

- Ritsert, Jürgen. 1997. "Zur Dialektik der Subjektivität bei Adorno." Pp. 29-51 in *Zeitschrift für kritische Theorie*, Vol. 4.
- Schmidt, Alfred. 1988. *Emanzipatorische Sinnlichkeit*. Munich.

---

**FLUCTUATIONS OF AUTHORITARIANISM  
IN SOCIETY: AN EMPIRICAL TIME SERIES  
ANALYSIS FOR THE DYNAMIC SOCIO-  
POLITICAL AND ECONOMIC INFLUENCE  
ON AUTHORITARIANISM IN AMERICAN  
SOCIETY, 1954-1977**

---

JOS D. MELOEN<sup>1</sup>  
*University of Leiden*  
*The Netherlands*

Social Thought & Research, 1998, Vol. 21, No. 1-2

This analysis aimed first to construct and test an empirical time series model of authoritarianism in society. Using rival theoretical assumptions of authoritarianism a number of models were built from available time-series, and the models were subsequently tested by time series analysis. The main models were developed from the assumptions of the psycho-dynamic approach of Adorno et al. (1950), the cognitive-learning approach of Altemeyer (1988) and the economic approach of authoritarianism (Sales 1972, 1973).

Second, the analysis aimed to test some basic reactions to authoritarianism in society. The main assumption tested was that large scale social phenomena like authoritarianism will have an impact on individual authoritarianism, that in turn will also be related to more specific individual behaviors. This was examined by cross-correlations with time lags analysis and by path analysis.

Authoritarianism scale responses of 136 American student samples were used for the construction of a time series of authoritarianism (1954-1977) in the United States (Meloan 1983). The face validity seemed high: high levels in the 1950s, declining in the 1960s until the early 1970s and a rise thereafter.

---

<sup>1</sup> Address all correspondence to: Jos D. Meloan, Botter 37, 1991 MK Velsbroek, The Netherlands. Fax+phone: +31-23-539-3622

The time series analysis revealed in general two major explanatory factors for authoritarianism in society: the best explanatory models consisted of one economic factor and one socio-political factor. In most models the economic factor was rather weak, but significant, and consisted mainly of the fluctuations in unemployment. The socio-political factor, however, was relatively strong, and included the common factor in the fluctuations in time series representing military strength, religious behavior, social punitiveness and related series selected on the basis of Adorno et al. (1950) assumptions.

Comparative analysis of the operationalized models showed that both the purely economic and the cognitive models of authoritarianism performed no better than spurious models constructed from weather statistics. The Adorno et al. models, however, performed better than these spurious models.

A causal chain of reactions was suggested by cross-correlational analysis of time lags between the social authoritarianism series, indicating large scale social phenomena, followed by individual authoritarianism and finally followed by individual behavior. Finally, path analysis supported the relationship between authoritarianism and some specific social behaviors.

Therefore, the main models of authoritarianism in society consisted of one dominant social factor which can be interpreted as a reaction to external social threat by the Cold War in the 1950s and the Vietnam War in the late 1960s. This would support the social threat model of authoritarianism. However, the economic factor was less influential, but in almost all models still significant, and will, therefore, also contribute to authoritarianism. The results seem to suggest support for both the Adorno et al. and Sales' approaches of authoritarianism in society.

### **The Problem**

Ever since the Nazis ascended to power in 1933 in Germany, many social scientists have been theorizing on the social and economic factors that were favorable for such a take-over. Especially economic factors, like the high unemployment rate of those days, have been identified as such. Some empirical support for this type of reasoning can be found in the contributions of Sales (1972, 1973) and Jorgensen (1975). However, purely economic factors seem to be inadequate for a causal explanation: at the same time and in comparable circumstances

(a high unemployment rate) the Americans voted in 1932 for a president with a rather liberal program, instead of turning toward fascist dictatorship, like the Germans. Therefore, more factors seem to be necessary for explaining the turn toward right wing authoritarianism.

More implicit in Sales' mainly economic approach is, however, also that societal threat - through economic disruption - maybe a key factor in a rise of authoritarianism in society, as Winter (1996) argued. A longitudinal analysis of the 1978-1987 period in the USA suggested some support (Doty, Peterson and Winter 1991), but Duckitt (1992) found no relation between threat and authoritarianism among a random sample of whites in 1983 South Africa, that were considered to be under high societal threat. However, at that time the white population may have considered the anti-Apartheid threat to be rather unrealistic, as Apartheid then appeared to reign forever.

Nevertheless, the debate on the causal factors of a rise of societal authoritarianism that can lead to democratic disintegration seems to be in need of empirical research. Indeed, more theories than empirical investigations can be found on the influence of social phenomena on authoritarianism in general too. Intergenerational persistence of authoritarianism was for instance experimentally shown by Montgomery, Hinkle, and Enzie (1976). But apart from such rare investigations, the main stream theories have been those using sociological or psycho-analytic concepts (Fromm, [1941] 1965; Adorno et al., 1950; Jay 1973), and those using concepts of learning theories and of cognitive psychology (e.g. Goldstein and Blackman 1978; Altemeyer 1988). These last two theories have not yet been applied to investigate related effects at a societal level.

Therefore, this analysis aimed first of all to construct and test an empirical time series model of authoritarianism in society. Using three main rival theoretical assumptions of authoritarianism, a number of models were built from available time-series, and the models were subsequently tested by time-series analysis. The main models were developed from the assumptions of the psycho-dynamic approach of Adorno et al. (1950), the cognitive-learning approach of Altemeyer (1988) and the economic approach of authoritarianism (Sales 1972, 1973).

Second, the analysis aimed to test some basic reactions to authoritarianism in society. The main assumption tested was that large scale social phenomena like authoritarianism will have an

impact on individual authoritarianism that in turn will also be followed by more specific individual behaviors. This was examined by cross-correlations with time lags analysis and by path analysis.

Hypotheses, derived from the three main theories guided the research presented here. In this extended exploratory study, time series analysis was used in order to find an explanation for fluctuations in authoritarianism in society. This analysis was only possible after the construction of a unique time series of student-authoritarianism. This series was the starting point of the present analysis.

### **Analysis**

The complete analysis consisted of several parts. In this contribution we will only report the first part: the construction of a preliminary model, explaining societal authoritarianism fluctuations in the 1954-1977 period. Elsewhere (Meloan 1983), the model was extended to the 1920-1977 period, and included a validity test of the model. A more general concept of an authoritarianism cycle then was suggested on the basis of the results (Meloan 1986).

In the present analysis some general methods and strategies of time series analysis were used. A time series of the authoritarianism of American students in the period 1954 through 1977 was the focus of this analysis. This series constituted the dependent variable, or the 'variable to be explained' in a time series model. In such a model the dependent variable is explained by various independent or explanatory variables. The first step was to construct this time series of authoritarianism. The second step was to construct theoretical models that included independent variables. The third step was to find operationalizations and indicators for the theoretical models in available time series. Finally, the models were tested by time series analysis, and their performance was compared.

### **The Dependent Variable: An Authoritarianism Time Series**

In an extensive review of hundreds of studies on Adorno et al. authoritarianism (Meloan, 1983, 1991, 1993), it was concluded that their concept seems to have been much underestimated, and that the F scale, despite much criticism, has remained reliable and effective (Meloan, Hagendoorn, Raaijmakers and Visser 1988; Meloan, Van der Linden and De Witte 1996; also, Stone, Lederer, and Christie 1993).

The Meloan 1983 review provided also an opportunity to construct a time series of student authoritarianism. In all, 136 American student samples were collected, that had been investigated by the original authoritarianism scale of Adorno et al. in the period of the 1950s through the 1970s. Their mean authoritarianism scores were standardized. From these means a time series was constructed of student authoritarianism over the period 1954-1977 (See Figure 1).

The face validity of this series seemed to be relatively high: the mostly low-authoritarian students showed a relatively high level in the 1950s, and a steady decrease in the 1960s, with very low levels of authoritarianism in the early 1970s, and a slight rise at the end of this series. It seems likely that such a turn toward higher levels indeed took place during the 1970s and 1980s, as Altemeyer (1988) reported with his right wing authoritarianism (RWA) scale over this last period. His authoritarianism scale correlated highly with the original Adorno scale. However, our analysis will be limited to the presented series of the 1954-1977 period for several reasons. One is that the original scale was consistently used with little variation in the first decades after Adorno et al. (1950). After this period the frequency of the use of this scale declined (at least in the US) to the extent that constructing a time series was no longer possible. Altemeyer's RWA scale results of Canadian students showed a rather linear rise from the mid 1970s on. Unfortunately, he indicates that this seems not to be due to the authoritarian half of his scale, which would be best comparable to the original F scale. The present series therefore will remain unique.

### **The Independent Variables: The Social and Economic Time Series**

Indicators for the concepts in this investigation were operationalized by collecting relevant statistical series or from

opinion polls that were periodically used (in similar wordings). The thus selected series were equally treated and processed. A few incomplete series were completed by a procedure of linear substitution. Subsequently, all series were smoothed and standardized to make them comparable. A number of series was supposed to represent a common theoretical factor. This common factor was then extracted by Principal Component Analysis. In general, the collected social series showed one common factor. By contrast, this was not the case for the economic series, which seemed much less related.

From these extracted common factors various time series models were built, that included series according to the related theoretical propositions. Mainly one, or two factor models were built. They included as 'dependent' variable, the authoritarianism series, and as 'independent' or 'explanatory' variables those selected for theoretical reasons. The thus constructed independent variables were truly independent, that is, they showed only low intercorrelations. Multicollinearity was avoided this way.

The models then were tested using Time Series Analysis. This implied Box and Jenkins ARIMA-models (Box and Jenkins 1976; Glass, Gottmann and Willson 1975; McCleary and Hay 1980) that produce 'white noise' models. For diagnosis the program CORREL, and for computing the coefficients and parameters, the program TSX was exploited (Glass, Gottmann and Willson 1975). This program did not include a time lag procedure. Therefore, an additional time lag analysis was conducted using the DURBIN2-program (Durbin-Watson method).

To compare the adequacy of the models the Akaike's Information Criterion (AIC) was computed. This criterion is somewhat related to the R-square ( $R^2$ ), but uses the unexplained variance instead. Nevertheless, the interpretation is that higher values of AIC coincide with a better performance (fit) of the models.

To check the explanatory value of models, spurious models of weather statistics were constructed. In order to show validity, the suggested theoretical models should have better explanatory values than those of the spurious ones: their AIC's should be higher than those of the models built from weather statistics.

During the analyzes a number of controls have been added to check the final results. For instance, complete versus incomplete

series were used to find out if this made any substantial difference. In general, such analyzes indicated little or no systematic influence.

More than twenty time series of social phenomena were gathered this way or constructed from American statistics or yearly repeated American opinion polls. The over all hypothesis was here that higher levels of authoritarianism would correspond with higher levels of the social and economic indicators. For both the social and economic indicators time series were collected.

### The Social Series

The social series were collected as operationalizations of the Adorno et al. (1950) subsyndromes: conventionalism, authoritarian submissiveness, authoritarian aggression or punitiveness, anti-intracception, superstition and stereotypy, power and toughness, preoccupation with 'sexual goings on', projectivity and cynicism, and destructiveness.

#### Conventionalism

Four indicators refer mainly to non-conventionalism. Non-conventionalism was hypothesized to be inversely related to conventionalism. It appeared that the last three series were highly intercorrelated. This suggested that higher levels of conventionalism in society were supposed to be associated with lower levels of identifying with non-conventional religions, lower levels of violation rates of military discipline and lower levels of the desertion rate.

*Series 1. Religious Non-Conventionalism (REL-CONV):* The series included the number of persons identifying with religions other than the major ones: Protestant, Catholic or Jewish. This series was constructed from Gallup Poll publications (Religion in America 1971, 1976, 1981).

*Series 2. Violation Rate (VIOL-RT):* This series was constructed of the series of those violating military discipline as compared to the total numbers of the U.S. military personnel. Both series were taken from the U.S. Historical Statistics and the annual U.S. Historical Abstracts.

*Series 3. Violation Rate (VIOL-POP):* The previous series of those violating military discipline was also compared to the total U.S. population. These series were also constructed from U.S. Historical Statistics and U.S. Historical Abstracts.

*Series 4. Desertion Rate (DES-RT):* The rate of desertion from military service was another indicator of non-conventionalism. The series was constructed from U.S. Statistical Abstracts.

### Submissiveness

Four series refer to religious submissiveness and family planning. Authoritarian submissiveness was supposed to be related to higher levels of church attendance, to population growth, and to a preference for large families and not to one for small families. The following ones were available.

*Series 5. Church Attendance (CH-ATT):* This series indicated religious participation: the mean percentage of participation over each year. The series was constructed from Gallup publications (Religion in America 1971, 1976, 1981).

*Series 6. Population Growth (POP-GR):* This series was considered an indication of the result of family planning. Therefore the growth due to immigration had to be subtracted from this series (U.S. Historical Statistics, U.S. Statistical Abstracts).

*Series 7. Preference for Large Families (L-FAM):* This was a series expressing the percentage in the population with a preference for large families (four or more children).

*Series 8. Preference for Small Families (S-FAM):* The reverse of submissiveness was considered a preference for small families (two or less children). Both series were constructed from periodically published opinion polls (Gallup publications).

### Authoritarian Aggression

Five series indicated social punitiveness or aggression toward groups with an underprivileged social position. Higher levels of authoritarian aggression in society were hypothesized to be related to a greater number of the population in favor of prohibition, to a greater number of executed capital punishments, to relatively more prison inmates, and to a higher percentage of women as targets in homicides.

*Series 9. Those in Favor of Prohibition (PROHIB):* This series included those in favor of the prohibition of alcohol in periodical opinion polls (Gallup publications).

*Series 10. Executed Capital Punishments (CAP-PUN):* The annual number of executed capital punishments was considered to be one of the most significant indicators (U.S. Historical Statistics).

*Series 11. Number of Prison Inmates (PRIS-POP):* This series was constructed from the number of prison inmates, as

compared to the total U.S. population (per capita, therefore; U.S. Historical Statistics, U.S. Statistical Abstracts).

*Series 12. Number of Prison Inmates (FED-PRIS):* For reasons of comparison: the number of prison inmates exclusively in Federal Institutions was taken, once again as compared to the total U.S. population (per capita; U.S. Historical Statistics, U.S. Statistical Abstracts).

*Series 13. The percentage of Women Victims in Homicides (HOMIC-WM):* This series was constructed from the homicide statistics: the percentage women victims of the total number of homicides (total = male and female victims; U.S. Historical Statistics, U.S. Statistical Abstracts).

### Anti-Intracception

One series was constructed indicating opposition toward tender feelings, and introspection. This was called 'anti-intracception' by Adorno et al. (1950), following Murray's definition. Authoritarians were supposed to find psychological questioning of themselves ego-threatening. It was therefore hypothesized that they would not or less answer psychological questions of opinion polls. Higher levels of anti-intracception were expected to be associated with higher levels of non-response.

*Series 14. Non-Response to Psychological Questions (NO-OP):* This series was constructed from the non-response figures to psychological questions in Gallup polls (Gallup publications).

### Superstition and Stereotypy

Three series refer mainly to educational sophistication (or its reverse: the lack of education) and the stereotypical role of some groups in society. These were hypothesized to be indicators of social vulnerability to superstition and stereotypy. A lower level of superstition and stereotypy was supposed to be associated with more males in favor of a woman for president, a higher percentage of students graduating from high school and a higher average educational level for women.

*Series 15. A Woman for President (WM-PRES):* This series was constructed from a number of polls (Ferree 1974; Schreiber 1978; Erskine 1971). Only the answers of the male respondents were included. Men favoring a woman for president seemed related to anti-stereotyped views.

*Series 16. Percentage High School Graduates (H-GRAD):* The percentage of 18-year-old adolescents, who finished high school over time was considered an indicator of educational

sophistication (U.S. Historical Statistics; U.S. Statistical Abstracts).

*Series 17. Average Educational Level of Women (ED-WM):* This series indicated the average educational level of women and was constructed from social statistics (U.S. Historical Statistics; U.S. Statistical Abstracts). Only the series for women was used, as advancement of this socially underprivileged group may indicate growing educational sophistication and less susceptibility to superstition over time.

### Power and Toughness

Three series referring to military strength were supposed to be indicators of power and toughness in society. Only the numbers were taken of the forces that were not actively used in conflicts, as they represent the possible 'peace time' defensiveness. The size of the armed forces seemed to be related to the perception of external threat (Cold War mainly).

Higher levels of power and toughness were hypothesized to be related to higher levels of military expenditures, as well as greater numbers of military personnel. The three military indicators were indeed highly intercorrelated and suggested that a common variation over time seems likely.

*Series 18. U.S. Federal Defense Expenditures (DEF-FED):* This series was constructed as a percentage of the total U.S. Federal Budget. The extra expenditures of the Korea and Vietnam conflicts were not included (corrected for inflation; U.S. Historical Statistics; U.S. Statistical Abstracts).

*Series 19. U.S. Federal Defense Expenditures (DEF-GNP):* As an alternative the same series was constructed as a percentage of the Gross National Product (also corrected for inflation; U.S. Historical Statistics; U.S. Statistical Abstracts).

*Series 20. Military Personnel (MIL-POP):* The number of military personnel, that were not involved in conflicts, as compared to the total U.S. population served as an additional indicator (U.S. Historical Statistics; U.S. Statistical Abstracts).

### Preoccupation with Sex

This was not a common public issue, especially in older opinion polls. Therefore, only one series could be constructed indicating promiscuity. It was considered to be the reverse of preoccupation with supposedly immoral 'sexual goings on'. Higher levels of preoccupation with 'sexual goings on' were hypothesized to be related to lower levels of the promiscuity rate or VD.

*Series 21. Promiscuity Rate (PROM-RT):* The frequency of the reported venereal disease gonorrhea was constructed from socio-medical statistics (U.S. Historical Statistics; U.S. Statistical Abstracts). Note, that in the period covered here (1954-1977) the AIDS-virus was not yet known, nor, at hind sight, believed to be active.

### Projectivity, Cynicism and Destructiveness

Because of a lack of available and relevant series not all the sub-syndromes of the psycho-dynamic concept of authoritarianism could be operationalized. 'Projectivity', however, was supposed to be part of most of the already mentioned sub-syndromes. To some extent, the military strength series can also represent 'cynicism and destructiveness'.

### **The Economic Series**

Seven different series were constructed, referring to various aspects of the economic situation. The main hypothesis was that higher levels of authoritarianism were associated with economic stagnation and, therefore, with higher levels of unemployment, a higher failure rate, less growth of the GNP, worsening of the business conditions and the personal financial situation, and in general a more problematic economy.

*Series 1. The Unemployment Rate (UNPL-RT):* This series was available from social statistics (U.S. Historical Statistics; U.S. Statistical Abstracts).

*Series 2. The Perceived Unemployment Rate (P-UNPL):* This series was constructed from periodical opinion polls (Gallup 1972; Gallup Opinion Index 1970-1980), and was closely related to the statistical unemployment rate.

*Series 3. The Failure Rate (FAIL-RT):* This series was taken from existing statistical series (U.S. Historical Statistics; U.S. Statistical Abstracts).

*Series 4. The Growth of the Gross National Product (Prod-GR):* This indicator was available from general statistical series (U.S. Historical Statistics; U.S. Statistical Abstracts).

*Series 5. The Expected Business Conditions (EXP-BC):* This series was constructed from periodic opinion polls (Social Indicators 1980).

*Series 6. The Expected Personal Financial Situation (EXP-PFS):* A series constructed from the same source (Social Indicators 1980).

Series 7. Gallup's Economic Indicator (GALL-EC): As a general indicator of the economy, this series was constructed from the economic answers to the frequently used Gallup question of 'what is the most important problem today?'. This series served also as a global indicator of the economic situation (Gallup 1972; Gallup Opinion Index 1970-1980).

**The Models**

It appeared that the selected social variables were strongly associated with the authoritarianism series. This confirmed in general their hypothesized relationships with authoritarianism (Table 1).

It must be emphasized that in time series analysis only high correlations will result in similar - parallel - fluctuations in time. Moderate correlations will not be satisfactory in this respect. More sophisticated than correlational analysis, however, is time series analysis.

Table 1. Series included in the Tested Models

Nr	Series	AUT	Models							
			4	5	6	7	8	9	10	11
			Ad-1	Ad-2	Ad-3	Ad-4	Cogn	Econ	Caus	Beh
<b>Economic Series</b>										
1.	P-UNPL	-28	.	.	.	x	.	x	.	.
2.	UNPL-RT	-02	.	.	.	x	.	x	.	.
3.	FAIL-RT	+70	.	.	.	x	.	x	.	.
4.	PROD-GR	+09	.	.	.	x	.	x	.	.
5.	EXP-BC	-72	.	.	.	x	.	x	.	.
6.	EXP-PFS	-43	.	.	.	x	.	x	.	.
7.	GALL-EC	-51	.	.	.	x	.	x	.	.
<b>Social Series</b>										
1.	REL-CONV	+93	x	x	1	x	.	.	.	x
2.	VIOL-RT	+84	.	x	1	x	.	.	.	x
3.	VIOL-POP	+85	.	x	1	x	.	.	.	x
4.	DES-RT	+84	.	x	1	x	.	.	.	x
5.	CH-ATT	+95	x	x	2	x	.	.	.	x
6.	POP-GR	+92	.	x	2	x	.	.	.	x
7.	L-FAM	+81	.	x	2	x	.	.	.	x
8.	S-FAM	+82	.	x	2	x	.	.	.	x
9.	PROHIB	+79	.	x	3	x	.	.	.	x
10.	CAP-PUN	+86	.	x	3	x	.	.	x	.
11.	PRIS-POP	+86	.	x	3	x	.	.	x	.
12.	FED-PRIS	+86	.	x	3	x	.	.	x	.
13.	HOMIC-WM	+93	x	x	3	x	.	.	.	x
14.	NO-OP	+87	x	x	5	x	.	.	.	x
15.	WM-PRES	+72	.	x	6	x	.	.	.	x
16.	H-GRAD	+80	x	x	6	x	x	.	x	.
17.	ED-WM	+83	.	x	6	x	x	.	x	.
18.	DEF-FED	+92	x	x	4	x	.	.	x	.
19.	DEF-GNP	+96	.	x	4	x	.	.	x	.
20.	MIL-POP	+88	.	x	4	x	.	.	x	.
21.	PROM-RT	+79	x	x	7	x	.	.	x	.

Column 3: Pearson correlation of AUT with the social and economic series (if the general hypothesis is supported this correlation is positive: +).

Column 6: 1 = (non)conventionalism, 2 = submissiveness, 3 = authoritarian aggression, 4 = power and toughness, 5 = anti-intracception, 6 = stereotypy, 7 = sexual preoccupation.

Column 4-11: x = series is included in the model.

Column 4-11: Ad-1 = Model Adorno-1; Ad-2 = Model Adorno-2; Ad-3 = Model Adorno-3; Ad-4: Model Adorno-4; Cogn = Cognitive Model; Econ = Economic Model; Caus = Causal Model; Beh = Behavior Model

The social series showed rather strong intercorrelations, indicating a general tendency to rise and fall collectively in the same time period of 1954-1977. This, however, appeared not to be the case for the economic variables. They neither showed a

general tendency (nor one common factor), nor were they in any systematic way associated with authoritarianism as the social variables were. As indicator of the perceived economic condition, the unemployment series proved to be the most useful one in the subsequent analysis.

A number of models were built and tested (Table 1: refers to the series used in the tested models; Figure 2. shows some of the most influential model series).

The general equation for the psycho-dynamic models was:

$$AUT = LEVEL + EC-AUT + SOC-AUT + ERROR$$

This meant that the student-authoritarianism series (AUT) was to be explained by an economic factor (EC-AUT) and a social authoritarianism factor (SOC-AUT). The level is the constant, and the error has to be 'white noise' or random error.

### The Psycho-Dynamic Models

More than one model was constructed here, because there were several ways to reduce the number of the included series.

(1) *The Adorno-1 Model:* Computed from seven single social series, one from each of the Adorno sub-syndromes. The first PC was extracted (AD-AUT-7), and used as the social authoritarianism factor. The unemployment series (UNPL-RT) was used as the economic authoritarianism factor. This way, the social and the economic series served as independent variables to explain the (student) authoritarianism series (AUT):

$$AUT = LEVEL + UNPL-RT + AD-AUT-7 + ERROR$$

(2) *The Adorno-2 Model:* From the 21 social series the first PC was computed, and this series (SOC-AUT-21) was used as the social authoritarianism factor. The other variables were equal to the ones of the first model. The difference with the first model was mainly procedural:

$$AUT = LEVEL + UNPL-RT + SOC-AUT-21 + ERROR$$

(3) *The Adorno-3 Model:* The first PC of each of the seven sub-syndromes was extracted, and then again, the first PC of these seven new series was taken. The final series (SOC-AUT-21-7) was used as the social authoritarianism factor. The other variables were again the same as those of the first model. From a theoretical point of view this may be considered the best model:

$$AUT = LEVEL + UNPL-RT + SOC-AUT-21-7 + ERROR$$

(4) *The Adorno-4 Model:* PC-analysis of the 7 economic and the 21 social series was executed, and the first two components were used. The result closely resembled the social and economic factors in the other Adorno models. From a methodological point of view this might be considered the best model:

$$AUT = LEVEL + EC-AUT-PC-2 + SOC-AUT-PC-1 + ERROR$$

In these four psycho-dynamic models the constructed social series were only slightly different, and they proved to be highly comparable. This was also true for the used economic series.

### The Cognitive-Learning Model

Here only two series could be considered to be expressions of the cognitive and learning approaches. Since both series were fairly similar, but rather dissimilar from the psycho-dynamic and economic series, they seemed to indicate an independent explanation.

(5) *The Cognitive Model:* The first PC was taken from the two series that were considered indicators for educational sophistication (COGN-AUT). This series was used together with the unemployment series (UNPL-RT), as an indicator of the economic-series. The economic variable was added to make the model comparable to the psycho-dynamic models. A cognitive model built from one, single cognitive variable performed badly in terms of time series analysis and was therefore not included:

$$AUT = LEVEL + EC-AUT + COGN-AUT + ERROR$$

### The Economic Model

Even though the economic series did have relatively little in common they could be reduced to two variables. These were used to compute the performance of this model.

(6) *The Economic Model:* Applying PC-analysis to the seven economic series, the first two PC factors were used as the independent variables (EC-AUT1, EC-AUT2). One of these appeared to closely resemble the unemployment series:

$$AUT = LEVEL + EC-AUT1 + EC-AUT2 + ERROR$$

### The Spurious Model

To compare the performance of the previous theoretical models, a spurious model was built from random time series of weather statistics (see Figure 2).

(7) *The Spurious Model:* PC-analysis was performed including 20 series of random annual U.S. weather statistics. The first



two components (SPUR-AUT1, SPUR-AUT2) were used as independent variables. They were needed to compare this model to the previous theoretical models:

$$AUT = LEVEL + SPUR-AUT1 + SPUR-AUT2 + ERROR$$

### The Test: Time Series Analysis

The models were tested by time series analysis (Table 2). Since they included mainly two explaining factors (apart from the level and error), the resulting statistics indicated the comparative performance of the models as well. The highest AIC values indicate the best performance of the models (actually the least negative value, since all values of AIC are negative).

Table 2. Models Explaining Authoritarianism Series 1954-1977

Code	Model	AIC	Equation	(1)	(2)
Ad-1	Adorno-1	-24.0	AUT = L*	+ UNPL-RT*	+ AD-AUT-7*
Ad-2	Adorno-2	-24.3	AUT = L*	+ UNPL-RT*	+ SOC-AUT-21*
Ad-3	Adorno-3	-24.3	AUT = L*	+ UNPL-RT*	+ SOC-AUT-21-7*
Ad-4	Adorno-4	-25.9	AUT = L*	+ EC-AUT-PC2*	+ SOC-AUT-PC1*
Cogn	Cognitive	-30.6	AUT = L	+ EC-AUT	+ COGN-AUT
Econ	Economic	-32.7	AUT = L*	+ EC-AUT1	+ EC-AUT2
Spur	Spurious	-32.9	AUT = L*	+ SPUR-AUT1	+ SPUR-AUT2

L = Level; \* = Contribution significant (5% chance level); Residual: Not shown (always 'white noise'); AIC of spurious models ranging from -30.2 to -32.9; in Adorno models: (1) economic variable (EC-AUT), (2) social variable (SOC-AUT).

### The Economic and Cognitive Models

The purely economic model produced no better statistical explanation than the spurious model. The cognitive model performed only slightly better than the spurious model, and much less than the Adorno models. Also, even more problematic, neither of the two main variables in the economic and cognitive models appeared to be significant. Several comparable models (not presented here) were tested, but their performance was not much better. The coefficients of the explanatory variables were hardly ever significant, nor were their AIC coefficient much different from the spurious models.

### The Psycho-Dynamic Models

The best models appeared to be the four psycho-dynamic models. They showed the highest AIC's. Most important was that these AIC's were much higher than the AIC's of the spurious models. The psycho-dynamic models explained also most of the variance (R2 higher than .95). These models all were constructed from (1) one strong and always significant social factor, the common factor of the phenomena based on Adorno et al. assumptions, and (2) one rather weak, but also still significant, economic factor, mainly the unemployment rate (Figure 3). The significance of the social factor in the various Adorno models was strong, while the unemployment factor in most cases just reached significance. The unemployment factor, however, did improve the models enough to justify its inclusion.

### Performance Models

It was concluded from this test that the models build from the assumptions of Adorno et al. apparently more adequately explained the fluctuations in time of authoritarianism. These models performed better than models build on the other mainstream explanations of authoritarianism: the purely economic and cognitive approaches. Whereas the psycho-dynamic models performed better than the spurious model, the purely economic and the cognitive models did not. Their performance was not better than that of the spurious one.

These results seem to give some advantage to the psycho-dynamic approach over the cognitive and purely economic ones. However, the psycho-dynamic models included a rather weak economic contribution to the explanation of authoritarianism. But a purely economic explanation of authoritarianism in society seems rather unlikely from this analysis. Since the economic indicators do not all run parallel in time, it is also very unclear which of the economic phenomena should be involved. The relation with economic stability may also be more indirect, or restricted to situations of much more social disorder, than was the case in the 1950s through 1970s in the USA (a rather stable period, compared to the 1930s, for example).

Models of Societal Effects

Additionally, an analysis was performed to test the societal effects of major elements of the various models. The following hypothesis on societal causality was tested: fluctuations of authoritarianism in society will cause fluctuations in personal authoritarianism, that again will lead to fluctuations in related authoritarian behavior. This was operationalized as follows: fluctuations in series indicating social and institutional phenomena will cause fluctuations in authoritarian attitudes, the student authoritarianism series, that again will cause fluctuations in series indicating individual behavior. The hypothesis was considered supported if the three consecutive elements (1) social authoritarianism, (2) authoritarian attitudes and (3) authoritarian behaviors would make a causal chain in this order, each with a significant time lag in between. This hypothesis was tested in two ways: by Cross-Correlation Analysis and by Path Analysis.

Cross-Correlation Analysis

For the cross-correlational analysis the social series were divided in (1) causal series and (2) behavioral series (see Table 1). Causal series included the large scale, social phenomena, like military strength and education. Behavioral series included those indicating individual behaviors or involving individual decisions, like church attendance, desertion rate and percentage of women victims in homicides.

The causal and behavioral series were both reduced to one factor by extracting once again the first principal component (CAUS-AUT, BEH-AUT respectively). Then cross-correlational analysis was performed, including the student-authoritarianism (AUT) series.

Remarkably, the result of this analysis indeed indicated a time lag between causal authoritarianism and student authoritarianism, as well as one between student authoritarianism and behavioral authoritarianism (Table 3). This suggested support for the hypothesis of a causal chain. Large scale social authoritarianism with a time lag appeared to be followed by student-authoritarianism, which in turn appeared to be followed by the behavioral authoritarianism series. This suggested that if there is a rise in authoritarianism on a social level, this will be followed by a rise in authoritarianism of individual attitudes, and finally in a rise in the number of authoritarian behaviors. A decrease of social authoritarianism

also will be followed by a decrease in authoritarian attitudes and numbers of authoritarian behaviors. At least, some social influences (race segregation, Vietnam War) may have had individual effects on attitudes and behaviors in the 1960s, quite contrary to what is believed in social and experimental psychology. But then such large scale phenomena can hardly be re-created in psychological campus laboratoria.

Table 3. Cross-Correlations Authoritarianism Series 1954-1977

CAUS-AUT & AUT	AUT & BEH-AUT	CAUS-AUT & BEH-AUT
-1 yr = +.934	-1 yr = +.900	0 yr = +.965
0 yr = +.951	0 yr = +.928	+1 yr = +.985
+1 yr = <b>+.961*</b>	+1 yr = <b>+.948*</b>	+2 yr = <b>+.993*</b>
+2 yr = +.941	+2 yr = +.938	+3 yr = +.989

CAUS-AUT = Causal authoritarianism series; AUT = Student authoritarianism series; BEH-AUT = Behavioral authoritarianism series; highest correlation indicates time lag.

Path Analysis

The second method that was used for the causal chain hypothesis was Costner's path analysis. The association of authoritarianism with authoritarian behavior was computed using some of the most salient indicators of the above presented analysis. Social authoritarianism and student authoritarianism were used as indicators on the causal side. Church attendance and the percentage women victims in homicide, as indicators of resulting behavioral tendencies (See Figure 4 and 5).

The relationship appeared to be particularly strong, from .883 up to .986. Thus operationalized and tested, there seems to a relation between authoritarianism and effects on behavior, that social psychology has never been able to find. However, it should be noted again that in time series like these, the values of the correlations between the series can not be compared with those computed from cross-sectional survey variables.

**Discussion**

This was partly an explorative and partly a hypothesis testing analysis. Therefore, the developed models need further validation. The present time series analysis suggests that fluctuations of authoritarianism in society can be explained

mainly by a social authoritarianism factor and an economic factor. The social factor represents the common trend in authoritarianism-related social phenomena, like militarism, social punitiveness, and religious orthodoxy. The economic factor represents mainly unemployment. The social factor appeared to be much stronger than the economic one in explaining authoritarianism.

The most likely explanation of the social authoritarianism factor - that was high in the 1950s and decreased throughout the 1960s and early 1970s - may have been the existing foreign threat, as perceived by the American population during the Cold War. However, it may also suggest that political maneuvering during the McCarthy era of the 1950s may have increased the perception of this threat, that subsequently faded during the 1960s and was even followed by a minor 'detente' with the then existing USSR in the early 1970s. Whatever the nature of such explanations, that may deserve further attention, the present results only suggest a social fluctuation, that is strongly related to the empirical authoritarianism series, that was the start of this analysis.

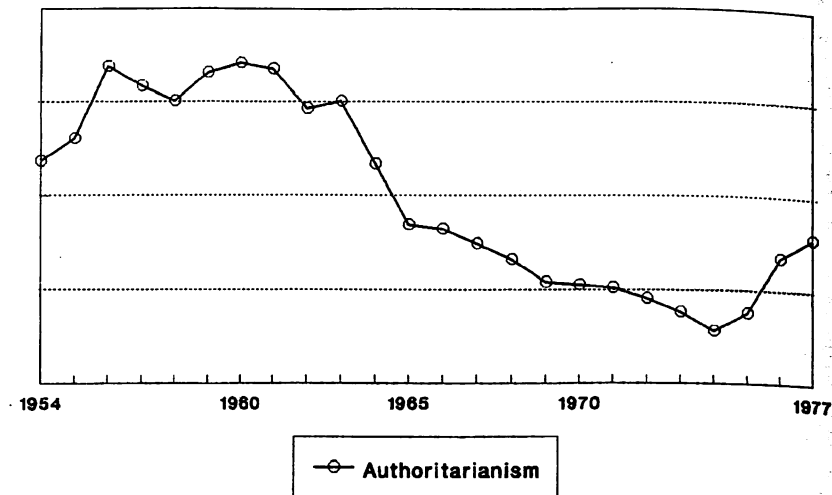
A causal chain from large scale social authoritarianism related phenomena, through (student) authoritarianism to authoritarian behavior also appeared in this analysis. It suggests that at least some large scale phenomena may have an impact on individuals and their behavior as far as authoritarianism is concerned. Although this may seem somewhat obvious, empirical evidence has hardly become available, so far.

In this analysis the second Adorno model was theoretically and empirically the most adequate and complete model, and this model has therefore been used in other analyzes. However, this model was also considered to be preliminary. Not all indicators of social phenomena, related to authoritarianism, were available, or (maybe) can be available. Furthermore, one may wonder how many indicators are needed to represent adequately a social phenomenon: One or many? And if many: How many? The present model at least indicates that some social phenomena seem to share concomitant variation with authoritarianism.

It is quite remarkable that assumptions derived from the Adorno et al. theory were more successful in this analysis, than the rival theories of purely economic or cognitive interpretations, that have been suggested before as explanations of authoritarianism. In this analysis neither the purely economic, nor the cognitive models appeared to perform better than spurious models of

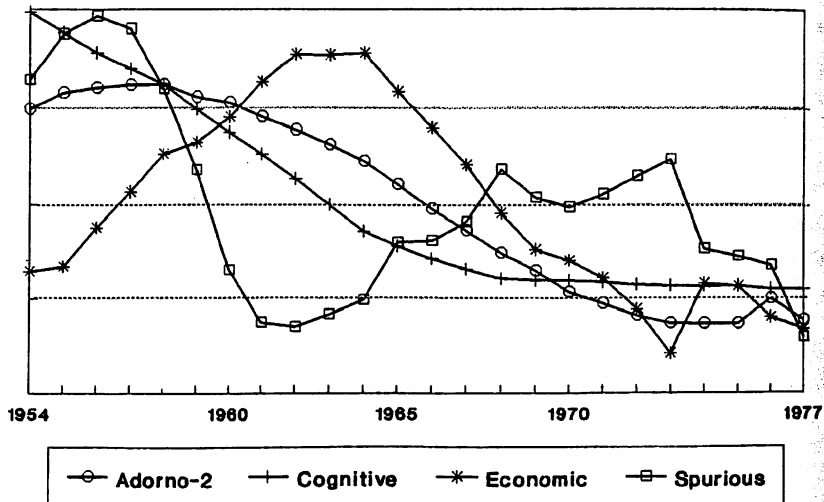
weather statistics. Apparently, the assumptions derived from Adorno et al. seem to have some surplus value over the alternatives. Whatever the present status of their investigation in the late 1940s, some elements of their theory may have been quite adequate.

**Figure 1. Time Series Authoritarianism**  
136 Student Samples  
USA 1954-1977



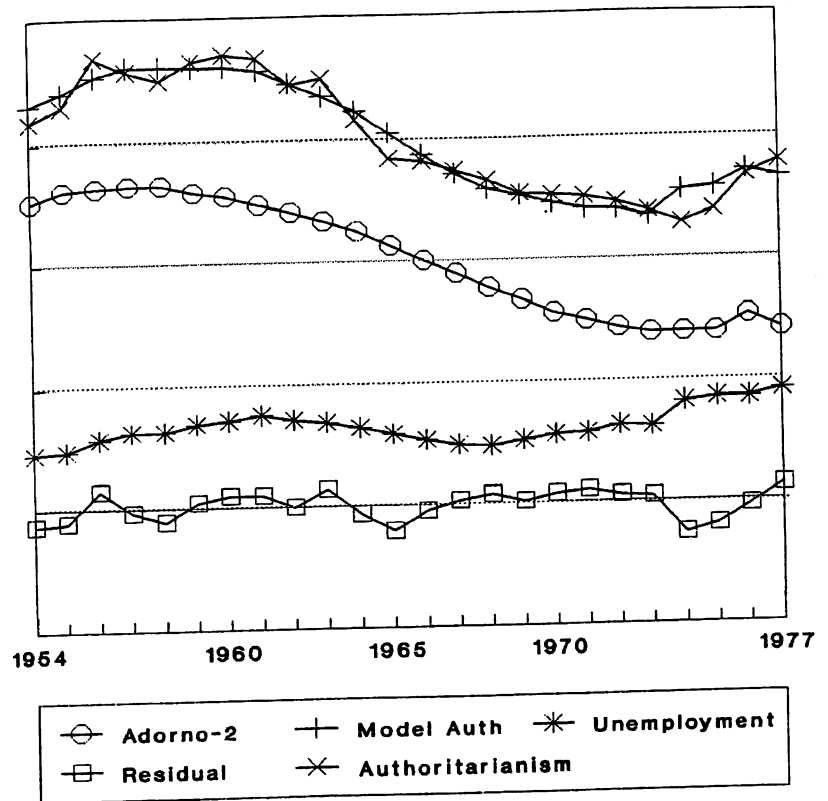
standardized and smoothed  
● Melen 1983/1998

**Figure 2. Main Indicators of Models**  
Time Series Authoritarianism  
USA 1954-1977



standardized and smoothed  
● Melen 1983/1998

**Figure 3. Adorno-2 Model**  
Time Series Authoritarianism  
USA 1954-1977



standardized and smoothed  
● Melen 1983/1998

Model Equation Adorno Model-2:

$$\text{Authoritarianism} = -13.32 + 0.26 \text{ Unemployment} + 1.01 \text{ Adorno-2} + \text{Residual}$$

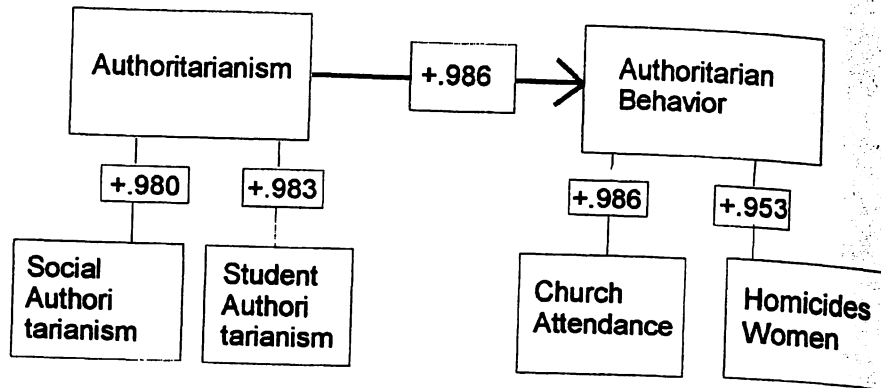
(-2.48\*)      (4.04\*)                      (14.58\*)

$$\text{Residual}(t) = 0.28 \text{ Residual}(t-1) + \text{White Noise}$$

Authoritarianism = student authoritarianism series (dependent variable)  
Model Auth = computed authoritarianism-model providing the best explanation  
Unemployment = Unemployment series (first independent variable)  
Adorno-2 = Adorno et al. authoritarianism series (second independent variable)  
N = 24 years  
t-values (in brackets) over 2.080 are significant (5% chance level)

Figure 4. Costner's Causal Effects

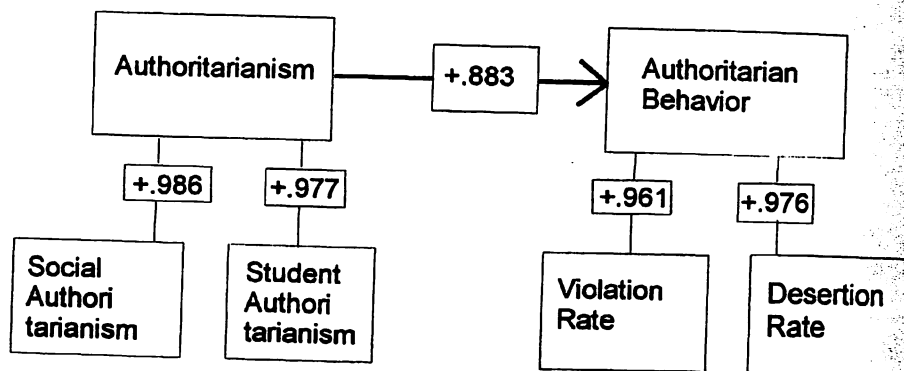
Authoritarianism and Behavior (1)



@ Melen 1983/1998

Figure 5. Costner's Causal Effects

Authoritarianism and Behavior (2)



@ Melen 1983/1998

References

Adorno, T.W., E. Frenkel-Brunswik, D.J. Levinson, and R.N. Sanford. 1950. *The Authoritarian Personality*. New York: Harper and Row. Also: Abridged Edition. 1982. New York: Norton and Company.

Altemeyer, B. 1988. *Enemies of Freedom*. London: Jossey Bass.

Box, G.E.P., G.M. Jenkins. 1970. *Time Series Analysis: Forecasting and Control*. San Francisco: Holden-Day.

Bureau of the Census. 1980. *Social Indicators III*. U.S.A.

Duckitt, J. 1992. "Threat and Authoritarianism: Another Look." *Journal of Social Psychology* 133(5): 697-698.

Doty, R.M., B.E. Peterson, and D.G. Winter. 1991. "Threat and Authoritarianism in the United States 1978-1987." *Journal of Personality and Social Psychology*, 61: 629-640.

Erskine, H. 1971/72. "The Polls: Womens' Role." *Public Opinion Quarterly* 35: 274-290.

Ferree, M.M. 1974. "A Woman for President: Changing Responses 1958-1972." *Public Opinion Quarterly* 38: 390-399.

Fromm, E. [1941] 1965. *Escape from Freedom*. New York: Avon/Holt, Rinehart, and Winston.

Gallup, G.H. 1972. *The Gallup Poll: Public Opinion 1935-1971*. Random House, New York.

Gallup, G.H. 1971, 1976, 1981. *The Gallup Opinion Index: 1970-1981*. Including 'Religion in America'. Gallup.

Glass, G.V., V.L. Willson, and J.M. Gottman. 1975. *Design and Analysis of Time Series Experiments*. Boulder: Colorado Ass. University Press.

Goldstein, K.M., S. Blackman. 1978. *Cognitive Style*. New York: Wiley and Sons.

Jay, M. 1973. *The Dialectical Imagination*. Boston: Little, Brown and Co.

Jorgensen, D.O. 1975. "Economic Threat and Authoritarianism in TV-Programs 1950-1975." *Psychological Reports* 37( 3): 1153-1154.

McCleary, R., R.A. Hay. 1981. *Applied Time Series Analysis for the Social Sciences*. London: Sage.

Melen, J.D. 1983. *De autoritaire reaktie in tijden van welvaart en krisis* [The Authoritarian Response in Times of Prosperity and Crisis]. Unpublished Doctoral Dissertation, University of Amsterdam.

Melen, J.D. 1986. "The Dynamic Socio-Political and Economic Influence on Authoritarianism: The Construction of an Empirical Time-Series Model." Pp. 62-71 in *Political*

- Psychology in The Netherlands, The Nijmegen Papers*, edited by M. Brouwer, J. van Ginneken, A. Hagendoorn, and J.D. Meloen. Amsterdam: Mola Russa.
- Meloen, J.D., L. Hagendoorn, Q. Raaijmakers, and L. Visser, L. 1988. "Authoritarianism and the Revival of Political Racism: Reassessments in The Netherlands of the Reliability and Validity of the Concept of Authoritarianism by Adorno et al." *Political Psychology* 9( 3): 413-429.
- Meloen, J.D. 1991. "The Fortieth Anniversary of 'The Authoritarian Personality'." *Politics and the Individual* 1(1): 119-127.
- Meloen, J.D. 1993. "The F Scale as a Predictor of Fascism: An Overview of 40 Years of Authoritarianism Research." Pp. 47-69 in *Strength and Weakness: The Authoritarian Personality Today*, edited by W.F. Stone, G. Lederer, and R. Christie. New York: Springer Verlag.
- Meloen J.D., G. Van der Linden, H. de Witte. 1996. "A Test of the Approaches of Adorno et al., Lederer and Altemeyer of Authoritarianism in Belgian Flanders: A Research Note." *Political Psychology* 17(4): 643-656.
- Montgomery, R.L., S.W. Hinkle, and R.F. Enzie. 1976. "Arbitrary Norms and Social Change in High and Low Authoritarian Societies." *Journal of Personality and Social Psychology* 33(6): 698-708.
- Sales, S.M. 1972. "Economic Threat as a Determinant of Conversion Rates in Authoritarian and Non-Authoritarian Churches." *Journal of Personality and Social Psychology* 23(3): 420-428.
- Sales, S.M. 1973. "Threat as a Factor in Authoritarianism: An Analysis of Archival Data." *Journal of Personality and Social Psychology* 28(1): 44-57.
- Schreiber, E.M. 1978. "Education and Change in American Opinions on a Woman for President." *Public Opinion Quarterly* 42: 183-198.
- Stone, W.F., G. Lederer, and R. Christie, editors. 1993. *Strength and Weakness: The Authoritarian Personality Today*. New York: Springer Verlag.
- U.S. Historical Statistics. *Historical Abstracts of the U.S.A., Colonial Times to 1970*, Volume I and II. Department of Commerce, Bicentennial Edition.
- U.S. Statistical Abstracts. 1970-1981. *Statistical Abstracts of the U.S.A. Yearbooks*.
- Winter, D.G. 1996. *Personality: Analysis and Interpretation of Lives*. New York: McGraw-Hill.

---

## ATTACHMENT EXPERIENCES AND AGGRESSION AGAINST MINORITIES<sup>1</sup>

---

Christel Hopf  
Institut für Sozialwissenschaften  
Universität Hildesheim

Social Thought and Research, 1998, Vol. 21, 1-2

This article is the revised version of a lecture given in October 1996 at the 28th Congress of the German Society for Sociology in Dresden. See also the German text in Stefan Hrad'1 (ed.), *Verhandlungen des 28. Kongresses der Deutschen Gesellschaft für Soziologie in Dresden* (1997).

### 1. Introduction

In recent years, the most striking and politically spectacular aggressive acts against minorities committed in Germany have been directed against ethnic minorities and political asylum-seekers. In this article, I will attempt a social-psychological analysis of this particular kind of aggression by combining insights from attachment research with authoritarianism research.

Aggression against minorities can be analyzed on a number of different levels:

-- the level of society: this level involves aggression that is firmly embedded in the political culture. Such aggression can also find official sanction in laws, administrative regulations, and directives for how state employees are to act. The most obvious and extreme example of this in Germany is the array of discriminatory regulations and legislation used to confine, ostracize, and destroy the Jewish population during the National Socialist period.

---

<sup>1</sup>Translation: Carol Scherer