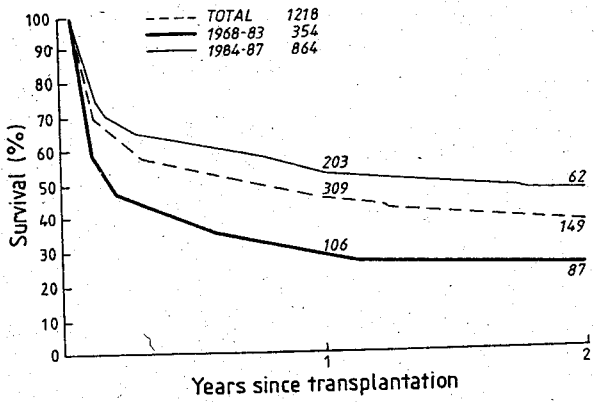

Fig 5—Actuarial survival of the total group of patients (1218 patients), compared by time of operation.

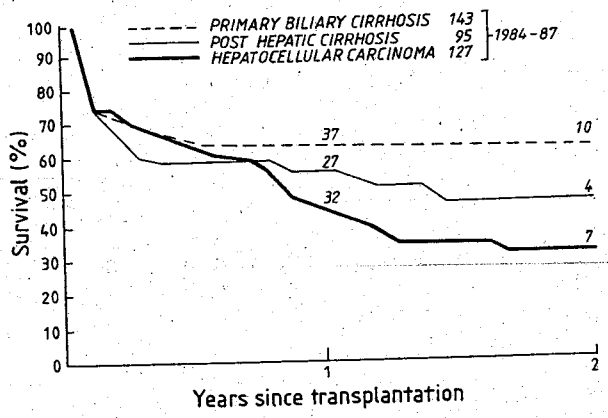

Fig 6—Actuarial survival of patients transplanted for primary biliary cirrhosis, post-hepatic cirrhosis, and hepatocellular carcinoma from 1984 to 1987.

Children aged under 15 years (n = 140, 16%) had a better survival rate at 6 months than did patients aged 15 years and more (n = 724, 84%) (survival 73% *vs* 56%, difference 17%). The difference was maintained at 2 years, when the actuarial survival was 69% for those aged under 15 years and 37% for those aged over 15 years (difference 32%).

The results for the three most frequent indications (primary biliary cirrhosis, post-hepatic cirrhosis, and hepatocellular carcinoma) are represented in fig 6. The perioperative mortality was the same for primary biliary cirrhosis and post-hepatic cirrhosis but the 6-month survival rate was better for primary biliary cirrhosis (difference 5%); the difference widened with time, to reach 18% at 2 years. The number of cases at 1 year was too short to allow further interpretation of these results. The surgical mortality for hepatocellular carcinoma (76·4%) was one of the lowest for any of the indications for transplantation, but the survival curve progressively decreased, so that at 2 years the survival rate of 30% for hepatocellular carcinoma was lower than that for any indication.

For biliary atresia (n = 76, 4 aged over 15 years) the survival rates at 30 days, 6 months, 1 year, and 2 years were 87%, 77%, 74%, and 68%, respectively. Acute hepatic failure was the indication for emergency transplantation in 75 patients; the surgical mortality was not different from that for the total group, and there were no deaths after the first 6 months (but the numbers were small).

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Personal Paper

SOME OBSERVATIONS ON DOWSING AND THE HUMAN MAGNETIC SENSE

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ROMAN roads have a dowsing profile characterised by a strong reaction over the drainage ditches, which are separated by a carriageway about ten paces (7·2 m) wide. This can be verified by dowsing over the exposed Via Devana south of Cambridge. By dowsing, when accompanied by an independent observer, I found a Roman road crossing beneath the modern road through Corton Wood and later found it exposed on the cliff face at Corton. The discovery of a Roman road by dowsing prompted further study of this procedure. Baker[1] recognised a human magnetic sense on the basis of orientation experiments and suggested that dowsing might be a manifestation of it. Presti and Pettigrew,[2] having found magnetic material in the neck muscles of homing pigeons, suggested that coupled to a muscle receptor it might form an effective basis for magnetic field sensitivity. The subject of dowsing has lately been discussed by Williamson.[3] There is considerable individual variation in dowsing ability and reactions vary between individuals. In this paper I have therefore confined my observations to those that occur in my own case.

Reactions of Dowsing Instruments to a Magnet

Ritter (see ref 4) showed that a pendulum suspended from between his thumb and index finger rotated clockwise over the north pole of a magnet and anticlockwise over the south pole, and he could thus distinguish between them. I can confirm this observation, though in my case the direction of rotation is the reverse of what he described. Bent rods of metal or wood diverge when carried towards the north pole of a magnet but converge when the south pole is approached. To be able to distinguish between the poles of a magnet in this way is good evidence for the existence of a human magnetic sense.

The Position of the Sensors

Since one magnet can be used to detect another, it seemed likely that the body contained small magnets, and I therefore made a search with a pendulum for north and south pole reactions. They were found over the face, upper abdomen, and limb joints. A clockwise pendulum rotation occurred over the right side of the face, corresponding to a south pole reaction, and an anticlockwise reaction on the left, while a clockwise rotation occurred over the left side of the upper abdomen and an anticlockwise one on the right. These reactions occurred irrespective of the position of the body in relation to the magnetic meridian. This contrasts with the behaviour of the limb joints, in which the north side of the joint always gave an anticlockwise rotation and the south side a clockwise one, in accordance with which side of the joint happened to be to the north or south at the time.

Aluminium foil, laid over a presumed Roman road ditch, suppressed all dowsing reactions. I therefore used this foil

mask regions of the body as another method of locating the dowsing sensors. When the forearms and hands were masked, the twig reaction was suppressed, whereas the pendulum and rods behaved normally. Similarly, foil covering the maxillary region and chin suppressed only the pendulum reaction, while foil covering the upper face and upper abdomen suppressed only the rods reaction. These sites are similar to those found with the pendulum and are therefore probably the true location of the sensors. It is also clear that different instruments are served by different sensors. Harvalik (see ref 4), working with the 5–7 m and 5 cm wave bands, identified the region of the adrenal glands and of the pituitary gland or pineal body as the position of the sensors for this dowsing stimulus.

Identification of the Earth's Magnetic Poles by Dowsing

The focusing of the dowsing sense is closely related to visual focusing. If while holding the rods, the dowser focuses his eyes on the horizon and rotates on the spot, the rods will react to distant stimuli, which include the magnetic poles, the position of the sun, and various radio stations and radioactive sources. The rods converge towards the north magnetic pole and diverge towards the south. It is also possible to locate horizon features with twig and pendulum. In my case, a positive dowsing reaction is accompanied by a faint rapid rhythmic sound at 108–144 beats per minute. Making use of this auditory signal, I am able to douse without an instrument and can find the earth's magnetic poles. This seems conclusive evidence for the existence of a human magnetic sense and that dowsing reactions are associated with it. By raising or lowering the outstretched arm I can detect the magnetic meridian across the vault of the sky and below the ground through 360°, apart from silent gaps about 20°–35° above the northern horizon and below the southern horizon. These gaps, possibly related to the angle of dip, can be used to distinguish north from south.

Other Dowsing Stimuli

Dowsing stimuli are associated with the fields produced by direct and alternating currents and high-tension cables, and dowsing reactions also occur in relation to television screens, radio waves, and radioactivity. Controllable and quantifiable stimuli of these kinds provide the basis for controlled experiments in this subject. The pendulum reaction and the auditory response are suppressed close to television screens and radioactive sources in the absence of other dowsing stimuli. It should be noted that experienced dowsers, as described in Christopher Bird's book[4] on the subject, regularly report findings that would require a very complex physiological infrastructure. I should be glad to hear from readers interested in the scientific aspects of dowsing.

I am indebted to Prof Richard Bailey, Dr David Trump, Prof F. J. Vine, and Dr John Green for discussion of various aspects of this work though they are not responsible for the observations and opinions expressed, and also to Dr R. J. F. H. Pinsent, Dr David Trump, and Mrs Edna Borris, who introduced me to the twig, rods, and pendulum, respectively. The use of the word I learnt from Christopher Bird's book.

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Food Intolerance

Joint UK Databank Established

SEPT 15 saw the launching of the first Food Intolerance Databank, drawing on the resources and experience of the Royal College of Physicians, the British Nutrition Foundation, the British Dietetic Association, and the food industry, together with leading agricultural and food research institutes. The databank will provide dietitians and hospital physicians with access to centrally collected data for the treatment of food intolerance and it aims at providing a service which is not equalled in any other country.

The databank has been compiled with the full support of major food companies in the UK, who have provided data on the composition of over 4000 food products. It was established on the recommendation of the 1984 joint Royal College of Physicians/British Nutrition Foundation report on food intolerance and food aversion and required three years of close cooperation between the food industry, research establishments, physicians, and dietitians before it could be launched. The founders of the databank include the Royal College of Physicians, British Nutrition Foundation, British Dietetic Association, Food and Drink Federation, Leatherhead Food Research Association, and Agriculture and Food Research Corporation Institute of Food Research (Norwich).

Located at Leatherhead Food Research Association, the databank will be based, initially, on the "top ten" list of substances, which reflect the practical experience of the British Dietetic Association. These ten include milk and milk derivatives, egg and egg derivatives, wheat and wheat derivatives, soya and soya derivatives, cocoa, butylated hydroxyanisole and butylated hydroxytoluene (BHA and BHT), sulphur dioxide, benzoate, glutamate, and azo colours. It will thus be of value in the management of conditions ranging from coeliac disease and cow's milk protein intolerance to egg allergy and intolerance to food additives.

The databank is only concerned with the treatment of food intolerance. Increased public awareness of the possibility of food intolerance has been followed by the appearance of cases in which self-diagnosis and self-treatment has led to dangerously inadequate and unsupervised diets. Access to the databank will therefore be limited in the first instance.

A recent study by Dr Elspeth Young (High Wycombe) shows that reactions to food additives, in particular, are much less frequent than recent publicity has suggested. In a study to be published in the *Journal of the Royal College of Physicians*, it was found that 15·6% of the 18 500 respondents to a questionnaire believed they had symptoms provoked by foods and 7·4% thought they had reactions caused by food additives. In only 3 cases, however, could a reaction to a food additive be positively identified.

The information on the Food Intolerance Databank is available only to state-registered dietitians and hospital physicians. The service is provided free of charge.

Further information may be had from Alison Eckett, Food and Drink Federation (tel: 01-836 2460) and Vivien Marcy, Kingsway Public Relations (tel: 01-831 6131).