than 40 $\mu\text{g}/100\text{ ml}$ one begins to have some awareness of the gravity of the situation.⁷ In view of these results we think it regrettable that the authorities in Britain have not seen fit to institute a similar screening programme on children in British cities. No doubt too much time would be spent in deciding which laboratory could be trusted to provide the right blood lead levels.

The appearance of the "chicken-or-the-egg" hypothesis was predictable but unnecessary in view of a number of elegant studies from America which have demonstrated that hyperactivity can be induced in rats suckled by mothers fed lead in their diets,^{8,11} whereas those suckled by mothers on normal diets are unaffected. This hyperactive behaviour shows a paradoxical pattern of response to drug treatment identical with that of "pure" hyperactivity in children¹⁰ and is correlated with changes in neurotransmitter metabolism in the brain.⁸ David's demonstration¹² that children with "pure" hyperactivity have high body burdens of lead was obliquely criticized in your article, but David has since repeated his study with larger groups of children and has confirmed his earlier studies to a high degree of statistical significance.¹³ Of even more importance, however, is his finding that *all* children with "pure" hyperactivity, even those with blood lead levels in the "normal" range, are cured by treatment with penicillamine and that the cure is permanent so far as can be judged after a one-year follow-up.¹³

You dismiss airborne lead as being of no significance in terms of domestic exposure and attempt to corroborate your statement by a very misleading juxtaposition of figures. You compare the 15 μg of lead absorbed per day from the atmosphere with the 200-300 μg contained in the diet before absorption. The non-specialist medical reader might easily be led to infer that airborne lead is only one-twentieth as great a threat as that contained in the diet. What must be remembered is that only about 10% of the lead presented to the gastrointestinal tract is absorbed—20-30 μg , an amount of the same order as that absorbed from air. Children of course absorb considerably more from the gut, about 50%, but on the other hand we do not know what fraction of inhaled air children absorb. And it is the children who are most at risk, not consenting adults. The United States National Research Council state this with great clarity when they write, "The other special category of inner city inhabitants for whom the level of lead in ambient air presents a significant threat consists of infants and young children."¹⁴

We agree with you on the need for more research and are now engaged on this. But we consider that the findings mentioned above already go a long way to providing a solution to the problem which you pessimistically think will long remain unsolved.—We are, etc.,

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Semen Cryobanking

SIR,—Having had some experience with artificial insemination by donor (A.I.D.), frozen semen, and vasectomy counselling, may I comment on the interesting article by Mr. M. S. Frankel on "Role of Semen Cryobanking in American Medicine" (7 September, p. 619).

The author states that "the potential benefits of semen cryobanking are enormous, yet . . . its application (particularly commercially) may produce unexpected and unwanted consequences." There is no evidence to date that the benefits of frozen semen are "enormous." The only advantage that I have found from those who use frozen semen is to avoid donor and recipient meeting each other. As frozen semen is far less likely to cause a successful pregnancy, far more inseminations are required and so the recipient must present herself more often for insemination. It has yet to be proved that there are no late complications or side effects for the progeny when frozen semen is used. As Mr. Frankel himself states, "we still know little about the effects of frozen semen including its efficacy and genetic consequences." Is he not contradicting himself?

Concerning the use of frozen semen as a fertility insurance for men undergoing vasectomy, I am sure that no surgeon in the U.K. would undertake a vasectomy on a man who is concerned with the possibility of wanting more children; he would regard this as a contraindication. Further, no studies have been undertaken (to my knowledge) which indicate that there is a reasonable chance of a successful pregnancy after frozen semen has been stored for several years. The few isolated cases reported in the press do not provide a satisfactory basis on which to offer such a service to prospective vasectomy patients.

Mr. Frankel states that semen cryobanking might be used as a method of "influencing the genetic quality of the species by making available a wide range of genetic material." Surely this indicates that a supply of frozen semen obtained from a "superman" donor, with a potential ability to fertilize many women, should never be contemplated. The health of our species depends upon a variety of genetic material, and until full genetic analysis of chromosomes is possible, who knows what potentially dangerous recessive genes a "superman" donor may be carrying? Furthermore, it is common knowledge that the most brilliant of children have come from the dullest of parents. Therefore a donor of low I.Q., of poor physique, and absolutely antisocial in behaviour may be a

better "superdonor" than a "superman." The conclusions are obvious—keep away from frozen semen, semen banks, and "supermen."

The increasing American practice of freezing dead persons in liquid nitrogen in the hope of reviving them at a later date is far safer for the species. Perhaps it is such ideas that need freezing in liquid nitrogen.—I am, etc.,

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A Human Right

SIR,—In your leading article (21 September, p. 699) you state: "Today it would be hard to find a medical school preparing its students thoroughly enough to cope with the family planning problems that will loom so large in most of their patients' lives." On behalf of the new medical school in Southampton I would like to submit that at least a serious attempt is being made to provide such preparation for our medical students in that one of the principal aims of the curriculum is to give students an opportunity of assessing priorities in medicine. In this connexion there is no doubt that the case for family planning and population control must be debated.

In the five-year course at Southampton most of the theoretical teaching takes place in interdisciplinary systems courses which form a major part of the curriculum in the first 2½ years. The first systems course is in "human reproduction" and commences midway through the first term of the first year. In this course there are seminar topics on, for example, "the relative place of contraception, sterilization, and abortion in population control," "medical termination of pregnancy," and "economic aspects of population control" and lectures and essays on the various presently available methods of contraception. Indeed, one-sixth of the course in human reproduction is devoted to topics of human sexuality and family planning. In the third year, during their attachment to clinical obstetrics and gynaecology, the students attend contraceptive clinics, including psychosexual problems, and further tutorials on common sexual malfunction. In their fifth and final year, during the period of clinical apprenticeship, weekly participation in the work of a family planning clinic is mandatory.

It is therefore one of the objectives of the course in human reproduction and obstetrics that the new graduates in medicine in Southampton will be thoroughly conversant with family planning methods and with their impact on the lives of their patients.—I am, etc.,

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Squint

SIR,—Your comment on Mr. T. K. Lyle's letter (5 October, p. 43) cannot be allowed to pass unanswered.

If the age of 5 is the commonest age at which concomitant squints undergo surgery, this is not because operation is deferred until this age, but because children are referred to an ophthalmologist some considerable time after the squint has become ap-

1 Byers, R. K., and Lord, E., *American Journal of the Diseases of Children*, 1943, 66, 471.

2 Lansdowne, R. G., et al., *Lancet*, 1974, 1, 538.

3 David, O. J., *Lancet*, 1974, 1, 866.