tional exposures of the study cohort. For example, heavy metalworking industrial concentrations are found in the United States in counties around cities such as Cleveland⁴ or Detroit⁵; petroleum and petrochemical industry is dense in certain counties of Texas or Louisiana. These considerations support the use of a national reference population.

In describing powerful multivariate modelling methods, which perform internal comparisons while incorporating external population experience, the authors cited Poisson and Cox regression examples. Not mentioned was modelling mortality (or incidence) odds with logistic regression, in well enumerated cohorts, which also inserts expected mortality (incidence) odds from an external population.⁶⁻¹¹ Like Poisson and Cox regression, this approach estimates relative (but not absolute) rates for exposure effects, and has some notable advantages. Unlike Poisson or Cox methods, complete information is required only for decedents (or incident cases). For example, date of birth or race, retrievable from death certificates or cancer registries, are often not available for occupational cohorts or general populations. Restriction of work history retrieval to the decedent (or incident cancer) subpopulation is a major advantage, compared with traditional cohort designs that may require enormous efforts.⁵ The method is actually a case-control design with the controls (for mortality study) consisting of all decedents with causes of death thought to be unrelated to exposures under study. The advantages and disadvantages of the use of deceased controls has been debated without clear resolution.¹²⁻¹⁵ In an incidence study with a cancer registry, controls would be all incident cancers at selected other sites.

The actual computation of mortality (incidence) odds by logistic regression is relatively simple compared with Poisson or Cox regression on the full population at risk. It can readily accommodate complex risk factor specifications, including cumulative exposures adjusted for latency, demographic dependencies of the healthy worker effect, and variation in mortality odds with employment duration independent of exposures.¹²

The concern of Callas *et al* on the appropriateness of multiplicative and non-linear exposure-response structures imposed by logistic (and Poisson) regression can be assessed by goodness of fit. In several studies, logistic models performed well.^{9,10} There is, moreover, some biological basis for this finding. For example, multistage carcinogenesis implies a higher than linear dependence in time (or exposure duration) that an exponential function can reasonably approximate over the ranges of effects found.

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Offspring sex ratios as an index of pollution hazard in residential environments.

Author's reply—Your correspondent suggests that the negative findings for exposure to generalised air pollution on the sex ratios of births reported in our paper may conceal positive, but opposing, effects of the pollution on male and female parents.¹ He advances the analogy with the changes in the sex ratio of the offspring of parents with multiple sclerosis, when the direction of the change of sex ratio depends on the sex of the parent sufferer. It is indeed possible that such a cryptic scenario might result from exposure to general air pollution and an answer to this hypothesis might well come through follow up studies as he has suggested. That approach, however, would require extremely expensive *ad hoc* studies to generate the data. The main purpose of our investigation was to ascertain whether the sex ratio was a sensitive barometer of exposure of generalised environmental pollution in residential communities. Whether or not the sex ratios of offspring in exposed parents differ was really beyond the design of this investigation. Our conclusions therefore are unaltered: the routinely available data on sex ratios of births do not betray the presence of potential toxins in general industrial air pollution in the same way as was apparent for air pollution from specific industrial processes.

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1 James WH. Offspring sex ratios as an index of pollution hazard in residential environments. *Occup Environ Med* 1995;52:556.

NOTICES

Fibres, particles, and the lung: New perspectives. 11-12 September 1995. Edinburgh Conference Centre, Heriot Watt University, Edinburgh.

The British Association for Lung Research (BALR) was founded in 1981, and is the premier UK organisation for workers researching into medical and non-medical aspects of the lung.

The last 5 years has seen exciting new insights into the effects of particles on the lung.

Fibres—The publication of the RCC study data; the completion of the first phase of the Colt Programme; the increasing importance of bio-persistence.

Environmental particles—Association with disease; the role of particle size.

Overload—The mechanisms; impact on the interpretation of inhalation toxicology studies.

Key note speakers: Dr Gunter Oberdorster Rochester, New York; Dr Brooke Mossman Burlington, Vermont; Dr Tom Hesterberg Denver, Colorado.

Colt fibre programme reports: Dr JMG Davis; Dr A Searl; Dr A Jones; Dr K Donaldson.

Open sessions: Fibres; Particles; General lung research.

Young scientist competition: this session is open to younger BALR members. The prize will enable the winner to travel to a major scientific meeting of their choice.

The BALR summer meeting is sponsored by The Colt Foundation.

For further information contact: Dr R Cullen, Institute of Occupational Medicine, 8 Roxburgh Place, Edinburgh EH8 9SU. Tel 0131 447 8460, Fax 0131 447 2822.

Royal Society of Health National Conference—Caring for the working population. 10 October 1995. The Society of Chemical Industry, 14-15 Belgrave Square, London.

Aims and objectives:

- To consider the need for occupational health services and workplace health and surveillance systems.
- Raise awareness about occupational diseases, injuries and disability; their impact on individuals, families, businesses and society; and the system for compensating victims.
- Discuss recent initiatives in industry and the NHS aimed at promoting the health and the wellbeing of working people and meeting the occupational health needs of under served working groups.

Speakers and topics include:

Occupational health services in economically stringent times—Dr Michael Baxendine, Director of Occupational Health Services, United Biscuits.