that provide temporary injunction relief during a divorce, separation or custody proceedings
SWL12	Statutes that defines the physical abuse of a family or household member as a criminal offense
SWL13	Statutes that permits warrantless arrest based on probable cause in domestic violence cases
SWL14	Statute that requires data collection and reporting of family violence by agencies that serve these families
SWL15	Statutes that provide funds for family violence shelters or established standards of shelter operations

Note: All indicators were score 1 = yes and 0 = no except for that indicator marked with an asterisk (^R) where the scoring was reversed.

that, important as such acts are, their passage does not immediately produce a situation of gender equality in employment.

The pool of items used to index the legal equality of women consists of all the statutes for which state-by-state data is given in Ross and Barcher (1983). Table X shows which states have passed each of these 15 laws.

Legal Equality Index

Each of the legal indicators was scored so that the presence of a statute

TABLE X
States enacting 15 legal equality measures, 1980

Statute*	States which enacted
1. Fair employment practices law	Alas, Ariz, Cal, Colo, Conn, Del, Ga, Hawa, Ida, Ill, Indi, Iowa, Kans, Ky, Me, Md, Mass, Mich, Minn, Mo, Mont, Nebr, Nev, NH, NJ, NM, NY, NC, Ohio, Okla, Oreg, Pa, RI, SD, Utah, Vt, Wash, W.Va, Wis, Wyo
2. Fair employment personal suits	Alas, Ariz, Cal, Colo, Conn, Ga, Ida, Me, Mich, Mont, Nev, Oreg, Wash
3. Equal pay law	Alas, Ariz, Ark, Cal, Colo, Conn, Fla, Ga, Hawa, Ida, Ill, Indi, Iowa, Kans, Ky, Me, Md, Mass, Mich, Minn, Mo, Mont, Nebr, Nev, NH, NJ, NY, ND, Ohio, Okla, Oreg, Pa, RI, SD, Tenn, Tex, Utah, Vt, Va, Wash, W.Va, Wis, Wyo
4. Equal pay personal suits	Alas, Ariz, Ark, Cal, Colo, Conn, Fla, Ga, Hawa, Ida, Indi, Ky, Md, Mass, Mich, Minn, Mo, Nebr, NH, NJ, ND, Ohio, Oreg, RI, SD, Tenn, Va, Wash, W.Va, Wyo
5. Public accommodations law	Alas, Cal, Colo, Conn, Del, Ida, Indi, Iowa, Kans, Ky, La, Me, Md, Mass, Mich, Minn, Mo, Mont, Nebr, NH, NJ, NM, NY, ND, Ohio, Oreg, Pa, SD, W.Va
6. Housing law	Alas, Cal, Colo, Conn, Del, Ga, Hawa, Ida, Indi, Iowa, Kans, Ky, Me, Md, Mass, Mich, Minn, Mo, Mont, Nev, NH, NJ, NM, NY, Ohio, Oreg, Pa, RI, SD
7. Loan law	Alas, Cal, Colo, Conn, Del, Fla, Ga, Hawa, Ida, Ill, Iowa, Kans, Ky, La, Me, Md, Mass, Mich, Minn, Mo, Mont, Nev, NJ, NM, NY, NC, Ohio, Okla, Pa, RI, SD, Va, Wash
8. Education law	Alas, Cal, Hawa, Ida, Ill, Indi, Iowa, La, Me, Mass, Mich, Minn, Mont, NJ, NY, Oreg, Pa, RI, SC, Tenn, W.Va
9. Name change not required at marriage	Alas, Ariz, Ark, Cal, Colo, Del, Fla, Ga, Hawa, Ida, Indi, Kans, La, Md, Mass, Mich, Minn, Miss, Mo, Mont, Nebr, Nev, NH, NJ, NM, NY, NC, ND, Ohio, Okla, Pa, RI, SC, SD, Tenn, Tex, Utah, Va, Wash, W.Va, Wis, Wyo
10. Civil injunction for abuse cases	Alas, Ariz, Cal, Colo, Conn, Del, Fla, Hawa, Ill, Iowa, Kans, Ky, Me, Md, Mass, Minn, Mo, Mont, Nebr, Nev, NH, NY, NC, ND, Ohio, Oreg, Pa, Tenn, Tex, Utah, Vt, W.Va, Wis
11. Injunction relief during divorce/sep.	Alas, Ariz, Cal, Colo, Del, Hawa, Ill, Indi, Kans, Mass, Mich, Mo, Mont, Nebr, NH, NY, Oreg, RI, SC, Vt, Va, Wash, W.Va, Wis, Wyo
12. Physical abuse defined as crime	Ariz, Ark, Cal, Hawa, Me, Md, Mass, Mich, Minn, Nebr, NH, NY, NC, Ohio, Oreg, RI, Tenn, Utah, Wash, Wis
13. Warrantless arrest for domestic violence	Alas, Ariz, Fla, Hawa, Ill, Iowa, Ky, Me, Md, Mass, Mich, Minn, Mo, Nebr, Nev, NH, NM, NY, NC, ND, Ohio, Oreg, Pa, RI, Tenn, Utah, Va, Wash, Wis

Table X (continued)

Statute*	States which enacted
14. Required reports of fam. violence	Conn, Fla, Ga, Ill, Iowa, Ky, La, Me, Md, Mich, Minn, Mont, Nebr, NH, NY, Ohio, Oreg, Tex, Wash
15. Funds-standards for shelters	Alas, Cal, Conn, Fla, Indi, Kans, La, Me, Md, Mass, Mich, Minn, Mont, Nebr, NJ, NY, Ohio, Okla, Oreg, Tex, Utah, Va, Wash, Wis

* See the corresponding numbered row of Table IX for a more complete description.

that protected the rights of women in a state resulted in that state gaining a point on the Legal Equality Index. For example, if a state had enacted a fair employment practice law, the state was coded with a one; if not, it was coded with a zero. Consequently, the presence of all of the statutes in the state law would result in a score of 15. These scores were then transformed to a percentage. A state which had passed five of these laws would have a score of 33, indicating 33% of the maximum points.

Table XII gives the results of the reliability analysis of this index. Because these items were all scored either zero or one, no Z-score transformation was done. The initial analysis (shown in the panel headed "Initial Analysis") suggested that two of the fifteen indicators should be eliminated. These two indicators were whether (1) the state required that the wife change her name when married and (2) whether the state had a statute that provided temporary injunction relief during a divorce, separation or custody proceedings. The deletion of these two indicators resulted in an index with an alpha coefficient of 0.75. This thirteen item scale had a mean score of 55.81 and a standard deviation of 23.58.

GENDER EQUALITY INDEXES AND THEIR INTERRELATIONSHIP

State Rankings on the Four Indexes

The first three columns of Table XIII array the states according to the economic, political, and legal equality indexes. The right hand column of the table also shows how the states rank on an overall Gender

TABLE XI
Regional differences in legal gender indicators

Legal equality indicator*	Percent of states in each region			
	North East	North Central	South	West
SWL1 State passed fair employment practice act**	100%	92%	47%	100%
SWL2 Women may file lawsuit personally under fair employment practices act**	22%	8%	12%	69%
SWL3 State passed equal pay laws	100%	100%	65%	92%
SWL4 Women may file lawsuit personally under equal pay laws	56%	67%	47%	69%
SWL5 Sex discrimination law in the area of public accommodations	78%	83%	29%	54%
SWL6 Sex discrimination law in the area of housing	89%	67%	29%	69%
SWL7 Sex discrimination law in the area of financing	78%	67%	59%	69%
SWL8 Sex discrimination law in the area of education	67%	42%	24%	46%
SWL9 ^R State requires that wife must change name when married	67%	83%	88%	92%
SWL10 Statutes provide for civil injunction relief for victims of abuse	78%	75%	53%	69%
SWL11 Statutes that provide temporary injunction relief during a divorce, separation or custody proceedings*	56%	58%	24%	69%
SWL12 Statutes that defines the physical abuse of a family or household member as a criminal offense	56%	42%	29%	46%
SWL13 Statutes that permits warrantless arrest based on probable cause in domestic violence cases	67%	75%	35%	62%
SWL14 Statute requires data collection and reporting of family violence by agencies that serve these families	44%	50%	35%	23%
SWL15 Statutes that provide funds for family violence shelters or established standards of shelter operations	56%	58%	35%	46%
SWL Legal P-Index (swx12)**	68%	63%	38%	62%

* = < 0.05, ** = < 0.01.

Note: All indicators were score 1 = yes and 0 = no except for that indicator marked with a superscript (^R) where the scoring was reversed.

TABLE XII
Reliability analysis of legal gender equality index

Indicator	All indicators		Final set of indicators	
	Corrected item-total correction	Alpha if item is deleted	Corrected item-total correlation	Alpha if item is deleted
SWL1	0.52	0.69	0.50	0.72
SWL2	0.29	0.71	0.29	0.74
SWL3	0.48	0.70	0.47	0.72
SWL4	0.29	0.71	0.25	0.74
SWL5	0.46	0.69	0.47	0.72
SWL6	0.54	0.68	0.57	0.71
SWL7	0.33	0.71	0.37	0.73
SWL8	0.28	0.71	0.27	0.74
SWL9	-0.05	0.74	—	—
SWL10	0.29	0.71	0.31	0.74
SWL11	0.19	0.73	—	—
SWL12	0.34	0.71	0.31	0.74
SWL13	0.33	0.71	0.34	0.74
SWL14	0.30	0.71	0.38	0.73
SWL15	0.35	0.71	0.34	0.74
Alpha coefficients		0.72		0.75

Equality Index, which consists of the mean of the three sub-indexes. In the case of the economic, political, and overall indexes, a score of 100 means equality with men. In the case of the legal index, 100 means that the state enacted all 13 of the laws included in the index.

The median state had a score of 55 in respect to the Economic Equality Index, 12 in respect to the Political Equality Index, and 54 in respect to the Legal Equality Index. This can be interpreted as showing that in a typical state, women have achieved only 55% of what is necessary for economic equality with men, only 12% of what is needed for political equality, and only 55% of the statutory protections which will enable further progress toward gender equality. The median score 42 on the overall Gender Equality Index can be interpreted as showing

TABLE XIII
States arrayed in rank order of gender equality indexes

Rank	Component indexes						Overall index (revised)	
	Economic		Political		Legal			
	State	swxe2	State	swxp2b	State	swx12	State	swx2b
1	IDA	67.1	MICH	24.4	OREG	92.3	OREG	59.9
2	ALAS	66.0	HAWA	24.2	MICH	92.3	MICH	56.1
3	KANS	64.0	CONN	24.0	MINN	92.3	ALAS	55.5
4	OREG	63.7	OREG	23.8	ME	92.3	ME	54.7
5	ARIZ	61.4	COLO	23.1	MD	84.6	MD	53.9
6	MD	61.3	N.H.	23.1	ALAS	84.6	MINN	52.5
7	DEL	60.6	ARIZ	22.3	CAL	84.6	CAL	51.8
8	HAWA	60.4	WYO	22.2	N.Y.	84.6	CONN	51.6
9	OKLA	59.0	WASH	20.4	OHIO	84.6	HAWA	51.3
10	NEV	58.8	DEL	20.4	MASS	84.6	MASS	50.6
11	MO	58.6	ME	18.9	CONN	76.9	N.Y.	49.7
12	WIS	57.5	FLA	18.2	MONT	76.9	N.H.	49.4
13	KY	57.2	ALAS	16.0	N.H.	69.2	MONT	49.1
14	MONT	57.2	MD	15.9	HAWA	69.2	OHIO	48.9
15	S.C.	56.3	IDA	14.9	WASH	69.2	WASH	48.4
16	VA	56.0	CAL	14.9	NEBR	69.2	IDA	47.8
17	CAL	55.9	MASS	13.8	IOWA	69.2	COLO	46.1
18	N.H.	55.9	N.M.	13.4	KY	69.2	KY	45.9
19	PA	55.8	MONT	13.2	R.I.	61.5	ARIZ	45.8
20	OHIO	55.8	W.VA	13.0	COLO	61.5	IOWA	44.6
21	WASH	55.5	VT	12.7	IDA	61.5	NEBR	44.3
22	WYO	55.2	N.C.	12.7	MO	61.5	KANS	43.3
23	FLA	55.0	KANS	12.0	PA	61.5	MO	42.8
24	IOWA	55.0	R.I.	11.9	N.J.	61.5	R.I.	42.6
25	GA	54.6	WIS	11.8	FLA	53.8	FLA	42.3
26	R.I.	54.5	ILL	11.6	ARIZ	53.8	N.J.	42.1
27	N.C.	54.2	MINN	11.5	NEV	53.8	NEV	40.6
28	N.J.	54.1	NEBR	11.4	KANS	53.8	PA	40.4
29	CONN	54.0	KY	11.4	ILL	53.8	DEL	39.8
30	N.D.	53.9	S.D.	11.3	GA	53.8	ILL	39.4
31	N.Y.	53.9	INDI	11.0	INDI	53.8	INDI	39.0
32	COLO	53.7	N.Y.	10.7	WIS	46.1	WIS	38.4
33	S.D.	53.7	N.J.	10.6	UTAH	46.1	GA	38.1
34	MINN	53.7	N.D.	9.9	W.VA	46.1	W.VA	37.4
35	MASS	53.5	VA	9.7	S.D.	46.1	S.D.	37.0
36	VT	53.4	IOWA	9.7	TENN	46.1	UTAH	35.6
37	TEX	53.3	NEV	9.3	DEL	38.4	N.C.	35.1
38	W.VA	53.1	UTAH	8.6	VA	38.4	VA	34.7
39	ME	53.0	MO	8.3	N.C.	38.4	TENN	34.5
40	ARK	52.9	OKLA	8.2	N.M.	38.4	N.M.	34.4
41	ILL	52.9	S.C.	8.1	N.D.	38.4	N.D.	34.1
42	ALA	52.8	TEX	7.6	LA	38.4	WYO	33.5
43	INDI	52.4	ALA	7.6	OKLA	30.7	OKLA	32.7

Table XIII (continued)

Rank	Component indexes						Overall index (revised)	
	Economic		Political		Legal		State	swx2b
	State	swxe2	State	swxp2b	State	swx12		
44	NEBR	52.2	ARK	6.9	TEX	30.7	LA	31.2
45	UTAH	52.2	OHIO	6.3	WYO	23.0	TEX	30.5
46	MISS	52.1	GA	5.9	VT	23.0	VT	29.7
47	TENN	51.7	TENN	5.6	ARK	23.0	ARK	27.6
48	MICH	51.6	MISS	5.6	S.C.	7.6	S.C.	24.0
49	N.M.	51.5	LA	4.8	ALA	0.0	ALA	20.1
50	LA	50.3	PA	3.7	MISS	0.0	MISS	19.2

that, in the typical American state, women have achieved less than half of what is needed for equal status with men. Moreover, Figure 2 shows that no region stands out as having a sharply higher score on the overall Gender Equality Index. The main divergence from the national average is the significantly lower score of states in the South. This is due primarily to the South's lower scores on the political and legal sub-indices.

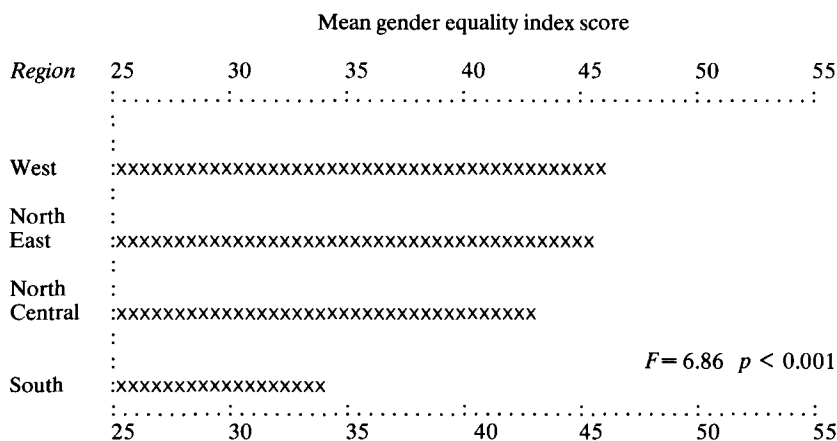


Fig. 2. Gender equality index by region.

Z Scored Version of the Overall Gender Equality Index

Although the overall Gender Equality Index in Table XIII has the advantage of presenting the data in a metric which has intrinsic meaning (percent of equality), it also has a potential disadvantage. The disadvantage is in not being able to control the contribution of each component to the total index. An index composed of the average of the component indicators will be disproportionately influenced by the component with the highest variance. To deal with this problem we computed a second version of the overall Gender Equality Index (SWX2BZ). In this version, the variances of the sub-indexes were equalized by transformation to Z-scores before combining them to form the overall index, with the result that each of the components contributes approximately equally to the total index score. In the absence of a theoretical basis for weighting one component more than another, this version of the Gender Equality Index is probably best for purposes of investigating the relationship of gender equality to other variables.

TABLE XIV
Reliability analysis of the overall gender equality index

Sub-index	Inter-index correlations		Corrected item-total correlation	Alpha if item is deleted
	1	2		
1. Legal	—		0.38	0.59
2. Economic	0.25	—	0.43	0.51
3. Political	0.35	0.42	0.47	0.45
Alpha coefficient of reliability = 0.62				

Note: Each sub-index was z-scored prior to this analysis.

Table XIV gives the results of a reliability analysis performed using the Z-scored indicators. The correlations of the sub-indexes with each other is shown in the panel labeled "Inter-Item Correlations." The item-total correlations and alpha coefficients in the right panel do not call for deleting any of the components. The Z-scored overall Gender

Equality Index (which is the version which will be used in the balance of this paper) has an alpha coefficient of 0.62, which is high for an index consisting of three indicators. However, this should not lead one to overlook the fact that the correlations between each of the three dimensions are low to moderate. The three dimensions may be correlated, but they are also distinct. Thus, our cross-state comparative study leads to the same conclusion as Whyte's study of 93 pre-industrial cultures (1978) — that the women can be relatively powerless in one sphere of life and relatively powerful in another.

CORRELATES OF GENDER EQUALITY

The paper thus far has shown that it is possible to construct indexes to measure gender equality in American states, and that there are large state-to-state differences in gender equality as measured by these indexes. However, aside from showing that the Southern states are farthest from equality between women and men, we have not related these indicators to other characteristics of the states. It is important that this be done, not to test substantive hypotheses (because that would require an entire paper or papers), but because knowledge of the correlates of these indexes provides information regarding convergent and discriminant validity of the indexes.

Socio-Demographic Characteristics and Gender Equality

Section A of Table XV gives the correlation of four socio-demographic variables with the Gender Equality Indexes. The right hand column headed Total gives the correlations with the overall Gender Equality Index. The first two correlations in this column suggest that there is a tendency for more urban states, and states with an older population to be high on the overall Gender Equality Index. A look at the other three columns in these two rows, however, shows that this correlation is due almost entirely to the legal component in the overall Gender Equality Index. This is an example of the point emphasized by Mason (1986) — the importance of being able to distinguish specific types of gender equality or inequality.

TABLE XV
Correlation of selected characteristics of the states with gender equality indexes

Characteristic	Correlation with			
	Econ	Polit	Legal	Total
A. Socio-demographic variables ¹				
% of population living in SMSA's (z251)	-0.12	0.02	0.34*	0.30*
Median age (ea8)	0.06	0.05	0.27*	0.24*
Median years of education (ec14)	0.50*	0.61*	0.45*	0.56*
Median income (cp274)	0.58*	0.38*	0.45*	0.54*
B. Social-psychological variables ²				
NOW members per 100 000 population (z94r3)	0.36*	0.19	0.38*	0.46*
Sexually tolerant attitudes index (xgs1a)	0.44*	0.48*	0.63*	0.69*
Non-traditional sex roles attitude index (xgs4a)	0.28*	0.42*	0.45*	0.50*
Violent attitudes index (xgs2a)	0.15	0.17	-0.19	-0.10
Violent behavior index (xgs3a)	0.02	0.10	-0.40*	-0.31*

¹ The variables in Part B are all from U.S. Census publications. See footnote to Table I for further information.

² The variables in Part B are documented in the codebooks of the State and Regional Indicators Archive. See footnote to Table I. Brief descriptions are given in the footnotes text.

* Indicates a statistical significant correlation ($p < 0.05$).

The next two rows of Table XV show that the higher the socio-economic status of a state (as measured by median education and income), the higher the degree of gender equality. The tendency for high socioeconomic status states to be high in the gender equality applies to each of the sub-indexes as well as to the overall index. Correlations of about this size (0.50) are sufficiently high to support the plausible notion that high education and high income populations tend

to be liberal in a number of dimensions, including sex roles; yet at the same time, not so high as to indicate that the Gender Equality Index is only a measure of socioeconomic level in disguise, since correlations of about 0.50 mean that 75% of the state-to-state variance in gender equality is *not* explained by these socioeconomic level variables.

Social-Psychological Characteristics and Gender Equality

The social-psychological variables in section B of Table XV reveal some extremely interesting patterns.

Membership in NOW. This correlation shows that states with an active feminist movement tend to be states with a higher level of actual gender equality. With cross-sectional data one cannot tell which is cause and which is effect, or whether there is a feedback loop. However, that was not the purpose of computing the correlation. Rather, it was computed for to provide information on convergent validity, had the significant positive correlations do provide some evidence in support of the convergent validity of the Gender Equality Index.

Sexually Tolerant Attitudes. The second row of Part B of Table XV report shows that states with a high Gender Equality Index tend to also have a population which is tolerant of "alternative" sexual styles.⁶

Non-Traditional Sex Role Attitudes. This variable is essentially a measure of attitudes about gender equality.⁷ Consequently, the correlations in this row of Table XV provide the most direct evidence in Table XV of convergent validity for the Gender Equality Index.

*Violent Attitudes and Violent Behavior.*⁸ In contrast to sexual attitudes, pro-violence attitudes were not found to be related to the Gender Equality Index (or any of the sub-indexes). This can be considered as evidence of discriminant validity for the Gender Equality Index. On the other hand, the Gender Equality Index is negatively correlated with the violent *behavior* index (a measure of a state population's experience with violence). This relationship is due primarily to the Legal Equality Index. That finding is consistent with the fact that several of the indicators in the Legal Equality Index are concerned with violence prevention, e.g., laws criminalizing domestic violence, requiring police intervention, and issuance of protection orders in cases of family violence. It seems that states with a population

that has experienced a relatively high level of violence are less likely to pass legislation aimed at limiting intrafamily violence.

Gender Equality, Rape and Social Disorganization

A paper by Baron and Straus (1986) tested a number of theories which might explain the large differences among societies and among states of the U.S. in the incidence of rape. They used the Gender Equality Index to test one of these theories — that rape is a mechanism for controlling and subordinating women. Baron and Straus's results are consistent with that theory since, after controlling for eleven other variables, they found a significant *negative* association between the Gender Equality Index and the rape rate (a path coefficient of -0.23). Or, putting it the other way around, the greater the gap between the status of men and women in a state, the higher the rate of rape.

Another finding of Baron and Straus concerns the antecedents of gender equality. They found that gender equality tended to be greatest in states with a *high* level of social disorganization (as measured by a six item social disorganization index),⁹ a low score on an index to measure the extent of non-criminal "legitimate violence" (described in Straus, 1985), and *more* economic equality (as measured by a Gini index using family income data from the 1980 census). The association of gender equality with economic equality (irrespective of gender) indicates that when there is more *economic* equality in society, gender inequality is also reduced (see Blumberg, 1978, for a discussion of the economic basis of sexual stratification).

Although there is not sufficient space within the confines of this article to adequately discuss these findings, they are consistent with other research and theories concerning the status of women. The finding that cultural support for violence is inimical to gender equality is consistent with anthropological research on the origins of sexual inequality. For example, Sanday's (1981a, 1981b) cross-cultural analysis of tribal societies showed that war was endemic or chronic in 82% of the male dominant societies, compared to 50% of the egalitarian societies (see also Chafetz, 1984; Quinn, 1977). Similarly, Divale and Harris (1976) report that warfare contributes to a "male supremacist complex," because in militaristic societies men monopolize the more

valuable fighting roles, while women are designated roles that are comparatively less important.

As for social disorganization, sociologists have emphasized the *negative* consequences since Durkheim's (1951) classic work on suicide. The assumption is that all members of society benefit from a well integrated and stable social order, whereas all suffer from rapid social change, the dissolution of intimate relationships, and the breakdown of time-honored institutions. Although there is much evidence to substantiate the adverse effects of social disorganization (Blau and Blau, 1982; Crutchfield *et al.*, 1982; Harries, 1982), our findings suggest that social disorganization can also have positive effects. This is especially true for those who stand to gain from fundamental changes in the social organization of society. The finding that the gender equality varies directly with the level of social disorganization suggests that disruptive influences may weaken discriminatory practices and promote sexual equality. By disturbing the status quo, social disorganization tends to erode traditional norms and social relationships, including sexual inequality. It appears that instability can contribute to equal rights by disturbing the system of sexual stratification that keeps women in a subordinate position.

SUMMARY AND CONCLUSIONS

Gender Attainment and Gender Equality

The first part of this paper was devoted to an attempt to systematize some of the divergent meanings attached to the concept of the "status of women". We suggested that some of the confusion can be avoided by distinguishing between "status attainment" and "status equality". Status attainment, or in this case *gender attainment* refers to the level of physical, educational, economic, political, legal, and psychological well being achieved by women in a society. *Gender equality* refers to women having the same level of status attainment as men. A society can be low in gender attainment and high in gender equality, and vice versa. The conceptual distinction between gender attainment and gender equality was also used as the basis for identifying four types of research on the status of women.

State and Regional Differences in Gender Equality

The next part of the paper described the methods used to construct a Gender Equality Index for each of the states of the United States, and presented findings on state-to-state and regional differences in gender equality. Indexes were constructed to measure gender equality in respect to three spheres of life — economic, political, and legal — and an overall Gender Equality Index. Each of the four indexes is scaled from zero to 100, with zero meaning that women have attained none of the status attributes included in the index (for example, no women members of the state legislature) and 100 meaning that women have attained as much as men (for example, as many women members of the legislature as men).

The use of these indexes revealed large differences among states for all four of the gender equality measures. The scores ranged from a low of 50 to a high of only 67 in respect to economic equality, from 4 to 24 in respect to political equality, from zero to 92 in respect to legal equality, and from 19 to 60 in respect to the overall Gender Equality Index. Thus, even in the state with the highest score on the Gender Equality Index, women have achieved only 60% parity with men. The medians are also important because they show that in a typical state, women have achieved only 54% of what is necessary for economic equality with men, only 12 percent of what is needed for political equality, and only 55% of the statutory protections which will enable further progress toward gender equality. Combining all three spheres, the median score of 42 on the overall Gender Equality Index shows that, in the typical American state, women have achieved less than half of what is needed for equal status with men.

Correlates of Gender Equality

The final section of the paper examined the relationship of the gender equality indexes to selected demographic and social psychological characteristics of the states as a means of providing preliminary data on the validity of the indexes. These analyses revealed a number of relationships which suggest that the Gender Equality Indexes described in this paper have both convergent and discriminant validity. In addi-

tion, some of the findings are substantively interesting. They suggest that the movement toward gender equality is most likely to take place in a highly educated affluent society in which women have organized to promote their own welfare; and in a society in which many other aspects of the traditional social order are disintegrating as reflected in a high level of social disorganization and a rejection of traditional norms that restrict sexuality and encourage violence.

ACKNOWLEDGEMENTS

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NOTES

* Paper presented at the 1986 meeting of the American Sociological Association. The research reported in this paper is part of the State and Regional Indicators Archive (SRIA). A bibliography listing papers and books of the SRIA is available from the Family Research Laboratory, University of New Hampshire, 128 Horton Social Science Center, Durham, NH 03824.

¹ Johnston (1985) points to the same distinction by differentiating between the "situation" of women versus the "status" of women. The latter, can be determined "... by comparing their situation, however measured, with some reference group or standard, such as the corresponding situation among men in the same society, or among women in another society or sub-culture" (Johnston, 1985: 233).

² It should be noted that the method of computing indicators of equality used in this research results in a figure which can be substantially higher than the percentage of women among those having a given characteristic. Suppose there are 150 members of a legislature, of which 25 are women. This is a 16% female membership. However, using our method of computing indicators of equality (the female percentage divided by the male percentage) results in an equality index of 20 rather than 16:

$$((25/150) / (125/150)) * 100 = 20$$

Essentially this is because gender equality in the legislature is achieved with 50 % women members, not with 100%.

Another method of measuring gender equality was proposed by Johnston (1985). Johnston's method was to sum the squared differences between the proportion of the members of a particular gender who hold a specific social status and the proportion of

the individuals of a particular gender in the overall population. For example, this indicator would first square the difference between the proportion of women who hold professional or technical jobs and the proportion of women in the civilian labor force. A similar squared difference is computed for men and the two resultant values are summed. Consequently, as the proportion of individuals of a specific gender who are in a particular valued social status approaches the proportion of gender members in the more general population, this indicator approaches the value of zero.

One problem with Johnston's proposal is that it does not offer the researcher directionality regarding any potential between-gender differences. For example, a value of 50 may represent either that women are overrepresented in that social status or that men are overrepresented. In the present paper, the former situation is shown by values below 100 while the latter situation results in values above 100. Consequently, one should theoretically expect a U-shaped curvilinear relationship between the indicator that Johnston (1985) proposes and the indicators employed in the present analysis.

³ Similarly, since being employed is a more highly valued status than being unemployed, one of the indicators in the economic sub-index assessed the percent of the female civilian labor force who were employed relative to the percent of male civilian labor force who were employed. This ratio was then multiplied by 100. This permits an interpretation of gender equality if the indicator resulted in a value of 100. If the resultant indicator value is less than 100, it suggests that women in a specific state have a lower status than men in that state.

⁴ Missing values and outliers were a particular problem in computing the Economic Equality Index and the other composite indexes because, with an *N* of only 50, loss of even a single state results in two percent reduction in the number of cases. Consequently, rather than deleting states with a missing value or an outlier, we tried to substitute meaningful estimated value.

Substitution for missing values was needed primarily for the political sub-index because four states (Nebraska, Hawaii, New York, and Wisconsin) had a missing data point. For example, Wisconsin lacks data on the percent of women on municipal governing boards. The estimate for this indicator was based on the ranking of the state on the indicator which we believed to be most similar — the percent of female mayors. The rank position of Wisconsin in respect to women mayors was used to estimate the percent of women on municipal governing boards by assigning Wisconsin a percentage that corresponds to that rank in the distribution of members of municipal governing boards. Similarly, since Nebraska has a unicameral state legislature, we used the percent of women in that body as the best estimate for both houses of the state legislature.

In respect to outliers, we did not want to permit any one of the indicators in an index to exert an overwhelming influence on the score of a state. Consequently, we inspected the data to locate values which were more than 2.5 standard deviations from the mean and more than 1.0 standard deviations from either the next highest or lowest value for that indicator. Values which met these two criteria were replaced by values that were just higher or lower than the next most extreme score. Six such outlier adjustments were made.

⁵ This evaluation of the 0.71 coefficient is based on the fact that alpha is a function of both the inter-item correlation and the number of items. Psychological tests — which typically consist of a great many test items — have higher alpha coefficients despite having *lower* average item-to-item correlations — because they usually contain a large number of items. Of course, from an absolute perspective, a reliability coefficient of 0.71 leaves much to be desired.

⁶ The Sexually Tolerant Attitudes Index and the Non-Traditional Sex Roles Attitude Index are described in detail in Jaffee and Straus (1986) and in Codebook 91 of the State and Regional Indicators Archive (see footnote to Table 1). Both use items from the General Social Survey (Davis and Smith, 1982).

The Sexually Tolerant Attitudes Index uses 20 indicators, each of which is the percentage of respondents in a state who agree with 20 items judged to reflect tolerance for "alternative" sexual behavior, for example, the percentage who would not object to a homosexual teaching in college, the percentage who would object to having books favoring homosexuality removed from a public library, the percentage who oppose restrictions on abortion, and the same for pornography, etc. This index has an alpha coefficient of reliability of 0.96.

The Non-Traditional Sex Roles Attitude Index uses five indicators, and specifically the percentage who, when asked to rate the most important qualities for a child, ranked "That he acts like a boy (she acts like a girl)" as least important of the seven traits; disagreed that women should care for the home while men run the country; approved of women working outside the home; would vote for a woman president; and disagreed with the statement that men are better suited emotionally for politics than women. This index has a 0.95 alpha coefficient of reliability.

⁷ See previous footnote.

⁸ The Violent Attitudes Index and the Violent Behavior Index were computed from General Survey data, as described in footnote 7. The Violent Attitude Index uses the percent of respondents in each state who endorsed 14 questions judged to reflect approval of the use of violence, for example: the percent who endorse the death penalty for murder, increased spending for the military, no restrictions on gun ownership; the percent who approve of punching an adult male under a variety of circumstances such as a participant in a political protest march, a drunk who bumps into you and your wife on the street, someone who hit your child, etc.; and the percent who approve of "a policeman hitting an adult male citizen" if the man was saying obscene things to the policemen, was being questioned as a murder suspect, was attempting to escape from custody, was attacking the policeman with his fists. This index has an alpha coefficient of reliability of 0.67.

The Violent Behavior Index consists of the percentage of respondents in each state who reported having been: punched or beaten by another adult, punched or beaten as a child, punched, pushed or beaten as an adult more than once, threatened with a knife or gun or shot at as an adult, threatened with a knife or gun or shot at as a child, threatened with a knife or gun or shot at as an adult more than once, have any gun in the home, have a handgun in the home, respondent hunts, other member of household hunts. This index has an alpha coefficient of reliability of 0.85.

⁹ The Social Disorganization Index was designed to measure the level of instability in society. It includes indicators of geographical mobility, divorce, lack of religious affiliation, female headed households, households headed by males with no female present, and an indicator of the tourist trade in states. Construction of the index began by choosing 12 indicators that seemed to measure some aspect of disruption of social organization. The 12 items were then factor analyzed using the principle components option of SCSS with varimax rotation. Six of the 12 items loaded on Factor 1 and had factor loadings of 0.65 or better. These six items were retained for the index. The alpha coefficient of reliability is 0.86.

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*Department of Psychology,
Rhode Island College,
Providence, RI 02908,
U.S.A.*

and

*Family Research Laboratory,
University of New Hampshire,
Durham, NH 03824,
U.S.A.*