Politieke sociologie

Political radicalism and social change

A macro-sociological analysis of some recent trends as reflected in a sample of 100 communities in the Netherlands

Dr. I. Gadourek, *University of Groningen*

Macro-sociological research in the Netherlands, in contrast to that in the United States, has been rather neglected, up to now. Practically no systematic analysis of rates, indices and other statistics has been undertaken with the purpose of revealing national trends or of uncovering causal or structural relationships. This is the more amazing, since the statistical services belong to the most developed in the world; thanks to the work of the Central Bureau of Statistics, one disposes of countless statistics with reference to the Netherlands' population as a whole, to that of the provinces and that of single communities. Periodically, every ten years, the bulk of Census-data is mechanically processed and published in mimeographed monographs for each community; election-results also are available per community regardless whether they refer to the elections of the national, provincial or local government representatives; finally, demographic data are collected even in shorter periods by the community-officials and published each year.

Longer than fifteen years ago, we conceived of the idea of analyzing the quantitative data available per regional unit in a similar way, as the U.S. sociologists do with the data available for the single states of their country. For obvious reasons, different units had to be chosen; since the number of provinces was considered much too small (eleven to twelve) to allow the application of statistical tests of significance, communities were chosen instead.

A sample of one hundred local communities (out of roughly one thousand) was selected at random some sixteen years ago and the date on these communities were collected through to this day *) The symptoms of the awaking political radicalsm that became apparent in 1963 and the growing impact of computer technique on the evaluation of data added the urgency and a more pregnant form to the present project. Its objective can be formulated as follows: to trace the structural correlates of political

radicalism in the Netherlands by the correlational analysis of some quanti-
indicators of social change and of social structure in a random sample of all
munities in the Netherlands.

Theoretical backgrounds.

It is impossible to cover the entire field of literature relevant to a multi-variate
in the short space of a single article. Even the two main concepts, that of 'po-
radicalism' and that of 'social (or societal) change' have to be treated but in a
mentary way.

Political radicalism was related to the poverty and low standard of living by a
early study of P. A. Sorokin in the United States[1]). Another study mentions a p-
lence of radical attitudes in a rapidly growing urban community[2]). Age-compo-
of a community is generally believed to be relevant too: the younger inhab-
are considered more radical than higher age bracketts. Education and intellig-
finally, seem to foster political radicalism as early studies in this field see
indicate.[3])

As to the interrelationship of various components of social change we refer co-
study only, that of Allen and Kenneth Bentz[4]), which covers no less than 32
titative indicators of change in 48 states of the United States and employs
sophisticated methods to identify main factors of societal change. By means
factor analysis of 32 inter-correlated variables, the authors succeeded in extr-
the following four factors which accounted for a large part of variance in
correlation-matrix: (1) a factor denoting the population growth; (2) a factor
a high loading on the increased standard of living and variables associated w-
(3) a factor which was identified as denoting the urbanization and the indu-
ization, and finally, (4) a factor denoting the increase in educational level-
obvious reasons (since data on religious affiliation are not collected by the B-
of Census) little is known about the impact on religion (or loss of religious-
by the changes in the social structure. The existing two-party system mak-
difficult to draw conclusions with reference to the political radicalism.
In order to enlarge the field of study to these two latter areas, we decided to in-
variables of political and religious affiliation to a matrix of indicators of

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[1]) P. A. Sorokin, "Impoverishment and the expansion of governmental control" in
J. of Sociology, XXXII, pp. 206-216; also S. M. Lipset, *Agrarian Socialism,* Berkeley,
C. P. Loomis, J. A. Beegle, "The spread of German Nazism in rural areas", *Amer. Social
Review, 11,* pp. 724-734, 1946.

[2]) See, however, John L. Haer, "Conservatism-Radicalism and the Rural-Urban Conti-
in Paul K. Hatt, Albert J. Reiss Jr., *Cities and Society. The Revised Reader in Urban Soc-
The Free Press, Glencoe 1957. Haer comes to the conclusion that there is no corre-
between the radicalism and the size of residential community.

[3]) See for the review of older literature on the impact of age and education on radic-
Murphy, G., Murphy, L. B., Newcomb, T. M., *Experimental Social Psychology,* New
1937, pp. 928-931.

[4]) Francis R. Allen, W. Kenneth Bentz, "Measurement of sociocultural change", *Social
43,* pp. 522-535, May, 1965. J. A. Ponsioen refers in his recent study *(The Analysis of
Change Reconsidered,* the Hague, 1965) to the demographic factory, urbanization
industrialization as prime movers of social change. These three, though questioned
author, coincide with the empirical results of Allen and Bentz.

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structure or of structural change. Some older theories could be validated (e.g., that linking the loss of religious faith with the process of industrialization [5]) or the above mentioned theories on political radicalism); moreover, the interrelationship of social change variables, as signalled by Allen and Kenneth Bentz could be reasessed by means of a replication in a different cultural setting.

Sources and nature of data.

An implication of our macro-sociological approach was that not the population of inhabitants but the population of communities formed the actual universe to which we tried to generalize our findings. Out of 1,014 communities in the Netherlands in 1950, 100 have been selected at random (by means of random sample numbers applied to the alphabetical list of all communities, published by the Central Bureau of Statistics in that year). Though they varied in size from some 400 inhabitants (Wijngaarden in Zuid-Holland) to some 162.000 (Haarlem), none of the big cities (Amsterdam, Rotterdam, The Hague, Utrecht) fell into our sample. This is of no consequence for our study that aimed at the estimation of parameters of 1,014 communities; no conclusion can, however, be drawn with regard to the Dutch population, comprising 10.200.300 inhabitants at the onset of our study. (Owing to the effect of clustering in these big cities, which themselves account for almost a quarter of the total population in the country, population-characteristics which are typical of metropolitan areas will be under-represented in this study).

In the course of some sixteen years, we continued to collect the data about these hundred communities; five communities got lost (chiefly due to the fusion with other administrative units by a governmental decree) from our sample, to know: Achttienhoven, Gameren, Giessendam, Nederhemert and Nieuwerkerk. For all remaining 95 communities some 22 quantitative indices were drawn from the materials which we obtained from the Central Bureau of Statistics of through their publishers (W. de Haan in Zeist or the *Staatsdrukkerij en -uitgeverij* in the Hague). The selection of these indicators seems rather unsystematic; on purpose they were selected for different periods of time, to make the estimates of time-sequence of variables feasible. As may be seen from Table 1 they cover such obvious demographic indicators as number of inhabitants, the population density (per square kilometer), average number of children per household unit, the index of community growth (number of inhabitants in 1965 minus the number in 1950), the percentage of autochthonous population in 1960, percentage of persons 65 years old or older. There were indicators of economic status: average income per tax-payer in 1950: index of income change (average income in 1960 less that in 1950); indicators of industria-lization: percentage of economically active population employed in industries (and a corresponding index of change between 1947-1960; those of education: percentage of economically active men with elementary education only, similar percentage of those with college or more education. We included at least three measures of religious affiliation: the percentage of members of the Dutch Reformed (Nederlands Her-

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[5] See J. P. Kruijt's older study *De onkerkelijkheid in Nederland, haar verbreiding en oorzaken* (Secularization in the Netherlands; its distribution and causes), Utrecht, 1933.

vormde) Church, the percentage of persons without a denomination in 19ᵉ
change in this percentage in 1960 (the latter less the former). And we had i
than five measures on 'radicalism': the percentage of Communist votes in 19ⁱ
change in this percentage in 1963 (the former less the latter); the percentageᵗ
Pacifist Socialist votes in 1963 and that in 1966; finally, the percentage of the ℝ
Party (*Boerenpartij*) votes in 1966 (the latter being reckened to right wing radicᵗ
Originally, also some indices of social pathological phenomena were includeᵗ
suicide rate 1947-1955 (numbers registered divided by the number of inhaᵗ
x 1000), and, to check on old theory, the percentage of single persons (one-ᵖ
households).

Table 1 describes once more these variables and presents the principal mᵉ
means, standard deviations, kurtosis and skewness for each of the 95 comm

Table 1. MEANS, STANDARD DEVIATIONS AND COEFFICIENTS
SKEWNESS AND KURTOSIS, FOR 22 SELECTED VARIABLE
A SAMPLE OF 95 COMMUNITIES.

	Variable	Mean	Standard deviation	Skewness	K.
1.	Number of inhabitants (January, 1950)	10,140	21,437	5.178	
2.	Population-growth 1950-1965 (in per cent of 1950)	22.64%	24.51%	1.314	
3.	Population density 1950	476.8	953.97	4.309	
4.	Number of children per household (Census of 1947)	2.97	6.12	0.562	
5.	Average income per tax-payer (1950)	ƒ 2,942	4,775	1.579	
6.	Percentage of Dutch Reformed (1947)	38.28%	30.53	0.145	
7.	Percentage of Communists 1952	2.71%	4.53	2.618	
8.	Change of Communist votes 1953-1963 (percentage 1952 less percentage 1963)	-1.67%	3.70	-4.146	
9.	Percentage of Pacifist Socialists 1963	1.62%	1.99	1.636	
10.	Percentage of persons without a religious affiliation 1947	7.15%	10.05	1.810	
11.	Percentage of economically active population employed in industry 1947	29.15%	14.3	0.855	
12.	Industrialization trend: percentage of persons in industry in 1960 less that sub 11	10.26%	9.4	-0.214	
13.	Suicide rate 1947-1955 (pro mille)	6.31⁰/₀₀	6.35	1.26	
14.	Percentage of men among the economically active population with elementary education only (1960)	61.8%	8.63	-0.198	
15.	Percentage of men among the economically active population with college education 1960	6.66%	4.66	2.369	

16. Income-change: average income in 1960 less than sub 5 (1950-1960)	f 2,452.0	647.4	1.729	10.78
17. Percentage of persons 65 years or older in 1960	8.54%	2.54	0.417	3.26
18. Percentage autochthonous population in 1960	57.97%	11.29	−0.263	2.69
19. Percentage of persons living single (one-person households) in 1960	2.3%	1.40	1.369	5.69
20. Secularization trend 1947-1960 (percentage of persons without a denomination in 1960 less than sub 10)	1.25%	2.08	1.427	6.55
21. Percentage votes for Peasant Party 1966	7.44%	4.07	2.010	9.17
22. Percentage votes for Pacifist Socialists 1966	2.38%	2.34	1.270	3.45

Statistical evaluation

As mentioned already above, the use of the computer made a quick evaluation of data possible. In less than two minutes, the means, the standard deviations, the coefficients of skewness and kurtosis and the product moment correlations were computed for all twenty-two variables involved.

The first four statistics are presented in Table 1. While we may make a grateful use of the means for the description of the social structure and trends under study, the measures of skewness and kurtosis are rather superfluous. Owing to the small size of the sample ($N=95$), little value can be ascribed to them. We may state that the distribution of most variables is rather leptokurtic (the curve is rather steep) and slanted to the right (there being a concentration of communities in the interval just below the mean and several 'out-liers' with extremely high values). This holds especially for variables 1, 3, 7, 8 and 10, which are all characterized by a considerably high standard deviation and high cofficients of skewness and kurtosis. When applying the usual test of normalcy to the coefficient, hardly any variable appeared mesokurtic and normal; yet these tests do not yield reliable results for the samples with a small number of elements, such as ours.

We still decided to use the correlations as a basis for a further analysis. There was one advantage of the material we studied: the neatly continuous nature of the twenty-two variables. Without a dreary procedure of scaling, we could base our analysis on interval- of ratio-scales owing to the quantitative nature of the variables used. Moreover, with the exception perhaps only of variable 13 (suicide rate), the base for the computation of rates, ratios or proportions was sufficiently large to allow for generalizations. The possibility of applying techniques making an analysis of a simultaneous effect of a large number of variables possible, was the decisive moment for applaying the correlational analysis to our data.

As Table 2 shows we were able to examine the multiple correlations and the partial correlations of all twenty-two variables. The table thus contains a large amount of

Table 2. PRODUCT MOMENT CORRELATIONS, MULTIPLE CORRELATIONS,
AND PARTIAL CORRELATIONS OF THE 22 VARIABLES FROM TABLE 1
(coefficients x 1,000).
Partial Correlations of the 20th Order

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	+1000	+ 7	+ 784	— 82	— 145	— 60	— 64	— 43	— 67	+ 100	— 159	+ 20	— 25	— 0	+ 190	— 141	— 122	+ 82	+ 93	+ 3	+ 128	— 28
2	+ 0	+1000	— 77	+ 50	— 293	— 67	— 12	+ 36	— 127	— 3	— 23	— 124	+ 4	+ 9	+ 129	+ 165	— 167	— 328	— 120	+ 89	+ 96	+ 81
3	+ 857	— 9	+1000	+ 66	+ 39	+ 1	+ 110	+ 41	+ 65	— 74	+ 177	— 99	— 46	— 32	— 48	+ 82	+ 5	+ 64	+ 123	+ 22	— 82	+ 61
4	— 201	+ 283	— 221	+1000	— 133	— 751	+ 86	+ 48	+ 171	— 280	— 446	— 196	— 324	— 195	— 163	+ 194	— 257	+ 226	— 314	+ 63	— 226	— 154
5	— 7	— 206	+ 12	— 373	+1000	— 71	+ 87	+ 205	+ 128	— 163	— 349	— 349	+ 148	+ 151	+ 333	+ 48	— 176	— 270	+ 76	— 289	— 24	— 48
6	— 119	— 339	— 136	— 693	+ 258	+1000	+ 126	— 16	— 25	— 162	— 516	— 286	— 205	— 39	— 198	+ 243	— 78	+ 106	— 125	+ 239	+ 50	— 71
7	+ 286	— 2	+ 398	— 442	— 81	+ 101	+1000	— 507	— 125	+ 513	+ 364	+ 157	+ 265	+ 13	— 115	— 72	— 101	+ 122	— 31	+ 376	— 81	— 16
8	— 217	+ 18	— 263	+ 344	+ 73	— 115	— 667	+1000	— 344	+ 376	+ 137	+ 11	+ 62	— 95	— 169	+ 9	+ 55	+ 149	+ 21	+ 295	+ 13	— 37
9	+ 294	— 85	+ 361	— 566	+ 166	+ 221	+ 674	— 606	+1000	+ 430	+ 13	— 54	+ 79	— 141	— 225	+ 32	+ 322	— 94	+ 48	+ 300	+ 425	+ 533
10	+ 374	— 39	+ 408	— 578	+ 181	+ 136	+ 701	— 487	+ 860	+1000	— 349	— 137	— 203	— 58	+ 170	— 69	+ 30	— 155	— 146	— 400	— 251	+ 289
11	+ 270	+ 253	+ 429	— 60	— 175	— 384	+ 416	— 204	+ 115	+ 171	+1000	— 566	— 100	+ 235	+ 269	— 41	— 201	— 45	— 230	— 45	— 148	+ 138
12	— 214	— 55	— 342	+ 293	— 377	— 88	— 162	+ 66	— 228	— 234	— 435	+1000	— 102	+ 124	+ 166	— 143	— 70	+ 42	— 235	+ 74	— 42	+ 97
13	— 20	— 79	+ 32	— 454	+ 233	+ 292	+ 417	— 288	+ 447	+ 335	+ 28	— 184	+1000	— 280	— 195	+ 77	+ 40	+ 47	— 139	+ 88	+ 53	+ 34
14	— 283	— 332	— 254	+ 25	— 234	+ 163	— 131	+ 115	— 323	— 358	— 38	+ 205	— 204	+1000	— 572	+ 55	+ 183	+ 177	+ 38	+ 3	— 63	+ 110
15	+ 440	+ 307	+ 445	— 271	+ 364	— 133	+ 237	— 190	+ 357	+ 468	+ 321	— 363	+ 106	— 706	+1000	+ 502	+ 164	— 13	+ 134	+ 94	+ 45	+ 52
16	+ 133	+ 365	+ 208	— 138	+ 258	+ 28	+ 150	— 117	+ 279	+ 272	+ 175	— 336	+ 155	— 518	+ 685	+1000	+ 45	+ 21	— 144	+ 154	— 125	+ 145
17	+ 21	— 416	+ 53	— 566	+ 255	+ 459	+ 124	— 108	+ 376	+ 339	— 210	— 132	+ 210	+ 82	+ 104	+ 70	+1000	+ 152	+ 203	+ 57	— 293	— 259
18	— 134	— 248	— 162	+ 476	— 408	— 141	— 329	+ 298	— 512	— 547	— 137	+ 293	— 292	+ 477	— 568	— 421	— 174	+1000	— 126	— 189	+ 118	+ 112
19	+ 383	— 248	+ 408	— 655	+ 429	+ 363	+ 218	— 172	+ 417	+ 436	+ 15	— 374	+ 175	— 139	+ 399	+ 175	+ 576	— 418	+1000	+ 108	— 237	+ 59
20	+ 137	+ 106	+ 218	— 395	— 59	+ 334	+ 502	— 312	+ 513	+ 356	+ 117	— 116	+ 367	— 200	+ 253	+ 371	+ 254	— 365	+ 292	+1000	— 106	+ 75
21	— 11	— 15	— 105	— 150	+ 30	+ 253	+ 0	— 158	+ 240	+ 39	— 237	+ 81	+ 228	— 77	— 120	— 98	— 112	— 2	— 138	+ 43	+1000	— 84
22	+ 376	+ 52	+ 457	— 556	+ 105	+ 118	+ 727	— 581	+ 898	+ 871	+ 308	— 258	+ 391	— 320	+ 459	+ 347	+ 246	— 512	+ 403	+ 495	+ 104	+1000
R =	793	528	814	895	623	824	811	603	920	902	778	560	473	698	848	650	631	647	706	628	474	899
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

information, unthought of only a few years ago[6]). There are, in the first place, the product moment correlations showing us the interrelations which exist among the variables. By applying the well-known formulas (two-tailed tests) we were able to estimate the correlations of .20 or higher as significant at the 5%-level ($F_{1,93} = 3.9$, which approaches the 5-percent level of probability). When applying a one-tailed test of significance (which was plausible in the case of many distinct hypotheses) $r = .17$ appears significant according to tables of Walker and Lev.

In case of partial correlations the number of variables (less two) should be subtracted from the number of degrees of freedom (N becoming thus 75). According to our estimates correlations $r \leqslant .300$ pass the two-tailed test of significance to reach the .01 level or probability; correlations $r \leqslant .19$ are significant when applying the one-tailed test at the .05 level of probability.

Two severe warnings should be mentioned in this context. To begin with there are variables which are not independent but are partly derived from other variables in the matrix. For instance: Variable 3 = x/Variable 1; Variable 8 = Variable 7 — y, etc. Obviously, no causal significance should be ascribed to the relationship between these contaminated variables.

Another caution concerns the number of tests performed. There are 232 coefficients in our matrix of twenty-two variables; this means that we may expect eleven correlations that appear significant at .05 probability level to be based on error; the number will be reduced to two if .01 level will be accepted (partials approaching the value of $r = .30$). The usual warning against an haphazard interpretation of the correlation matrix applies here: only the correlations which were expected (if possible: in the distinct direction) on the basis of literature or previous hunches, should be taken into consideration.

The multiple-correlations which we publish in Table 2 form a by-product of the canonical factor analysis that was applied to the correlation matrix. Moreover, the principal axes analysis also was applied. Only the results of the latter as combined with the standardized Varimax-rotation are presented here. While in the canonical factor analysis estimates of communalities were used (as based on the multiple correlations), we used units along the principal diagonal in the principle axes analysis. It is interesting to note that the results of both procedures were quite similar and converging[7]). Once more we wish to express our indebtedness to our colleague in Groningen, Professor Dr. B. J. Kouwer, who wrote the programs for the canonical factor analysis and the corresponding Varimax and Promax rotations and generously put these at our disposal.

A final word of warning is addressed to the reader to consider the results of this

analysis as very tentative, indeed. The progress of computer-technique and the in
of computers upon our thinking is so pervasive, that we often are lagging behind
new programs which are being given at our disposal. In the present analysis of p
of the twentieth order one may, for instance, ask after the influence of depen
contaminated variables upon the final results — even if the partial is to be com
between two independent variables. Multivariate analysis puts us before pro
not faced before.
It was this doubt and a kind advise of Mr. Nass, the *auctor intellectualis* of this
gram which made us avoid the highly correlated variables. For evident reasons
partials then show a distinct vanishing tendency. Before writing the closing
of this paper, we decided to draw another matrix of partial correlations, cont
the conceptually (operationally) independent variables only. Als Table 4 suffic
demonstrates, there are distinct differences in the two tables (no. 2 and 4).
example, we compare column 1 in Table 4 with row 1 in Table 2, we notice
urbanism (the size of community) positively correlates with the percentage
single-living persons — a fact unrevealed by the partials in Table 2. Owi
the uncertainty with regard to the new method of high-order partials, we
recurred to the more comprehensible analysis of partials of lower order, as first s
out by H. A. Simon and somewhat further elaborated by H. M. Blalock Jr.[8]
partials of second order were computed mechanically or by means of logarithms
standard error does not considerably deviate from that of the product moment
cients. Unless stated differently, all partials in the test refer to Table 2.

Some findings
Characteristics of social change and social structure
Even a fugitive look at the first column of Table 1 reveals that we have to do
in the Netherlands, with population groups living in densely populated area
panding chiefly due to the high births (even though big cities are left out o
picture, there were 477 inhabitants per square kilometer in 1950, an average h
hold consisting of about three children; the population increased by about on
in the course of the last fifteen years). About one third of the economically
population worked in the industry, in 1947; this percentage increased by mor
10 per cent in the course of thirteen years: we may speak of a rapid industriali
process. There also was an increase of nominal income per tax-payer by mor
80% in the decade of 1950-1960, which amounts to an increase in real incom
well. We have na indices for a change in the educational level; its outcome in
indicates still a considerably low level, there being on average 62 per cent p
with elementary education only, among the male economically active popu
(less than 7 per cent went to the secondary school or college).
As far as secularization is concerned, we notice that only somewhat more than
per cent did not affiliate with one of the existing churches. This percentage is
(by no less than ten per cent) than the coutry-average, which indicates that s
rization is especially a metropolitan phenamenon. Yet its trend is continued in

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[8]) Herbert A. Simon, *Models of Men*, New York, 1957; Hubert M. Blalock, Jr. *Causal Inf*
in Nonexperimental Research, Chapel Hill, 1961, 1964.

smaller communities, as well: there was an average increase of 1.25% of persons without denomination in the sample under study in the period between 1947 and 1960. There were but few marks of political radicalism in the course of the first decade after World War II. The average percentage of Communist votes amounted to 2.71%, in 1952, and rose only by some 1.7% in the course of the following decade (1963). In this year, a new political party entered the scene with a radicalist leftist program (de *Pacifistisch Socialistische Partij*) which obtained 1.6% of votes in 1963 and rose to 2.4% in 1966, in the communities under study. Finally, the recent years witnessed a rapid growth of a rightist radical party (de *Boerenpartij*) sharply opposing some established institutions of government regulation; this party collected 7.44% votes in the communities under study (once more: the figures are not representative for the entire population of the country, there being less Pacifist Socialists in the smaller communities).

Finally, we wish to point out that we have to do here with a considerably mobile population: only some 58 per cent lived in their native community (and in this percentage small children are included, which makes the actual proportion of the autochthonous among the adults much smaller); this implies a considerable amount of migration. Another aspect worth emphasizing is the ageing of the population, there being on average 8.5% of aged persons (65 years or older) in our sample of communities.

Patterns of relationships

If we search the corresponding matrix-columns in Tables 2 and 3, we can state that urbanism, as indicated by the size of the community and the density of its population, is less relevant to the societal change and structure than we originally assumed. There is a significant correlation with smaller family-size ($r_{1-4} = -.201$, $r_{3-4} = -.221$), but this correlation is reduced to insignificance by the process of factor-analysis (loading of $-.078$ in Factor 4) or by the computation of partials ($r_{p(1-4)} = -.082$; $r_{p(3-4)} = .066$). A similar picture is obtained when we examine another well-known theory, that about the impact of urbanization upon the secularization, in the light of our data. There are product moment coefficients suggesting that more people without denomination are concentrated in large communities or more densely populated areas ($r_{1-10} = .374$; $r_{3-10} = .408$). These coefficients vanish when the test of the partial correlation is applied: $r_{p(1-10)} = .100$; $r_{p(3-10)} = -.074$). Once more, the factor analysis confirms the results obtained by the computation of highorder partials (see loading .199 on Factor 4 in Table 3).

The correlation with industrialization is also lower than expected. It is especially the density of population that shows a positive association with the proportion of people employed in the industry. Yet the partial correlation fails to reach the significance level, $r_{p(3-11)} = .177$. Factor analysis shows a positive, though low loading (.227) on the urbanism-factor (4). It is interesting to note that the more recent industrialization-trend (1947-1960) is quite independent of the size of the community or of the density of the population. Community growth shows even a negative tendency with the growth of industrial population ($r_{p(2-12)} = -.124$).

An association which tends to survice the rigorous test of multivariate-analysis is that

Table 3. CANONICAL FACTOR ANALYSIS OF CORRELATIONS FROM TABLE 2

Original Factors

	+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	+ 10
+ 1	+459	+448	+247	+516	−314	+169	− 62	− 75	+ 23	− 15
+ 2	− 41	+485	+ 2	−384	+236	+266	− 59	−136	+230	− 83
+ 3	+527	+483	+200	+534	−151	+123	+ 11	+ 73	− 31	+ 37
+ 4	−713	+519	−266	−164	−181	+ 29	+100	+ 98	− 62	+ 40
+ 5	+246	−218	+541	−242	− 79	−281	−219	+169	−269	+ 64
+ 6	+262	−810	+230	+ 80	+ 69	+279	− 19	− 35	+ 19	+137
+ 7	+738	+ 79	−382	+144	+261	+ 77	+ 56	−160	−244	+ 55
+ 8	−583	− 8	+329	− 49	− 90	−152	+ 54	+ 47	+242	+126
+ 9	+909	− 82	−246	−116	−138	+ 11	− 5	+156	+ 6	− 39
+10	+908	+ 26	−146	− 78	−125	−183	+ 3	−147	+ 39	+ 97
+11	+265	+553	− 62	+262	+610	−133	− 91	+ 94	+ 76	− 27
+12	−354	−142	−362	− 75	−306	+148	+165	−404	+ 56	−175
+13	+443	−253	− 69	−129	+160	+133	−146	+103	−250	− 33
+14	−385	−411	−293	+475	+202	−176	+ 90	+ 65	+130	+ 22
+15	+560	+462	+517	−288	+ 37	+ 9	+ 22	− 94	− 6	− 3
+16	+387	+285	+373	−442	+163	+238	+181	+127	+ 48	+232
+17	+393	−492	+227	+ 85	−106	−223	+387	+111	+ 21	− 38
+18	−612	− 25	−257	+373	−126	+ 55	+ 81	+104	+ 26	+263
+19	+573	−213	+488	+226	− 81	−185	+184	+ 84	− 41	−185
+20	+537	−107	− 41	− 74	+218	+471	+355	+104	− 10	−131
+21	+ 97	−255	−169	−114	−216	+364	−542	+138	+ 75	− 67
+22	+924	+ 85	−211	− 51	+ 8	− 11	− 4	+ 48	+103	+ 17

Varimax Factors

	+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	+ 10
+ 1	+170	+ 49	+146	+905	+ 50	− 29	+ 9	− 6	− 3	+ 26
+ 2	− 61	−509	+447	− 51	+208	+177	− 10	−110	+152	+226
+ 3	+250	+ 44	+119	+862	+163	+ 74	− 85	+144	− 4	− 45
+ 4	−438	−645	− 41	− 78	−148	− 67	−166	−159	+ 12	−207
+ 5	− 25	+404	+330	− 75	−175	−238	+ 64	+541	−130	+143
+ 6	+ 78	+537	−112	−144	−189	+274	+283	+103	− 8	− 1
+ 7	+843	− 53	− 17	+160	+177	+181	−127	+ 37	−187	− 3
+ 8	−673	− 38	− 25	− 98	−116	−123	−156	+ 79	+290	+ 41
+ 9	+857	+253	+178	+129	− 63	+135	+195	+120	+140	+ 35
+10	+847	+205	+237	+199	− 51	−104	− 62	+ 77	+195	+124
+11	+225	−234	+ 54	+227	+786	+ 30	−209	+188	− 33	+ 17
+12	− 73	−134	−203	−170	−310	− 56	+ 41	−675	− 72	− 3
+13	+425	+133	+ 73	−124	− 14	+180	+217	+242	−207	+ 57
+14	−183	+127	−759	−176	+169	+ 19	− 72	− 86	+ 71	−135
+15	+199	+141	+831	+290	+188	− 65	−108	+ 96	− 47	+106
+16	+112	+ 36	+773	+ 9	+102	+255	− 75	+166	+ 97	−158
+17	+200	+784	− 22	− 40	−115	+ 96	−131	+ 21	+ 66	− 52
+18	−385	−174	−490	+ 26	− 34	− 84	− 10	−203	+ 3	−518
+19	+184	+706	+133	+328	+ 1	+ 81	−114	+223	− 20	+232
+20	+401	+155	+201	+ 51	+ 34	+708	+ 12	− 25	− 16	+ 53
+21	+126	− 65	− 28	− 36	−129	− 13	+773	− 13	− 17	− 8
+22	+848	+161	+234	+207	+128	+100	+ 81	+ 83	+191	+ 49

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Table 3 (continued)   MUTUAL CORRELATIONS OF THE PRIMARY FACTORS.
(as above: all correlations x 1,000)

	+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	+ 10	+ 11
+ 1	+1000.00	+ 395.94	+ 352.77	+ 391.77	+ 297.93	+ 313.40	+ 229.97	+ 192.69	+ 180.06	+ 468.28	+ 255.25
+ 2	+ 395.94	+1000.00	+ 126.05	+ 267.55	— 166.78	— 100.78	+ 41.16	+ 488.05	— 12.74	+ 390.69	+ 447.47
+ 3	+ 352.77	+ 126.05	+1000.00	+ 302.88	+ 205.71	+ 189.57	+ 57.91	+ 362.34	+ 319.92	+ 574.50	— 68.42
+ 4	+ 391.77	+ 267.55	+ 302.88	+1000.00	+ 380.38	— 11.53	— 67.71	+ 144.08	+ 105.40	+ 286.74	— 67.68
+ 5	+ 297.93	— 166.78	+ 205.71	+ 380.38	+1000.00	+ 315.83	— 293.01	— 38.07	+ 232.60	+ 86.55	— 48.05
+ 6	+ 313.40	— 100.78	+ 189.57	— 11.53	+ 315.83	+1000.00	+ 85.44	— 138.87	+ 219.17	— 55.23	+ 162.22
+ 7	+ 229.97	+ 41.16	+ 57.91	— 67.71	— 293.01	+ 85.44	+1000.00	+ 72.42	+ 10.41	+ 158.71	+ 189.33
+ 8	+ 192.69	+ 488.05	+ 362.34	+ 144.08	— 38.07	— 138.87	+ 72.42	+1000.00	— 108.89	+ 435.42	+ 279.59
+ 9	+ 180.06	— 12.74	+ 319.92	+ 105.40	+ 232.60	+ 219.17	+ 10.41	— 108.89	+1000.00	+ 36.22	— 273.28
+10	+ 468.28	+ 390.69	+ 574.50	+ 286.74	+ 86.55	— 55.23	+ 158.71	+ 435.42	+ 36.22	+1000.00	+ 278.20
+11	+ 255.25	+ 447.47	— 68.42	— 67.88	— 48.05	+ 162.22	+ 189.33	+ 279.59	— 273.28	+ 278.20	+1000.0C

Table 4.   PARTIAL CORRELATIONS OF THE 11TH ORDER OF THIRTEEN NON-
CONTAMINATED VARIABLES FROM TABLE 2.

	1	4	5	7	9	10	11	13	15	17	18	19	21
1	—1000												
4	+ 34	—1000											
5	— 180	— 139	—1000										
7	+ 34	— 164	— 195	—1000									
9	— 19	+ 224	— 32	+ 219	—1000								
10	+ 152	— 251	+ 20	+ 308	+ 655	—1000							
11	+ 74	— 196	— 177	+ 339	+ 68	— 216	—1000						
13	— 84	— 225	+ 179	+ 271	+ 191	— 202	— 61	—1000					
15	+ 326	+ 180	+ 276	— 143	— 72	+ 221	+ 322	+ 20	—1000				
17	— 199	— 380	— 91	— 165	+ 274	— 42	— 253	+ 9	+ 59	—1000			
18	+ 263	+ 198	— 113	+ 63	— 166	— 87	+ 29	— 32	— 387	+ 251	—1000		
19	+ 389	— 415	+ 220	— 54	+ 155	— 151	— 69	— 128	+ 56	+ 268	— 101	—1000	
21	+ 125	— 382	— 4	— 176	+ 468	— 277	— 275	+ 62	— 0	— 331	+ 99	— 273	—1000

with the educational level. The population of larger communities seems to ha
enjoyed more school education, as may be expected according to the theory seeing i
the cities the intellectual centers of the country: $r_{p(1-15)} = .190$ ($r_p = .326$ in Table
The corresponding loading on the 'urbanism' factor was .290. There also is a larg
proportion of single persons in larger communities.

If we compare the matrix of the product moment coefficients with that of partials, i
notice many 'vanishing correlations'. Concentration of Communists, Pacifist Socialis
and small families in the bigger communities vanishes if we introduce test-factors. Th
is the first important conclusion of the study: *the size of the community and the de
sity of population seem to be of less relevance for the explanation of social condi
than has been assumed up to now;* they influence the conduct inasmuch they indic
qualitatively different population groups.

Somewhat different findings can be reported with regard to the two variables whi
we consider as indicators of industrialism and industrialization (variables 11 and 1
Both show a mediately intensive but persistent association with income-level: *peop
employed in the industry usually live in a community with a low average income; i
terms of a structural (non-sequential) analysis similar to ours, industrialization do
not raise the average income of the inhabitants living in the industrializing commun
ties. It brings about a decrease in births, as expressed in negative partial correlatio
with the average number of children per household.*

There is an evidence that industrialism (earlier process of industrialization) results i
a polarization with regard to the educational level: there are relatively less people li
ing in the middle category. *Recent industrialization goes hand in hand with prevalen
of lower educational status.*

Contrary to expectation, *no direct correlation between industrialism or industria
ation and secularization could be stated.* The partial correlations point even in t
opposite direction, there being less people without denomination in the communit
housing industrial population ($r_{p(10-11)} = -.349$. The factor analysis also offers evi
ence for the rejection of the original hypothesis, yet it brings no evidence for t
assumption that secularization and industrialization are negatively associated in o
sample. Thus we prefer to accept the null-hypothesis.

There is, on the other hand, hardly any doubt about the fact that industrialis
goes with leftist-radicalism (or better to say, that *early industrialization resulted i
higher percentage of Communist votes).* The partial correlations are quite persiste
and we also find loadings pointing in the same direction on Factors 1 and 5 of Ta
3. This does not hold for the other indicators of a leftist-radicalism: the percenta
of Social Pacifist votes in 1963 and 1966. The product-moment coefficient (r
.308) decreases when the partial correlation is computed ($r_{p(11-22)} = .138$) and fa
to reach the significance level. There is some indication that the 'rightist radicalis
(as indicated by the percentage of Peasant Party votes) is negatively correlated w
industrialism; the *Boeren Partij* voters are recruited somewhat more frequently fro
the non-industrial communities. Yet the latter correlation is much lower than
should expect on the basis of the origin and the explicit program of this 'agran
party'.

Educational level is consistently associated with income level, *more school educati

being accompanied with higher average income and even more intensely with income-increase ($r_{p(15-16)} = .502$).

The originally significant correlations with secularization ($r_{10-15} = .468$) are substantially reduced by partial correlation ($r_{p(10-15)} = .170$). The direction of association remains persistent; moreover, there is a considerably high loading on Factor 3 (.237) which reinforces our assumption that *school education leads in some cases to the loss of church affiliation in communities under study* (also see Table 4: $r_{p(10-15)} = .221$). A similar pattern of association was found between education and some structural variables, such as the percentage of persons born outside the community and the size of the household (number of children per household, variables 18 and 4). More school education characterizes the communities with a mixed population, of allochthonous origin. Though the partial correlation sinks to insignificance, this is chiefly due to the fact that two (instead of one) highly intercorrelated indicators of educational level were used, which cancel each other, when partial correlations are computed: $r_{14-18} = .477$; $r_{p(14-18,15)} = .13$. (In Table 4 we find $r_{p(15-18)} = -.387$).

There also is a tendency to smaller number of children with the higher educational strata, though this association is comparatively of low intensity ($r = -.271$) and of a vanishing nature ($r_{p(15-4)} = .180$, in Table 4); mind that the income-level is kept constant by partial correlation!)

We also find some product moment correlations with leftist radicalism indicating *more school education fosters a more radical political attitude* ($r_{7-15} = .237$; $r_{9-15} = .357$; $r_{15-22} = .459$). In spite of the fact that all point in the same direction and are of considerable intensity, their corresponding partials all vanish (see the upper part of the matrix in Table 2 and the corresponding cells in Table 4).

Income-level is not correlated with leftist radicalism in the expected direction. There is little direct evidence in our data supporting the hypothesis that leftist radicalism flourishes in communities with low average incomes ($r_{p(5-7)} = -.195$ in Table 4). Community growth shows a disjunctive pattern of relationship with the two indicators of wellfare: *rapidly growing communities show originally low income-level but a higher average increase of income over time.* This need not astonish us too much if we realize that growth is a function of family-size and our income-level is measured per tax-payer. Somewhat more interesting is the negative association of income with the recent secularization: the recent increase in proportion of persons without a denomination is signalled in by origin poorer communities and is accompanied by an increase in income-level. The dependence of the two income-measures from each other makes us hesitate to see in these tendencies a verification of Durkheim's *anomie-*theory.

In terms of variance 'explained', by far the most important association is that of leftist radicalism with secularization. *The percentage of Communist votes correlates (r =*

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[9]) This association to political preference with church-affiliation is not too surprising for an expert in Netherlands' home-affairs. It is interesting to note that as early as 1950, we found in a small community an association amounting to a $T = .87$, though very few persons without denomination were involved. It concerned the preference of votes who were canvassed in a personal interview during our survey. See *A Dutch Community*, Leiden, 1956, p. 312.
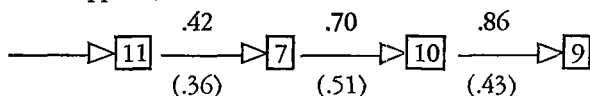
.70) with the percentage of people without the church-affiliation; that of Pac
Socialists shows correlations $r_{9-10} = .860$ *and* $r_{10-22} = .871$.[9]) This means that
knowing the religious composition of a community we can predict about 63% of
variance in Communist votes, and no less than 76% of the variance in the Pac
Socialist votes. Moreover, there is a high intercorrelation of various indicators
leftist radicalism. The percentage of C.P. votes in 1952 correlates as high as r = .1
with the percentage of Pacifist Socialists in 1963, and r = .727 with that of Pac
Socialist votes in 1966. Very high loading on Factor 1 in Table 3 show the h
interrelation of various indices of secularization and leftist radicalism. Out of
structural variables it is chiefly the allochthonous population (.—.385) and
industrialism (.225) which may be seen as possible causal factors; smaller number
children (—.435) and higher suicide rate (.425) can be seen as possible effects. We
very hesitant to mention the latter, owing to the small number of suicides regist
in the small Roman Catholic communities; the base being too narrow, we abs
from dealing with this variable in a serious way.

Interestingly enough, the loading of variable 21 on Factor 1 is very low (.126),
evidence that rightist radicalism is not associated with this general factor at all
other words, *we can hardly speak of a general 'political radicalism' factor in te*
of variables under study. A qualified exemption in this respect forms the associa
between Pacifist Socialist votes and the *Boerenpartij* votes in 1963; in that year,
could speak probably of political uneasiness in certain communities which accoun
for the positive correlation of the two variables. In 1966, the correlation decrease
insignificance. There is some evidence that the *Boeren Partij draws her partisans m*
often from the Dutch Reformed communities, from the less-secularized communi
from communities with a small percentage of industrial workers. The social compo
ion of the more Social Pacifist communities is opposite in these respects. In one p
they resemble each other: the smaller number of children per household going h
in hand with a lower percentage of aged persons than the average.

Discussion

The above mentioned associations are, without doubt, of a tentative nature. We h
seen that the new technique of high-order partials does not lead in all cases to uneq
vocal results. When there are closely related variables in the matrix, the partials
reduced to zero, are of vanishing nature. That's why we relied on coinciding evide
of the factor analysis and of lower-order partials in examing several associations
stake. We hesitated to causally interpret correlation findings.

Since a good theoretical model may help to direct future research, we still attemp
to construct one and tried to adjust it to our data. There is, to begin with, a pattern
associations, which unites four intercorrelated variables. If it is assumed that ind
trialism (variable 11) precedes Communism (variable 7) as is known by the histo
development, the following chain of causal relationships will obtain (when t
method of Blalock is applied):

$$\longrightarrow\!\!\rhd\boxed{11}\xrightarrow{.42}\rhd\boxed{7}\xrightarrow{.70}\rhd\boxed{10}\xrightarrow{.86}\rhd\boxed{9}$$

$$(.36)(.51)(.43)$$

The bracketted figures denote the variables from our tables: above the lines are the product moment coefficients, under the lines (in the brackets) the partials. It is interesting to note that all other possible associations in this clusters (11-10, 11-9, 7-9) show a vanishing tendency or a tendency to change of direction, as can easily be ascertained in the matrix of partial coefficients.

In this simple four-variablesmodel, industrialism is connected with three more or less 'ideological variables'. It leads to leftist political radicalism as expressed in the percentage of Communist votes. It is the acceptance of Marxian ideologie which, on its turn, has higher secularization rates as a consequence. The newer forms of leftist radicalism seem then pre-conditioned by this secular mentality.

An evident foible in this model is the comparative lack of association with the structural indicators of the social change. With some pains we can link the following cluster to the previous one:
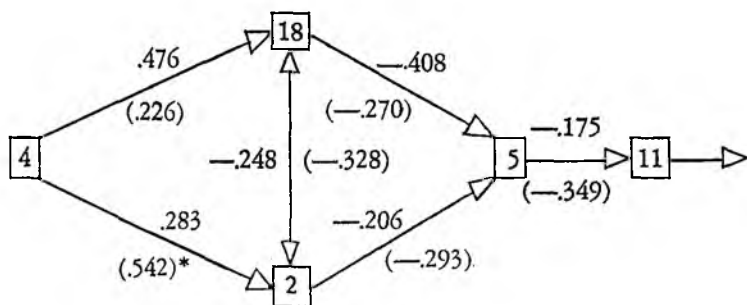
The linking pin forms once more, industrialism (variable 11) as indicated by the percentage of persons employed in the industry among the economically active population. There is a weak correlation with the level of income (indicating the higher percentage of industrial workers in poor communities) which is raised to significance by computing the partial correlation ($r_{p(5-11)} = -.349$). The old theory of 'pauperization and proletarization' re-emerges then in our model. Two weak causes of 'pauperization' can be shown in our sample: the growth of communities and the growing percentage of immigrants to the communities; underlying both is probably the high birth-rate, though this does not show a direct influence on the income-level ($r_{4.5} = -.373$, but $r_{p(4-5)} = -.133$).

Another weak point in this model is the difficulty of deciding the temporal sequence of variables. The period we covered in our study (of at most 19 years) was too short to be able to trace long term trends and changes. If less strict assumptions are made about the temporal sequence, we can trace some cyclical changes in our model. Secularization leads to smaller family-system, as the correlation $r_{4-10} = -.578$ (and its corresponding partial) suggests. If partials are considered, we also notice a backward working of industrialism on birth-rate. The negative partial between secularization and industrialism gets then a new significance: church-dominated communities attract industries in order to prevent a secularization.

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*) This means: $r_{2-4.18} = .542$.

A new project, comprising a new sample and covering the data over a longer pen of time and less 'contaminated' variables helps, as we still hope, to shed a new light these unsolved problems. In spite of its various shortcomings, the method of analy seems to us worth a new trial[10]).

Summary

A correlational analysis of 22 quantitative variables was applied to a sample of communities (drawn at random out of 1,014 communities in the Netherlands) order to determine the main structural variables and the structural correlates political radicalism. The latter was indicated by the percentage of votes for radical leftist parties and a percentage of votes for the *Boeren Party,* a rightist radi party. In addition to two factor-analysis programs (with the standardized Varim and Promax rotations) a new program for the computation of high-order partials applied to the matrix of inter-correlated 22 variables. Results were analyzed al the line as devised by Blalock for the causal inferences from non-experimen research.

The findings indicate an intensive association of secularization with political rad alism and a high inter-connectedness of various indicators of leftist radicalism. And er cause may be seen industrialism (earlier industrialization) which is, on its to correlated with initially lower income level as resulting from migration of low status strata to industrializing communities and from population-surplus (as indica by a large family-size). Both industrialism and secularization result in a decrea in family-size which opens a possibility of applying the model of cyclical soc change to the present situation in the Netherlands.

Contrary to expectation, no positive association could be stated between the indust alization or the urbanization and the secularization. Neither community-growth, n more school education correlate with radical attitudes when a more controlled desi of study, such as ours is applied.

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[10]) A verification (i.e. the rejection or acceptance) of some of the hypotheses launched in th study can also be expected from the national survey of voters' conduct that is taking pla under the supervision of the professors in political science at the three universities in th Netherlands. We are looking forward to the results of this interesting study.