ECONOMIC RECESSIONS AND NEUROTIC PROBLEMS: THE NETHERLANDS 1930 - 1985

Giel J.M. Hutschemaekers and Fons J.R. van de Vijver

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Summary

It is commonly assumed that economic dips give rise to an increase in neurotic problems. The validity of this claim is investigated in an analysis of 4511 files of neurotic patients from nine different archives covering the last half century. It was found that complaints among neurotics do not increase during recessions, but that they rather increase in times of prosperity. For unemployed neurotics the effects are most salient: a large decrease of neurotic complaints appears during economic depressions. A historical-contextual model is proposed to account for this pattern. Rather than explaining the changes in occurrence of neurotic complaints by referring to a decrease or increase of mental health, the model considers the social interpretation which types of behavior receive as the major source of changing patterns of neurotic complaints.

1 INTRODUCTION

Contemporary Western belief is that illness and society are interdependent. Herzlich (1979) called this `une vision Rousseauïste'. It assumes that man is healthy by birth and that illnesses have social causes. Stressors such as urbanization and the introduction of new technology are taken to induce illness. The belief that social conditions cause illness is also fairly common among health specialists. From general practitioners we learn that tension, problems at work and stress are hazardous factors threatening our health. This holds in particular for neuroses, here defined as `non-psychotic psychopathological disturbances'; neuroses are seen to result from social influences. Historical changes in their occurrence are seen as an indication of the quality of society.

The idea that society can have a detrimental influence on psychic health is quite old. In fact, it could be argued that the concept of neurosis was introduced to embody this relationship. Cullen (1710-1790) used the term referring to the so-called `English malady' discovered by Cheyne (1671-1743). This syndrome, which was typical of England, consisted of headaches, giddiness, loss of appetite and vapours, and was taken to be caused by Britain's special climate and habits of living (cf. Lopez Pinero, 1983). In the history of the study of neurosis, we often come across this kind of arguments, e.g., in the works of Pinel, Charcot, Freud, Fromm, and more recently, Kohut and Lasch. Lasch's controversial book The Culture of Narcissism (1979) is a good illustration of this belief; here again, the increase of (narcissistic) neuroses is put forward to argue that society is unhealthy.

The relation between neuroses and society is one of the topics in the general theme of this book. Where the impact of economic recessions is concerned we also meet the belief that external factors, more in particular economic depressions, induce psychological disorders (see Dooley & Catalano, 1986, p. 504). Veenhoven and Hagenaars (see introduction in this volume) indicate that it is often assumed that these harmful effects are brought about by intermediary processes such as declining

health care, unhealthy lifestyle, frustrated needs, chronic stress, impaired coping, and impaired social support. Moreover, it is often supposed that those negative influences are strongest in disadvantaged social categories such as the unemployed. Increases in neurotic problems can be seen as a proof for the claim that the crisis did hurt.

Did it really? The title of this volume already indicates that we cannot take that for granted. Veenhoven and Hagenaars argue that it is questionable whether crises necessarily imply an increase in physical or psychic health problems. Empirical evidence concerning the influence of economic fluctuations on neurotic disturbances is not as convincing as is often supposed. Dooley and Catalano (1986), in their review of literature, conclude that empirical results are far from coherent, and, in fact, sometimes contradict each other. Problems they mention are the inability to rule out alternative hypotheses (the same result may well be explained in several ways), and difficulties in finding a suitable operationalization of the dependent variable, e.g. mental health.

Suppose that a historical review would reveal a positive relationship between psychic complaints and economic recession. Could we then conclude that "the crisis did hurt"? Probably not. There are alternative explanations. It could be argued that the increased availability of professional help explains the relation. Or increased sensitivity to signs of psychic problems in times of recession both by patients and psychiatrists. Still another thing is the validity of the measures of mental health: What would be the best indicator for the presence of neurotic disturbances? The number of complaints as found in a nationwide survey? The number of complaints as expressed to psychiatrists? The number of neurotics according to psychiatrists? We shall argue that neither the number of patients nor the psychiatric judgement, nor the amount of complaints presented in the population are good indicators of mental health. A different kind of operationalization is chosen: the relative frequencies of complaints presented to psychiatrists[1].

This chapter presents an empirical study of 4511 neurotics in the period 1930-1985. It is questioned whether complaints rise in times of economic downturn. We shall demonstrate that economic recession rather causes a decrease in the relative frequencies of most of the complaints. This effect is strongest for the most disadvantaged: the unemployed. Finally we shall argue that fluctuations in neurotic complaints do not necessarily reflect a change in mental health; they can as well be explained as different attributions.

2 HOW TO MEASURE NEUROTIC PROBLEMS?

2.1 Psychiatric admissions and help-seeking

Suppose we adhere to the popular view that economic dips harm mental health. The underlying assumption is that economic decline is an important `stressor', which brings the human equilibrium out of balance. The more the equilibrium is distorted, the higher the risk an individual will decompensate (mental illness) and will need treatment. If this hypothesis is correct, the number of people asking for psychiatric help constitutes an adequate operationalization of mental health (or more accurately, of mental illness). It is not surprising, therefore, that Dooley and Catalano (1986) report 15 studies in which mental health is operationalized as the number of admissions and help-seeking. In spite of this uniformity these studies do not yield the same results. On the contrary, in some studies a positive correlation was found between economic recession and admissions/help-seeking, whereas in others a negative correlation was found.

How can we account for these differences? We suggest that help-seeking and psychiatric admissions not only depend on mental health but also on the supply of help services, as well as on the social and financial consequences of being labelled as mentally ill. The influence of supply can

be nicely illustrated by research in general medical consumption. It is an established fact that the number of hospital patients does not simply follow from the health conditions of the population. Rather, the supply of hospital beds (the amount of beds per 10,000 inhabitants) dictates the number of admissions. Marshall and Funch (1979) have demonstrated that hospital capacity is a better predictor of the first admission rate than the condition of the national economy. And if we correlate the number of hospital beds with the average life expectancy, again we find a strong correlation.[2] Somewhat simplified we may say that the healthier the people, the higher the number of admissions. Probably this also applies to psychiatric admissions.

2.2 The psychiatric judgement

The second possible indicator of mental health is the psychiatric judgement. Experts such as psychiatrists and psychotherapists can indicate the severity of the neurotic problems of their patients. We can then compare severity ratings (diagnostic judgments) during economic recessions with ratings made in better times. If problems are seen to be more severe in times of economic decline that would indicate that crises hurt.

However, in a review of the literature Mischel (1968) showed that diagnostic statements are rather unreliable and have a quite poor validity. Similarly, Hutschemaekers (1987) demonstrated that psychiatrists disagree fairly consistently in their judgement about changes in neurotic disturbances over time as experienced in their own psychiatric practice. He found three types of psychiatrists. Each group uses its own attribution mechanism to account for historical shifts in the complaints of neurotic patients. One group attributes them to large and fundamental transformations in all neuroses. A second group affirmed that neuroses do not change and attributes changes to subjective expressions of complaints by the patients. The third group stated that symptoms and syndromes had changed, without any transformation of the underlying problems. The increase in identity problems was for example explained in three ways. The first group saw an increase of narcissism, a more severe disorder. The second group explained the appearance of identity problems as a `fashion': patients used other words to express basically similar problems. A third group interpreted them as a new syndrome formation. Psychiatrists appeared to construct diagnoses in line with their theories on the origin of neuroses, and their vision about social transformations in general. These consistent individual differences between psychiatrists warrant caution in using their judgement as operationalizations of mental health. Both private opinions and social changes are reflected in their judgement of historical changes in neuroses.

2.3 The number of complaints

Could the number of psychiatric `complaints' people report be used as an indicator of mental health? Complaints can be easily assessed by means of standard questionnaires and there are a lot of data on this matter based on representative surveys. Yet there are three major problems with the use of (self-reported) complaints as an indicator of mental health.

First, if we accept the number of complaints as an indicator, we must postulate that the more complaints people have, the poorer their health will be. This need not be true. It is well-known that some serious diseases give rise to only a few complaints, whereas others are accompanied by a large amount of complaints.

Second, the reliability and validity of self-reports is debatable. Self-reports are often prone to momentary mood fluctuations of the respondents, figures often vary from moment to moment. A rather poor reliability always questions the validity: what in fact are we measuring if the results fluctuate that much?

Third, we may wonder whether complaints are necessarily an indication of neurotic problems. Complaints are not always a sign of dysfunctional and maladaptive behavior. Thus, mourning is often an adequate strategy to adapt to the loss of a significant person. In fact, in this specific context such complaints are a sign of good health. Analogously, it might be argued that the increased incidence of complaints during economic crises should be interpreted as a sound coping strategy. We can also regard the presence of complaints during economic crises as a form of dissonance reduction (Festinger, 1957) or of other congruence maintaining cognitive strategies. If we expect that the crisis does hurt, complaining in times of recession underscores that view. Furthermore, one can more easily complain in bad times because there is something clear and external to complain about. There is no reason to consider such complaining as a sign of a disease. Mootz (see chapter 7) illustrates this point by showing that people during times of recession worry more about money and unemployment but do not report more psychosomatic problems.

2.4 The alternative: Relative frequencies of complaints

Another possibility is to combine the above methods by using complaints of neurotic patients. The impact of economic fluctuations may be investigated by comparing the number of complaints presented during prosperity and in periods of recession. This procedure has several advantages: First, we use complaints of people considered ill (they are either admitted to a psychiatric hospital, or treated by psychiatrists and psychotherapists). Thus there is little chance of including healthy complaints. Second, these complaints are less determined by the supply of health care. Once admitted, there is little point in overstating problems.

This procedure has the shortcoming that it does not allow conclusions about the severity of the impact of crises. Relative frequencies of complaints as such do not lead to an unambiguous conclusion concerning the severity of the neurotic problems. As argued above, the relationship between health and the number of complaints is not necessarily a linear one. Recent developments in psychiatry such as the implementation of a uniform diagnostic framework (for example the DSM III-r), take this problem for granted. Here too, one refrains from judgments about the severity of psychopathological problems and conclusions are limited to the presence of specific syndromes. This also holds for the present investigation: only shifts in relative occurrence of complaints and syndromes can be described.

3 METHOD

We investigate the relation between economic conditions and the relative frequencies of complaints. This involves the risk that random fluctuations in complaints and even modes of presentation of complaints could distort the picture. One possible way to control these effects is to take a long period into consideration. Therefore, we shall cover a longer time interval than in most of the other chapters. The period 1930-1985 will be analyzed. This has the advantage that we cover two economic recessions (1936 and 1982). Random fluctuations in neurotic complaints are reduced by grouping of complaints by means of factor analysis.

3.1 The selection of archives and patient files

Historical information about neurotic patients can be found in patient files. At several places in the Netherlands there are archives which cover a period of time that is sufficient for our purposes. In the past, a large group of neurotics was treated by private psychiatrists. Patient files of these practices have nearly all disappeared. The oldest private practice archives we could find date from the end of the thirties. One of them is included in our research, labelled `South-Netherlands'. More patient files can be found in the General Psychiatric Hospitals. Some of these are specialized in the care of neurotics, for example the sanatoria for nerve-diseases which were opened around 1900. The

`Christelijk Sanatorium voor Zenuwziekten' near Zeist has an excellent archive to which we were allowed access. Several university clinics (`Jelgersmakliniek' Leiden, `Universiteitskliniek Utrecht' and The `Valeriuskliniek' in Amsterdam) were also included in this research. The latter also has an out-patients clinic, which was started in 1910. Two special clinics for neurotics allowed us access to their archives: De `Viersprong' in Halsteren and the military clinic `Austerlitz' (1946-1964). The latter, which was originally intended for colonial veterans, soon became a clinic for soldiers with neurotic complaints. Another special clinic is the Sint-Antonius stichting (the later `Hooghuys') in Etten-Leur, which used to be a clinic for women with social and psychological problems. Files dating from 1930 until the present day are included. A total of 9 different archives was included in our research. Their names and some more specific information have been presented in table 1.

The patient files were sampled in an aselect way. For each period of five years about 50 files were scored (1931-1935, 1936-1940, etc.). The total number of files included in each archive is given in table 1. Files of psychotic patients were excluded from the analysis.

Files were rated by four raters. In order to test the inter-rater agreement, 29 patient files were analyzed by the four raters separately, and 31 files twice by each rater. The percentage of agreement was calculated. In 75.2% of the encoding the four coders agreed fully, whereas in 19.6% one disagreed, and only in 5.2% they disagreed completely. The intrarater agreement was even larger: 89.2% of the scores were identical. These results pointed to a fairly good agreement among the raters. Both results (inter- and intrarater agreement) indicated that differences in the scoring of the patient could only marginally be accounted for by systematic differences between the raters.

3.2 Complaint syndrome

Each patient received a score on 32 complaint variables. The variables were scored dichotomously and were not mutually exclusive; that is, several complaints could be present simultaneously. The results of a factor-analysis of the complaints are presented in table 2. On the basis of a screen-test (Cattell) a four-factor solution seemed appropriate. The eigen-values were quite low (2.45, 1.99, 1.48, and 1.32), together explaining 22.8 % of the variance.

The first characteristic of this Varimax rotated four factor solu tion was that almost all factor loadings were positive; hence the factors found were unipolar. The interpretation of the factors was straightforward. Because different complaints are involved we will speak of `syndromes'.

Somatic syndrome. On the first factor, all physical complaints had high loadings, while sleeping complaints, eating problems, conscience complaints and nervousness might also be seen as closely connected to the body. This factor could be easily interpreted as a somatic syndrome.

Depressed mood syndrome. The second factor was characterized by feelings of sadness and unhappiness, suicidal thoughts, self problems and assertiveness problems. This factor could be interpreted as a (somber)mood factor associated with life and personal problems. The only negative loading in table 2 - exaltation - was found here. Inhibition, self and life problems, typical for depressed people, also loaded on this second factor.

Social problem syndrome. Social and behavioral problems loaded high on the third factor. Grudge and norm-deviation were the most important variables; the attitude towards other people was negative (grudge); others experienced this person as unadapted (norm-deviation). Problematic relations, feelings of jealousy, dysphoria, and exaggerating or denying signs of being ill could be seen as expressions of these social problems. This factor also included behavioral consequences such as an addiction or living in a mood of exaltation. The last was probably connected with psychotic complaints (mania).

Dysfunction syndrome. The last factor involved complaints that are typical clear-cut neurotic disturbances such as compulsive disorders (compulsive complaints, worrying and delusion), anxiety disorders (panic reactions and phobia), sexual troubles and cognitive dysfunctioning. Psychotic complaints occur frequently in borderline-states or severe personality disorders. We called this the `dysfunctioning' syndrome.

3.3 Economic ups and downs

In most contributions in this book economic rise and decline is measured by rates of economic growth and unemployment. These indicators are not without problems for the present investigation focusing on a much longer period. In a long-term perspective it would be an oversimplification to reduce socioeconomic development to economic indices. Variations in GNP per capita do not quite reflect actual prosperity because of inflation of money and changes in income distribution through time. And how about cultural shifts? Unemployment rates for females depend to some degree on social norms. The solution opted for here is a rather pragmatic one. Several socioeconomic indices were combined by means of a factor analysis. The resulting factors are used as indicators.

The variables selected are the cues available at the Dutch Bureau of Statistics (CBS). The analysis was carried out on the basis of time series of the following fifteen variables: male inhabitants, female inhabitants, secondary school pupils, university students, hospital beds, general hospital patient-population rate, psychiatric hospitalizations, suicides per 100,000 inhabitants, unemployed men, unemployed women, unemployed population rate, net national product, price-index figure, domestic consumption, and volume index. Casual missing values were estimated on the basis of preceding and following years. The use of the number of psychiatric hospitalizations may not be self-evident, because at first sight these seem to interfere with the `neurotic complaints'. This is not the case. As we chose a fixed number of patient files per time period, the number of analyzed patient files was independent of the total number of patients in that period.

The factor analysis of these time series (eigen-values 10.57, 3.16, and 0.79) indicated a two factor solution. In table 3 the resulting factor loadings (after Varimax rotation) are presented.

Although the eigen-values were high and the distinction between the two factors is quite obvious, the interpretation of the factors causes some difficulty.

Prosperity. The first factor considers two separate kinds of variables. High loadings of scale enlargement indices such as inhabitants and secondary school pupils in addition to prosperity variables such as domestic consumption may be observed. This factor, a combination of scale enlargement and prosperity related indices, was called the prosperity factor.

Crisis. The second factor seemed more crisis linked, with variables as unemployment, suicide rates and psychiatric hospitalizations; we called it the crisis factor.

4 RESULTS

4.1 Syndromes co-vary with prosperity, not with recession

As we have seen the factor-analysis of complaints revealed the existence of four syndromes: `somatic', `mood', `social' and `dysfunction'. The factor analysis of CBS figures revealed two factors: `prosperity' and `crisis'. In order to test possible relations with economic data, factor scores were computed (each patient received four complaint scores). Next, prosperity and crisis scores for the different years were linked to all patients (the prosperity and crisis scores of the year in which he or she was admitted were added to the four complaint scores), thereby yielding a data matrix of 4511 persons by six variables (four complaint factors and two CBS factors). The question is now

whether these two sets of factors are related: Are the two CBS factors (prosperity and crisis) linked with the four complaint factors? This amounts to an investigation of the relationship between two sets of variables. A technique often used to achieve this is the computation of canonical variates. In the present dataset two canonical variates could be calculated[3].

The results are presented in table 4. It can be seen that the loadings of the socioeconomic factors are extreme. The correlation of the first canonical variate with the prosperity was .989; the correlation of the second canonical variate with the crisis factor was .975. This indicated that the two canonical variates could be interpreted as being virtually equal to the two CBS factors.

Table 4 shows that only the prosperity factor is significant, indicating that the relation between the two sets of factors is substantial for this canonical variate only. The mood syndrome correlated highly with it. This relationship is not necessarily a causal one. The body syndrome is negatively and significantly correlated to the prosperity factor. The more prosperous the period in which the neurotic patients lived, the fewer physical complaints they reported. The correlations with the other two complaint syndromes were lower but still significant. Prosperity (and, of course, scale enlargement) co-varies positively with the majority of syndromes.

The relationship between the crisis factor and the complaint syndromes (the second canonical variate) is not significant. Crisis is not significantly related to changing complaint syndromes of the whole group of neurotic patients. Yet, there is a tendency of decreasing complaints. The results suggest that crisis is negatively related to somatic[4], social and mood-related syndromes. Only the dysfunction syndrome appears to be unrelated to the crisis factor.

4.2 Unemployed are more responsive to recession

It is generally believed that the unemployed suffer more under economic decline than employed people (Dooley & Catalano, 1986). To what degree do patient files confirm this classical viewpoint?

Most files included information on the patients' profession, i.e., whether they were employed, unemployed, or suffered from long-term illness. In 74.2% of the cases, information about the present employment status was given. Although this percentage is high, the interpretation is not without problems. A clear-cut distinction between unemployment and long-term illness was hardly ever made, while the position of women was even more complicated. We decided as follows: women without paid work were not considered as unemployed; only in cases where this was explicitly stated did we code them as such. In order to make a bipolar distinction, employed versus unemployed, no distinction was made between long-term illness and unemployment, while on the other hand, retired persons, students and conscripts were considered employed.

For both groups canonical correlations were computed. The results are presented in the tables 5a and 5b.

The data for the employed (table 5a) show the same pattern as in the group at large (table 4). The correlation between the crisis factor and the complaint syndromes was still insignificant. Two loadings have changed in this relationship; the somatic syndrome lost its negative relation, whereas the dysfunction syndrome seemed much more strongly related to crisis. Table 5b presents a different picture. Among the unemployed both canonical variates are significant: `Prosperity' as well as `crisis' relate to the complaints in this category. The negative significant loadings of the somatic, mood and social syndromes are impressive. Of special interest is the social syndrome. During

`crisis' unemployed neurotics report less social and behavioral problems whereas in an upgoing economy they report more.

We saw that the complaints of the unemployed were significantly related to the crisis factor whereas this relation was not significant for the employed. Let us take a close look at the differences involved: The figures 1 to 4 present the scores on the four complaint factors for both categories through time. Asterisks under the horizontal axis indicate significant differences in mean complaint scores.

Figures 1 and 4 show only a few significant differences between employed and unemployed. However, the second and third figure reveal a consistent difference. If we mark the periods 1930-1936 and 1978-1982 as times of recession, we find that the differences between both categories are smaller during recession than in times of economic prosperity. This is in clear contradiction with current beliefs.

5 DISCUSSION: THE HISTORICAL-CONTEXTUAL MODEL

Consistent with the theory that economic decline harms mental health we found a correlation between the condition of the national economy and the number of complaints presented by neurotic patients. Yet, contrary to that theory the correlation was negative. Likewise: consistent with the theory that the unemployed are most harmed by economic decline we found that the difference in complaints between employed and unemployed varies with economic rise and decline. Yet contrary to that theory the complaints of unemployed neurotics appeared to be more similar to the complaint pattern of the employed in times of recession rather than less. This is not an artefact of the method used here. On the basis of quite different data Van der Velden also observed a decline of complaints during the recession (see chapter 6). How can these findings be accounted for?

Several theories may account for the results. First, it is possible that in bad times only more severe forms of neurosis are presented to the psychiatrist. Fewer complaints may mean that the remaining and presented symptoms are more distinct and more serious. Brenner (see chapter 12) prefers this viewpoint. He suggests that patients receive less treatment during crises; only severe cases will be presented to the psychiatrists. Fewer complaints are interpreted then as indicators of worsening neuroses.

The opposite view is that prosperity affects mental health negatively. With Weijel (1971) one can argue that labor in our modern society is dehumanizing. Reduction of labor by economic decline will then contribute to mental health. Likewise one can argue with Durkheim (1986) that economic growth involves `anomy'. Prosperity thus leads to a greater incidence of mental disorders. In this context it is worth remembering that there were less neurotic problems during the second World War. Below we present an alternative viewpoint, the historical-contextual model, which accounts for our findings without referring to a decrease or increase of mental health in the population.

What kind of behavior do we call neurotic? Ingleby (1981, 1982) states that the context in which the behavior occurs defines whether it is seen as normal or as a sign of illness. "Insanity ascriptions in this view are made when behaviour does not seem accountable by any plausible motive...(they) occur when common sense theories conspicuously fail to account for deviant behavior in an accepted vocabulary of motives and goals" (Ingleby, 1982, p. 128).

When normal attribution processes fail to account for the presented behavior, its meaning remains unclear. We cannot explain it by referring to the person's own free will or attribute it to an external cause. Both the person and his social environment feel incapable of changing it. One way of managing this unclear situation is to label the behavior as being an expression of some

underlying defect; it is seen then as symptom of a disease. As soon as it is recognized to be a disease, society has a variety of institutions to deal with it. In our society general practitioners, psychotherapists and psychiatrists are seen as health specialists; they are supposed to have the insight and required knowledge, they are able to distinguish between simulated and real disease. At the same time society has given them a privilege to place someone in the sick-role (Parsons, 1957). The sick person is exempted from some or all of his or her normal social role responsibilities, cannot help being ill and cannot get well by an act or decision of free will. The person is expected to get well as soon as possible, to seek appropriate help, and to cooperate with that help in order to get well.

In this view neurosis is a social construction (Gergen, 1985), a way of making sense of seemingly incomprehensible behavior. Culture provides us with schemes, with a system of meanings (Geertz, 1973). Within these schemes[5] it is prescribed whether or not a particular behavior makes sense in a particular context. Thus culture defines the boundaries between normal and abnormal. This implies that not behavior in itself, but its meaning is produced by culture.

The influence of economic decline on neuroses can now be analyzed at three levels; first its influence on implicit schemes of meaning; second, its consequences on the construction of meaning by means of the concept of neurosis, and third, its influence on the social consequences of the use of the neurotic label. We shall illustrate this interpretation briefly by showing how economic decline might influence the implicit schemes of meaning.

Many problems presented to the psychiatrist in prosperous times concern labor, mood and social issues. In prosperous times it is difficult for the individual to attribute these problems to social factors. There is nothing wrong with society. Also, if this person cannot be seen as actor, as cause of his actions, the only solution consists in the construction of a disease. Economic decline provides an alternative solution: the recession can be held responsible. Many problems can be attributed to the recession, also problems we would consider abnormal otherwise. As a consequence neurotic patients have fewer complaints in times of recession.

From this perspective we can also explain the paradoxal findings concerning unemployment. In times of prosperity, unemployment is unintelligible, something that has to be explained. When the unemployment rates are high, however, (during economic crises) being unemployed is quite intelligible. Our data suggest, indeed, that unemployed patients worry more about labor in prosperous time, and less during recession.

6 CONCLUSIONS

Predictions of more complaints during recessions, in particular among the unemployed, were not supported by the data. The reverse appears to be the case. Does that mean that the crisis was beneficial rather than harmful? We simply do not know. A more plausible explanation is that economic decline makes people less inclined to attribute their problems to themselves. If we accept this viewpoint we may conclude that the `vision-Rousseauïste' is not a correct statement about the `true' relationship between economy and mental health, but a coping strategy to ascribe problems to external events. The more it is used, the fewer neurotic complaints will be reported to the psychiatrist.

NOTES

[1] The expression `relative frequency of a complaint' refers to the number of patients presenting that complaint, divided by the total number of patients in that year.

[2] The correlation of hospital beds per 10,000 inhabitants and life expectancy in the Netherlands (1930-1985) is .96.

[3] The canonical correlation procedure is a mixture of a multiple regression analysis and a principal components analysis. The relation between two sets of variables is computed. This is done by calculating linear combinations of variables in the two sets with maximum intercorrelations. A linear combination is called canonical variate. The canonical variates are interpreted by investigating the patterns of the correlation between the canonical variates and the two sets of variables, much in the same way as done in factor analysis.

[4] The negative relation of the body syndrome with the indicators of prosperity as well as recession is curious, and one may wonder how somatic complaints can be negatively related to both. A more general analysis of the data revealed that the somatic complaints decrease sharply and linearly over time. This decrease therefore could be explained as an effect of an increasing impact of `psychologization' on neurotic complaints.

[5] These schemes can be analyzed as social representations (see Moscovici, 1983).

Table 1.

The archives

Name	Years	Type	Total Patients	Cases Included
1 Sanatorium Zeist	1904-1985	clinic	26.841	910
2 Valeriuskliniek	1911-1985	clinic	±60.000	820
3 Valeriuskliniek	1911-1985	polycl.	±10.560	820
4 Jelgersmakliniek	1918-1985	clinic	10.098	680
5 Utrecht University	1943-1985	clinic	13.420	490
6 Mil. Austerlitz	1946-1964	clinic	6.225	240
7 Viersprong Halst.	1957-1985	clinic	3.051	340
8 Hooghuys Etten-L.	1930-1985	clinic	±9.300	600
9 South-Netherlands	1941-1985	private	±22.000	500
Period 1900-1985:		Total:	161.495	5.400
Cases 1930-1985:		4.511		

Table 2.

Rotated Factor Loadings of Complaints

Complaint		Factor 1	Factor 2	Factor 3	Factor 4
03	General funct.	.63			
01	Body complaints	.61			
02	Functional body	.58			
04	Sleep problems	.51	.21		
06	Eating problems	.44			
05	Motoric compl.	.39			
24	Tension/nervous	.35			
15	Conscience	.22			
19	Sadness		.59		
29	Unhappiness		.48		
20	Suicide thoughts		.46		
28	Self problems		.38	.25	.26
27	Assertiveness		.37		
08	Inhibition		.37		
30	Work problems		.20		
31	Grudge			.57	
14	Norm deviance			.50	
09	Exaltation	-	.20	.43	
32	Relational pro.		.26	.43	
26	Dysphoria	.27		.41	
25	Jealousy			.32	
10	Exaggeration			.28	
11	Denial			.24	
13	Addiction			.22	
21	Anxiety		.21		.51
17	Psychotic comp.			.25	.48
18	Delusion				.47
12	Compulsion				.44
22	Preoccupation		.29		.43
16	Thinking				.35
07	Sexual compl.				.21

Note: Only loadings >|.2| are indicated.

Table 3.

Rotated Factor Loadings of CBS Variables

	Factor 1	Factor 2
Inhabitants-male	.99	
Inhabitants-female	.99	
Hospital bed	.98	
Patient-popul.rate	.99	
Psychiatric hospital	.54	.52
Sec. school pupils	.97	
University students	.52	
Unemployed-male		.97
Unemployed-female		.82
Unemployed/popul.rate		.96
Suicide	.85	
Net national product	.83	
Price index	.87	
Domestic consumption	.81	
Volume index	.93	

Note: Only loadings >|.5| are indicated.

Table 4.

Canonical Correlation Matrix (total neurotic population)

Canonical variates	I	II
eigen-value	.1345	.0294
$\mathbf{X}^2$	657.79*	3.93
Df	8	3
Loadings	**I**	**II**
Prosp.	.989	-.149
Crisis	.223	.975
Somatic	-.426	-.858
Moodsyndr.	.821	-.316
Social	.319	-.395
Dysfunction	.209	.093

* p<.0001

Table 5a.

Canonical Correlation Matrix (Employed)

Canonical variates	I	II
eigen-value	.35330	.02570
$\mathbf{X}^2$	356.61*	1.76
df	8	3
Loadings	**I**	**II**
Prosp.	.991	-.135
Crisis	.203	.979
Somatic	-.461	-.086
Moodsyndr.	.803	-.091
Social	.279	-.208
Dysfunction	.145	.976

* p<.0001

Table 5b.

Canonical Correlation Matrix (Unemployed)

Canonical variates	I	II
eigen-value	.37860	.12512
$\mathbf{X}^2$	126.08*	11.67**
df	8	3
Loadings	**I**	**II**
Prosp.	.965	-.262
Crisis	.476	.879
Somatic	-.583	-.589
Moodsyndr.	.701	-.245
Social	.225	-.788
Dysfunction	.261	.004

* p<.0001 ** p<.001

FIGURE 1

Factorscores factor 1: Somatic complaints (employed versus unemployed)

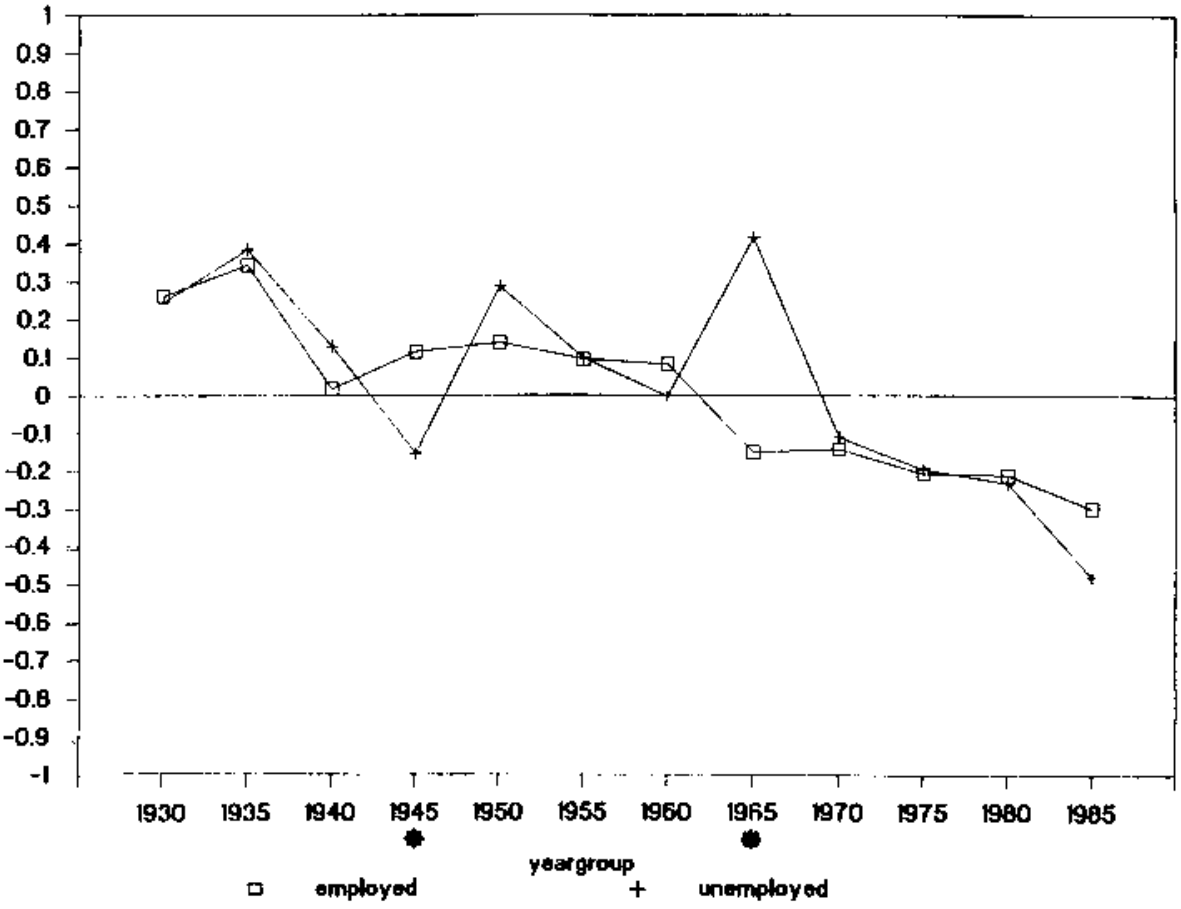


FIGURE 2

Factorscores factor 2: depressed mood (employed versus unemployed)

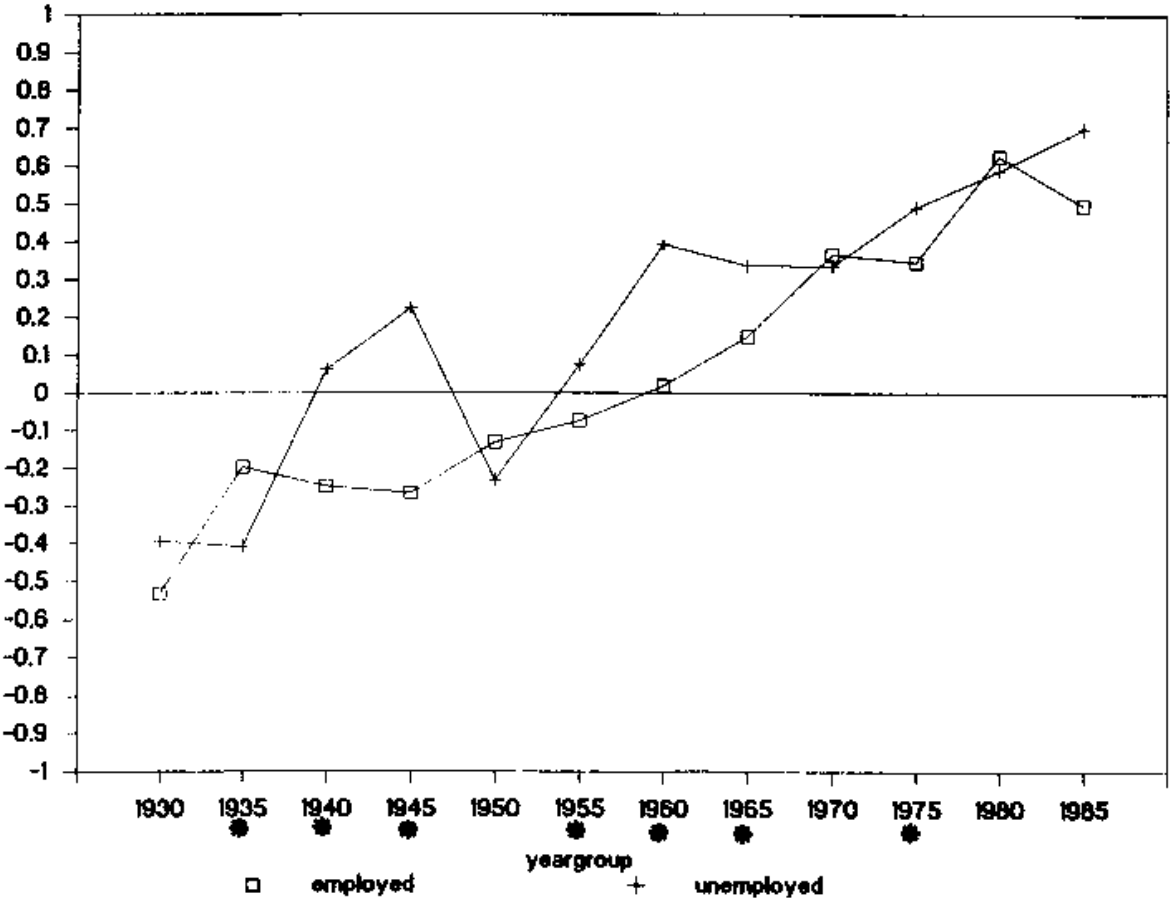


FIGURE 3

Factorscores factor 3: social problems (employed versus unemployed)

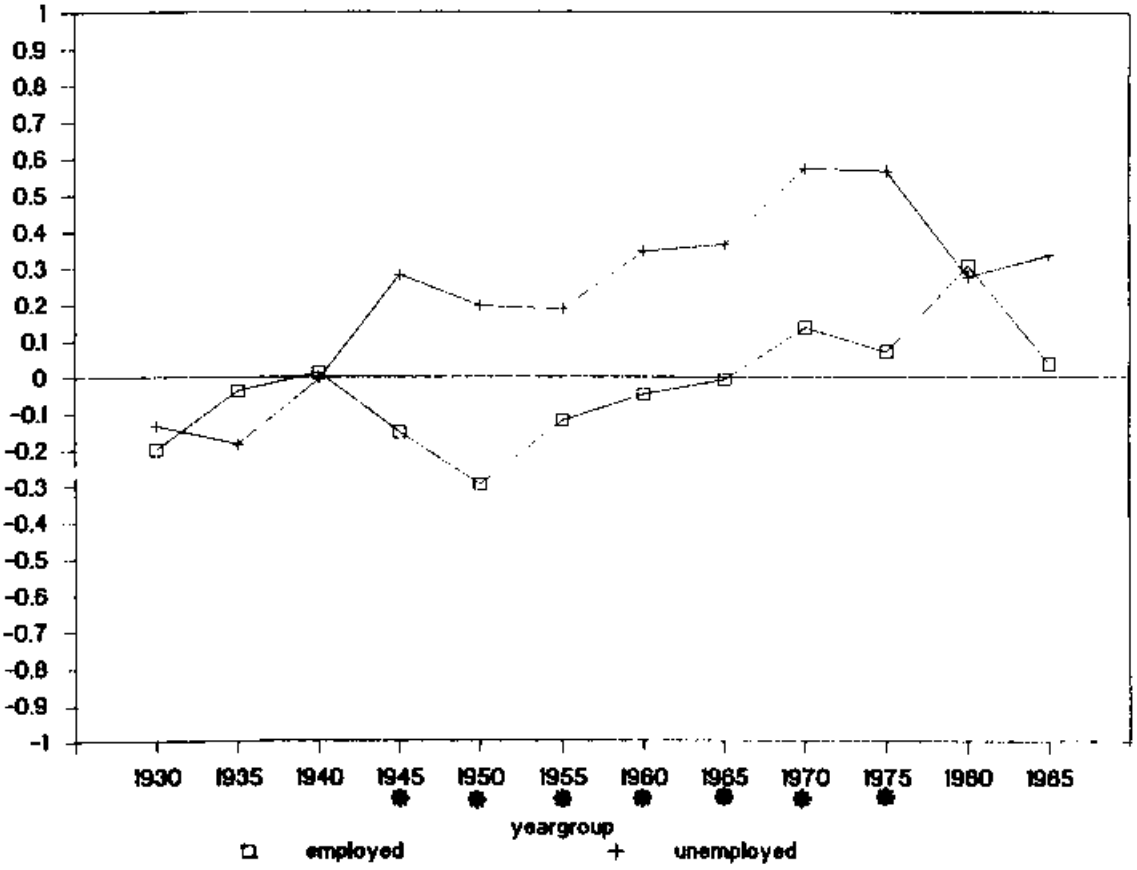
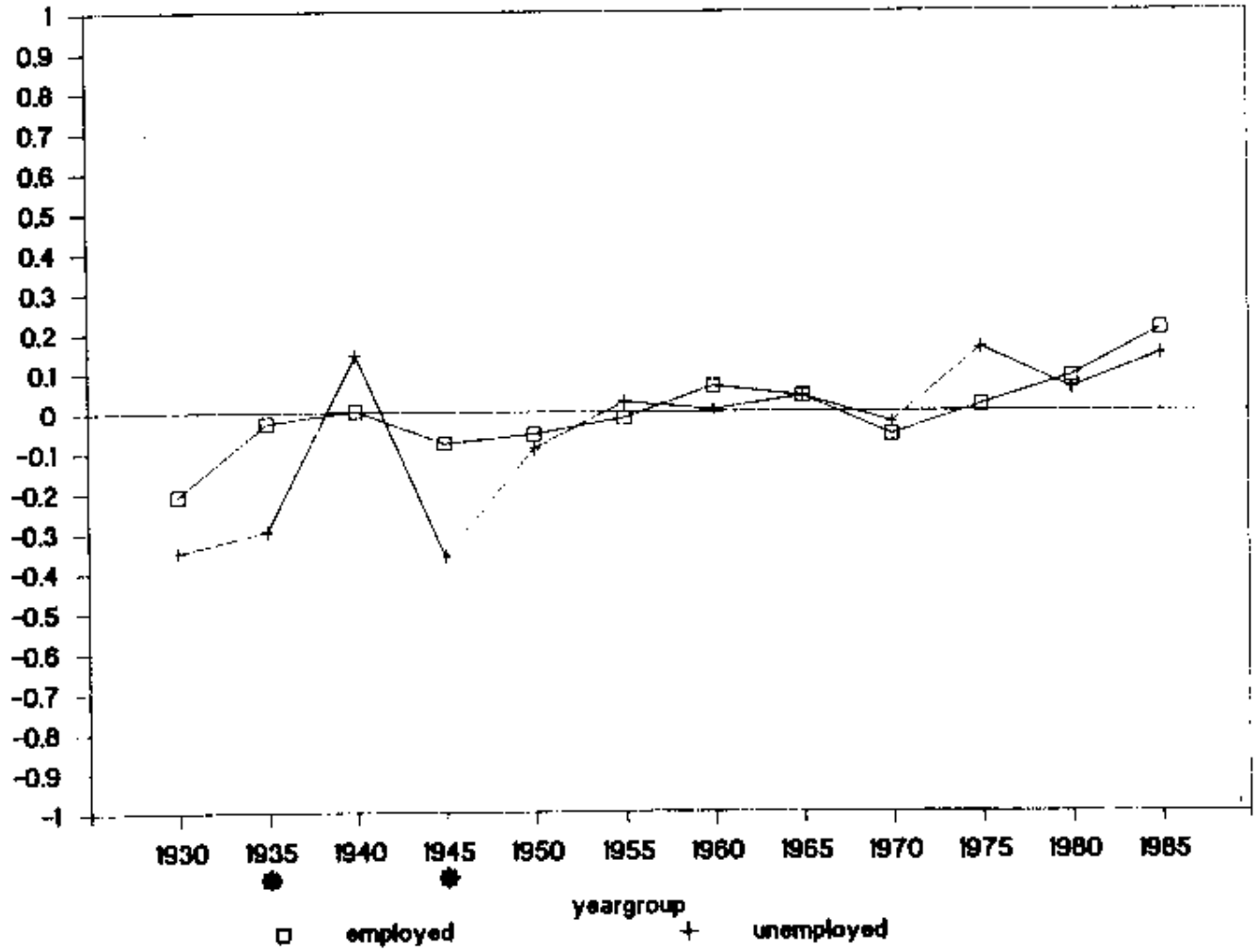


FIGURE 4

Factorscores factor 4: dysfunctioning (employed versus unemployed)



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