the debate on whether women with minor cytologic abnormalities (squamos atypia or koilocytosis) should be immediately assessed by colposcopy or should be followed up by repeat cytology. Although colposcopy is certainly more sensitive than cytology, its prompt and extensive use in assessing women with abnormal smears has been questioned because it may have negative psychological effects.^{2,3}

Within a prospective study (European Community SOC 93-102330) that compared the diagnostic accuracy of six months' cytological surveillance to immediate colposcopic assessment in women with minor histological abnormalities, we have measured the level of psychological discomfort (anxiety) in two comparable, age matched subgroups of 50 women assessed according to the two policies. Psychiatric symptoms were quantitatively and qualitatively assessed by the Spielberger state-trait anxiety inventory (STAI),⁴ and by the Z-test.⁵ The latter focused on the analysis of "anatomical" contents which are strongly associated with anxiety.⁶ Psychiatric tests were administered immediately before colposcopy or six months repeat smear.

As shown in the table, a minor statistically insignificant (mean (SD) score: colposcopy = 44.6 (10.9); repeat smear = 40.7 (8.7); $p>0.05$; $\chi^2 = 4.38$; $df = 2$, $p = 0.11$) increase in anxiety was observed in the group of women undergoing colposcopy according to the STAI test. No difference, however, was observed in the response to Z-test between the two groups, which showed comparable frequencies of anatomical contents.

Results of psychiatric assessment of two comparable groups of women with minor cytological abnormalities and undergoing immediate colposcopic assessment (group A), or cytological surveillance after six months (group B)

Psychiatric test	Group A	Group B
State-trait anxiety inventory:		
Score 20-39	19	28
Score 40-55	23	19
Score >55	8	3
Z-test		
Absence of anatomic contents	22	21
Anatomic contents present	28	29

Our findings agree with those of Gath *et al.*¹ and suggest that colposcopic assessment in women with abnormal cytology is not associated with major psychiatric morbidity. In particular, the level of anxiety is not significantly greater than that associated with cytological surveillance. Thus, the latter policy should not be preferred to immediate colposcopic assessment on the grounds of minor psychiatric morbidity.

PATRIZIA MAGHERINI
SILVIA CECCHINI
CARLO F CATAGNI
FELICIA DI FRANCISCA
STEFANO CIATTO
GRAZIA GRAZZINI
*Centro per lo Studio e la Prevenzione Oncologica,
Florence, Italy.*

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Review of the article by Knox: Leukemia clusters in childhood

Sir - In 1994 an article was published by Professor Knox presenting the results of a geographical analysis of leukemia clusters in childhood.¹ The objective of this analysis was to validate a previously demonstrated spacial clustering of childhood leukemias by investigating the relative proximity of map features to cluster locations compared with control locations.

Based on 9406 childhood leukemias and non-Hodgkin lymphomas, including 264 pairs (or more) separated by 150 m or less and partially matched and unmatched controls, clusters showed a relative proximity to several map features, the strongest being for railways. After more detailed analysis of the association with railways, Knox concludes that the use of fossil fuels, especially petroleum, is associated with the occurrence of childhood leukemia clusters. The investigator has made a methodological error in this study related to the selection of controls. Specifically, because leukemia/lymphoma clusters are more likely to occur in densely populated areas than in areas with a small population density, and more densely populated areas are more likely to have railways and industrial facilities located in them, controls should have been selected in a manner similar to that used to select clusters. However, Knox¹ instead selects controls from postcodes filed alternately 10 000 before and after the cluster postcode, as well as randomly. This method of control selection creates an artificial difference between the two samples. Any factor related to population density will appear to be statistically associated with the disease clusters. Knox should have defined "control clusters" in the same manner as case clusters, perhaps from clusters of other childhood diseases (for example, non-cancer end points such as cleft palate). This would have balanced the aggregation of case clusters in densely populated areas.

Knox states that population density has been taken into account by using church distance to standardise rail distance. However, this adjustment is unlikely to completely account for population density due to the "significant correlation between distance to the nearest church and distance to the nearest railway". When two variables are highly correlated, it is not possible to adjust for the effects of one variable on another.

In fact, the stratified analysis by degree of population densities (second paragraph, page 372) suggests population density is not accounted for. In this analysis, the difference in mean rail distances between clusters and controls in the higher density areas was only 0.12 km and not statistically significant, compared with the lower density areas where the difference was "more extreme" (1.12 km) and statistically significant. The author, however, incorrectly interprets this as a further confirmation of the hypothesis.

Knox's analysis of individual cases and randomly selected controls does not suffer from

the limitations noted above. However, this analysis shows associations for a variety of different types of installations which suggest the data are unable to discriminate between potential hazard types. Moreover, data for refineries suggest that risk increases as distance from the refinery increases, an unexpected finding if petroleum use is associated with childhood leukemia. For example, the relative risk (RR) for residence within 0.3 km of a refinery was RR = 1.17, while at 3-5 km the RR increases to 1.26. Risk decreases at 5-10 km to RR = 1.17, but this irregular dose-reponse pattern is inconsistent with a petroleum related effect. Similar patterns of irregular dose-response are observed for "lesser oil hazards" such as oil storage and oil distribution terminals, and for fossil fuelled power stations.

Finally, the heterogeneous patient group consisting of leukemia cases and non-Hodgkin cases and the lack of statistically significant associations with roadways, which would be expected if fossil fuel use were associated with childhood leukemia clusters, also argue against the validity of Knox's findings and conclusions.¹ Furthermore, Knox makes a distinction between primary and secondary associations, without any scientific justification.

In conclusion, the geographical analysis presented by Knox suffers from serious methodological shortcomings and cannot be used to support or refute a relationship between leukemia clusters and environmental exposures from fossil fuel combustion.

G M H SWAEN
*University of Limburg,
Maastricht, The Netherlands.*

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Smoking and health promotion in Nazi Germany

SIR—Hermann Brenner's letter¹ seems to consider that our article "Smoking and health promotion in Nazi Germany"² should have contained a "careful review of more informative individual-level studies" of interventions aimed at reducing smoking. This seems to rather spectacularly miss the central point of our piece, which is that to understand smoking behaviour in populations, some knowledge of the historical and social background is required. By discussing the possible reasons for the continuing high levels of smoking in Germany, backed up by a cohort analysis stretching back to those who initiated their smoking during or before the second world war, and not referring to the possible long term influence of one of the most dramatic (and fortunately, in what it accompanied, historically unique) prohibitionist movements the world has seen, seems bizarre. This is especially the case when the reasons Brenner cites for the remaining high rates of smoking - the lack of restrictive smoking policies in workplaces and on transport, together with a paucity of health education activity among youngsters - are exactly those which the Nazis implemented, with little success.

Understanding behaviours as complex as smoking requires a considerably more sophisticated view of how the world is than one which sees individual-level motivation as

primary.³ The biological and psychological dependence induced by sustained nicotine use and the no less fundamental economic dependence of capitalism on expanding potential markets cannot be considered separately.⁴ The social function of smoking and the contribution of the status as a smoker to the construction of identities must also be considered.⁵ Of relevance to our article, the possible conscious adoption of smoking as a form of resistance cannot be easily dismissed.⁶ Thus smoking among adolescent women can simultaneously represent and construct resistance to gender stereotyping.⁷ In the Nazi period, the Hitler Youth surveillance teams, at least, understood this point. In a Hitler Youth report on the anti-authoritarian Hamburg Swing Youth, the contribution of smoking to general degeneracy was clear:

"The dance music was all English and American. Only swing dancing and jitterbugging took place. At the entrance to the hall stood a notice on which the words "Swing prohibited" had been altered to "Swing requested". . . . The dancers were an appalling sight. None of the couples danced normally, there was only swing of the worst sort. Sometimes two boys danced with one girl; sometimes several couples formed a circle, linking arms and jumping, slapping hands, even rubbing the back of their heads together, and then, bent double, with the top half of the body hanging loosely down, long hair flopping into the face, they dragged themselves round practically on their knees. When the band played a rumba, the dancers went into wild ecstasy. . . . The band played wilder and wilder items; none of the players were sitting down any longer, they all "jitterbugged" on the stage like wild creatures. Several boys could be observed dancing together, always with two cigarettes in the mouth, one in each corner."⁸

A "careful review of more informative individual-level studies" of smoking cessation which Brenner asks for, has, in fact, been carried out.⁹ It demonstrates rather small effects of individual education. Interventions in collective settings such as schools, even when well developed, can have very disappointing outcomes.¹⁰ Claims for dramatic effects – such as the 80% reduction in female smoking consequent on a prohibition of workplace smoking in the study by Brenner,¹¹ tend to be based on investigations which are methodologically very poor. Recently the results of a series of methodologically high quality evaluations of smoking cessation interventions have appeared, showing essentially no additional effect of well developed, community-based interventions over and above secular trends.^{12–15} Changes in smoking behaviour do occur, but they cannot be attributed with any degree of certainty to Brenner's favoured explanations. A deeper understanding of the social, cultural, and economic foundations – and consequences – of public policy in relation to smoking is needed. Indeed, an interest in consequences may be of particular importance, as the evidence grows that some apparently reasonable policies may increase the misery of those in the poorest sections of society.¹⁶ Rather than attempt to atomise society for analytical and interventionist purposes, a more considered approach to what people do is required. This must involve resisting the – sometimes understandable – desire to forget history.

GEORGE DAVEY SMITH
Department of Social Medicine,
University of Bristol
MATTHIAS EGGER
Institute of Social and Preventive Medicine,
University of Berne,
Switzerland

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BOOK REVIEWS

Urbanisation and Mental Health in Developing Countries. Trudy Harpham and Ilona Blue (eds). (Pp 266; £32.50). Aldershot: Avebury, 1995. ISBN 1-85628-971-0.

This book makes a useful contribution to the extraordinarily limited number of publications on mental health and illness in developing countries. The structure is sensible: it comprises a review of the relationship between urbanisation and mental health (including a historical perspective), two chapters on the process of migration and mental health; four on case studies of particularly vulnerable groups, two on research methods, and two on future responses. It is a truly international product. The inclusion of so much material from non-English speaking countries is particularly welcome; much is from Latin America, and contributors come from 11 countries in all.

Inevitably, given the wide range of contributors, some chapters seem crisper and better argued than others. Among the most interesting is a detailed account of how inhabitants of a Brazilian shanty town think about and deal with mental illness. Nearly all sufferers make their way to a doctor, but many also see a religious healer somewhere along the way. None of these healers appear to be from the major Brazilian religion, Roman Catholicism. Class differences are mentioned in passing: beliefs that the mad possess a rich interior life is not one shared by the poor. Exploring the boundaries of mental illness is a tantalising topic that these researchers, like many others, avoid.

New problems are undoubtedly just over the horizon. Mental health services' responses to AIDS are still at a very rudimentary stage. The management of depressed or demented old people is something that will increasingly exercise politicians and service planners as well as relatives in the next decades.

Migration out of agricultural villages into cities has been described as one of the greatest changes in human behaviour in history. It is certainly happening on a large scale. Some of the statistics are hair raising. Urban populations in developing countries are increasing at the rate of a million a week. Mexico City is due to pass the 30 million mark any day now. More than half the world's population will be urban by the end of the century. AIDS will have orphaned up to 10 million children.

We know that mental illness is more prevalent in poor urban populations than in rich ones and most of it is unrecognised by primary health care workers. At present our response, both intellectual and practical, seems quite inadequate to the presenting problems.

BERNARD INEICHEN
Department of Public Health,
Chelsea and Westminster Medical School,
London.

A Strategy for Cancer Control in Scotland. C S Muir and P McKinney, Glasgow: Scottish Forum for Public Health Medicine, 1995. ISBN 0-9518742-2-5

This booklet written by the late Dr Calum Muir and Dr Patricia McKinney for the Scottish Forum for Public Health Medicine is a concise but wide ranging review of topics such as the current burden of cancer in Scotland, primary and secondary prevention strategies, and cancer survival. The authors propose a 13 point strategy for cancer control, the most important of which is the creation of a broad-based national standing committee on cancer control to determine priorities and assess progress and costs continuously. Other recommendations include efforts to reduce exposure to known risk factors such as tobacco and excess alcohol consumption while increasing consumption of dietary factors known to be protective against many forms of cancer, that is fresh fruit and vegetables. Recommendations for screening are that national coverage should be ensured for cervical cancer screening while an evaluation should be carried out on the efficacy of breast cancer screening in Scotland. Finally, the authors recognise that evaluation of a cancer control programme can only be carried out where high quality statistical and epidemiological services exist and therefore the