(3) the absence of a clear effect of birthweight on the mental performance.

Two alternative hypotheses are: (1) that survivors of famine-affected cohorts do not represent the total born, so that those who died in early life might have been adversely affected. In other words, there was an all-or-none effect: the exposed fetus either died from the insult or survived unimpaired; (2) that postnatal learning was able to compensate for neurological impairment of the fetus induced in utero by the famine. If this hypothesis were correct, it would controvert the 'critical period' hypothesis.

The Nutrient Intake of Kent Schoolchildren. D. G. ALTMAN (*Dept. of Clinical Epidemiology and Social Medicine, St. Thomas's Hospital Medical School, London*).

Between autumn 1968 and spring 1970, a nutrition survey was carried out on schoolchildren in four areas of Kent by the Department of Social Medicine, St. Thomas's Hospital and Kent County Council.

The aims of the study were: (1) to examine the dietary intake of school children and its relationship to health and socio-economic factors, (2) to investigate the extent and nature of poor nutrition, and (3) to act as a pilot study for a forthcoming national survey.

The sample consisted of 1,207 children, of whom 1,017 were eligible for the study. Of these, 778 were willing to co-operate and 239 refused. The children were chosen from two age groups being either 8-9 years old or 13-15 years old at the beginning of the study.

Each child was asked to complete a one-week's weighed diet record and to undergo a medical examination. A socio-economic questionnaire was administered to the family.

Preliminary results were presented concerning the relationships between intake of nutrients and certain basic factors—sex, age, weight, social class, number of siblings, and mother's work status, between these factors and nutrient intake standardized for intake of calories, and and on the intakes for children who had no father.

The relationships between both nutrient intakes and nutrient intake/1,000 calories and term time lunch source, allowing for variations in sex, age, social class, number of siblings, mother's work status, and Quetelet's index were discussed. Similarly, results were presented for frequency of school milk uptake in relation to variation in the same socio-economic factors.

All analyses were carried out using multiple regression techniques.

Prediction of Outcome in the Treatment of Alcoholism—A Belfast Study. R. BLANEY and INGE RADFORD (*Dept. of Social and Preventive Medicine, Queen's University, Belfast*).

Against the background of scarce resources for the treatment of alcoholism relative to the generally acknowledged size of the problem, a Belfast study was initiated with the object of evolving a method for the prediction of treatment outcome based on certain items of information known about patients before their admission to hospital.

The samples were selected, 111 patients from Shaftesbury Square Hospital, a specialized unit for alcoholism, and 140 patients from Purdysburn Hospital, a general psychiatric centre. The sample patients were all those from the Belfast area treated for alcoholism in either of the two centres during the year 1968. The following independent pre-treatment variables were recorded: age, sex, marital state, age at marriage (if relevant), social class, religion, day or inpatient, formal or informal admission, previous hospitalizations, education, trouble with the law, cigarette smoking, and the patient's previous attempts to change his drinking pattern. Note was also made of the length of stay in hospital and whether the patient discharged himself contrary to advice. Each patient was sought out for interview at 18 months following discharge and his drinking behaviour for the period recorded. Follow-up was successful for 95% of Shaftesbury Square patients and for 81% of Purdysburn patients. For each hospital the non-response rate was not significantly related to age, sex, social class, marital state or religion.

For the Shaftesbury Square patients, 46% remained abstinent for the first six months after discharge. By 12 months, 28% were still abstinent from alcohol. This proportion had fallen to 16% by the time 18 months had elapsed. In the case of Purdysburn Hospital the corresponding proportions were 17%, 9%, and 6% respectively. Further analyses employed the category of 'unfavourable' outcome over the six months period after discharge as the dependent variable. For the single factor tests, this measure of outcome was found to be significantly associated with religion, length of stay, and trouble with the law (drink-related) in the case of Shaftesbury Square patients, and for Purdysburn patients with length of stay, trouble with the law (drink-related), age, social class, and previous admissions for alcoholism to any unit.

Discriminant function tests were applied to the Shaftesbury Square Hospital data. The result was that only two variables (previous admissions for alcoholism to Purdysburn Hospital, and previous admissions for alcoholism to other hospitals, excluding Shaftesbury Square and Purdysburn Hospitals) significantly discriminated between the groups. The proportion of variation explained was 7½%. The small numbers in the unfavourable category precluded meaningful examination of the misclassification rates. Similar analyses for the Purdysburn Hospital data indicated that only one variable (trouble with the law—drink-related) would significantly discriminate between groups. Again the proportion of variation explained was low (8%) and the estimated probability of misclassification was 0.387. It was concluded that prediction of outcome was not practicable on the basis of the variables selected.

Evaluation of Social Therapy in Chronic Alcoholism. W. E. WATERS, A. L. COCHRANE and J. COLLINS (*Department of Clinical Epidemiology and Community Medicine, University of Southampton Medical School, and M.R.C. Epidemiological Research Unit (South Wales) Cardiff*).

Scientific evaluation of the personal social services is

rarely attempted and is sometimes thought to be impossible. However, the Seeborn Committee described these services as large-scale experiments in ways of helping those in need and emphasized that it was both wasteful and irresponsible to set experiments in motion and to omit the recording and analysis of what happens.

A small randomized controlled trial sought to compare the effectiveness of two methods of social therapy in the treatment of patients with chronic alcoholism admitted to a hospital in Cardiff. On admission 20 patients were allocated at random to receive either (i) 'intensive' social therapy (including visiting the family if the patient was willing) or (ii) the 'routine' treatment. An assessment of benefit, using standard questionnaires and an interview was attempted by a social worker two months after admission to the trial. As the social worker was aware of the method of treatment in each individual case there was a possibility of bias. Another assessment was therefore made 'blindly' by a doctor who was unaware of the details of the two methods. This assessment also included a standard questionnaire and a clinical interview for both the patient and for the patient's family. Questions covered attitudes to alcohol, estimates of the amount of alcohol consumed, and the relationships between the patient, the family, and the treatment unit. In fact there were no important differences between the assessments of the social worker and the independent assessor. The numbers in the trial were small and not all patients were willing to be followed up. The complete assessment of both patient and family was possible in only 12 cases (of the others, four were in the 'intensive' and four in the 'routine' groups). There was no evidence that one method of social therapy was consistently better than the other. The consumption of alcohol during the week before the assessment was similar in the two treatment groups and there were two patients in each group who had abstained from alcohol during this week.

FIFTH SESSION (Chairman: W. W. HOLLAND)

Behavioural Changes in Coronary Patients. MONICA MALLAGHAN (Dept. of Social and Preventive Medicine, Queen's University, Belfast).

The relevance of personality to behaviour changes after a myocardial infarction was tested in a study of patients discharged from two Belfast hospitals. The changes studied were in smoking habits, in diet (indicated by change in weight), and in physical activity. The aspects of personality considered were neuroticism and extroversion, measured by the Eysenck Personality Inventory for extroversion and neuroticism.

In addition it was decided to examine whether behavioural changes after infarction could be related to any of the following factors: (a) medical advice, (b) the patient's view of the severity of the attack, (c) the patient's attitude to the attack, (d) social class, (e) sex.

Over a period of 20 months, 493 patients were successfully interviewed—365 males and 128 females. The mean neuroticism and extroversion scores were expressed in terms of changes in smoking, weight, and exercise. Of the 321 smokers, 12 (4%) increased their smoking, 210 (65%) stopped or reduced, and 99 (31%) made no change.

There were no differences in the mean neuroticism and extroversion scores in these groups. The analysis of change in physical activity showed that 23 (4.7%) increased their activity, 319 (65%) became less active, and 140 (30.3%) made no change. Those who changed, i.e., increased or decreased, had a significantly higher mean neuroticism score (12.2%) than those who did not change (mean score 9.5%). Extroversion scores showed no differences. There were no differences in the neuroticism and extroversion scores of those who changed their weight and those who did not. While there was no indication that personality affected the behaviour changes studied it was shown that advice, attitude, and severity were associated with changes in some instances. Of those who believed smoking to be harmful, significantly more reduced or stopped, as did a significant number of those who had been advised against smoking. There was a general tendency to reduce physical activity.

Children's Smoking. BEULAH BEWLEY (Dept. of Clinical Epidemiology and Social Medicine, St. Thomas's Hospital Medical School, London).

In March 1971, 7,115 final-year primary schoolchildren in Derbyshire (excluding Derby City and Chesterfield) completed a screening questionnaire enquiring into their smoking habits and respiratory symptoms. (This was the first study of this kind in primary schoolchildren in the U.K.). A regular smoker was classified as someone who smoked at least one cigarette a week. An experimental smoker was one who had puffed or smoked a cigarette. A non-smoker was a child who had never smoked. The prevalence rate of regular cigarette smoking was found to be 4.8% and that for experimental smokers was 28.5%.

From the screened population a stratified random sample of 100 smokers was selected. Each smoker was matched (for age, sex, and school class) with an experimental smoker and a non-smoker. Two-hundred and ninety-three children (97 smokers, 98 experimental smokers, and 98 non-smokers) completed a second questionnaire (97% response rate).

Preliminary findings to date include family smoking habits. Thirty per cent of the children who stated that they were smokers, 44% experimental smokers, and 24% of the non-smokers said that both their parents smoked, whereas 6% of smokers, 20% of experimental smokers, and 42% of non-smokers said that neither of their parents smoked. The number of siblings (of both sexes) who smoked and lived in the same house influence the number of children who smoked. Where the smokers had 1, 2 or 3 siblings who smoked the percentages were 18%, 18%, and 15% compared with 7%, 1%, and 0% for the non-smokers. This trend was also observed when siblings of the same sex, who smoked and lived in the same household, were studied. Friends inside and outside school appeared to influence smoking behaviour; 18% of smokers stated that most of their friends at school smoked and 23% of smokers said that friends outside school smoked, compared with 1% and 2% for the non-smokers. Only 7% of the smokers had friends at school