

## Law and genetic testing

SIR—Bains observes that genetic screening may have attendant legal ramifications<sup>1</sup>. This has certainly been demonstrated in the United States.

The expanding ability of medical science to predict and detect defects before birth may have important applications in clinical medicine. Genetic counselling and prenatal testing may potentially provide valuable information to patients planning families about the likelihood of various defects in their offspring. The development of various genetic screening techniques, at least in the United States, has further spawned the birth of various classes of lawsuits. "Wrongful pregnancy" actions refer to cases where the parents of a child file a claim for the monetary and emotional damages suffered as the result of giving birth to a healthy, albeit unwanted, child<sup>2</sup>. The action may arise where a child's conception was due to the alleged negligent performing of a sterilization procedure. "Wrongful birth" suits are those instituted by parents claiming that they would have avoided conception or terminated the pregnancy had they been advised of the risks of birth defects in their offspring<sup>3</sup>. "Wrongful life" cases are instituted by the infant and allege that, as the result of the negligence of the defendant health-care provider, birth has occurred<sup>4</sup>. The infant is claiming essentially that the defendant has wrongfully deprived the parents of information, which would have resulted in the child not being born.

The three classes of lawsuits are thus different. Wrongful pregnancy cases typically involve a healthy, although unwanted, child, whereas wrongful birth actions normally involve planned children who are born deformed. Both actions are normally brought by parents. However, the wrongful life action is brought by the infant. Allegations in recent, selected lawsuits have involved the failure to diagnose Down's syndrome during pregnancy<sup>5</sup>, failure to diagnose rubella suffered by the mother during pregnancy resulting in the birth of a rubella baby with severe congenital defects<sup>6</sup>, failure correctly to type and record maternal blood and the later birth of a child with erythroblastosis fatalis<sup>7</sup>, the "wrongful birth" of children suffering from fetal hydatidosis syndrome associated with the mother's use of dilantin during pregnancy<sup>8</sup>, negligent performing of a vasectomy<sup>9</sup> and the negligent performing of tubal ligation<sup>10</sup>.

With the increased knowledge in the field of genetic screening, there has been a concomitant recognition by various courts that the appropriate standard of professional care may require the use of available, pertinent prenatal tests and genetic

counselling, particularly for patients at high risk of having children with birth defects. Perhaps it may be helpful to seek definitive legislative guidance concerning the vexing legal questions potentially raised by genetic screening.

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1. Bains, W. *Nature* 322, 20 (1986).
2. Continental Cas. Co. v. Empire Cas. Co., 713 P.2d 384 (1985).
3. Blake v. Cruz, 698 P.2d 315 (Idaho 1984).
4. Harbeson v. Parke-Davis, Inc., 656 P.2d 483 (1983).
5. James G. v. Caserta, 332 S.E.2d 872 (W. Va. 1985).
6. Garrison v. Foy, 486 N.E.2d 5 (Ind. App. 3 Dist. 1985).

## Models of man

SIR—In the context of the diversion of psychological research funds to cognitive science and computing projects, the argument below must be considered:

There are two flaws in computational models of man: (1) in human beings there can be no certainty what the programs are; (2) in human beings the database is unknown and different for every person. It therefore follows that computational models, being quite unlike the human case, are doomed to failure.

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## Help for Africa

SIR—Michael Spencer's letter (*Nature* 322, 10; 1986) prompted me to read again your leading article "Who will pity Africa?" (*Nature* 321, 548; 1986). Pity and political posturing seldom assist the objective assessment of any problem, least of all the vast and complicated set of problems that afflict Africa today. Spencer highlights some of the external political and economic pressures, whereas your leading article, like the United Nations' statement of early June, drew attention to the contributions to the chaos made by some of the African governments themselves. All these have to be taken into account, and much else besides, not least the vastness and heterogeneity of Africa itself—some 45 separate states and ecological conditions ranging from complete desert to tropical rain-forest, with montane and temperate regions besides.

You call for "a political clearing-house for good ideas that have already contributed to the improvement of Africa's conditions on a small scale... which... could be spread more widely". I hope your call will be heeded, but I would suggest that the emphasis should be not so much on good ideas as on good projects that have proved themselves over a reasonable period of time.

As Spencer says, there has been no

shortage of good ideas, but some of these have proved to be disastrous. They range from simple wells in arid regions which have attracted so many people and their animals that the surrounding land has been destroyed, to multi-million dollar irrigation and farming projects that have impoverished the local farmers and their land.

Most of Africa never was and never will be "a Garden of Eden"—the ecology is not like that—but there are instances, past and present, where sensible efforts, with or without outside help, have led to real improvements in the lives of ordinary people. We need to hear more about these, and less about who is to blame for the present troubles.

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## Darwin's yellow rain

SIR—In the light of the continuing controversy over yellow rain, it might interest your readers to know that Charles Darwin observed and reported a case of yellow rain. The report was quoted in the 18 July 1863 issue of the *Gardeners' Chronicle and Agricultural Gazette*<sup>1</sup>. The letter from Darwin reads in part:

A very slight shower, lasting hardly more than a minute, fell here this morning (July 2) about 10 o'clock. My wife gathering some flowers immediately afterwards noticed that the drops of water appeared yellowish, and that the white roses were all spotted and stained. I did not hear of this circumstance till the evening; I then looked at several roses and Syringas and found them much stained in spots. Between the petals of the double white roses there were still drops of the dirty water; and this when put under the microscope showed numerous brown spherical bodies, 1/1000 of an inch in diameter, and covered with short, conical transparent spines.

Darwin goes on to describe additional small particles "only just visible with a quarter-inch object glass". The author of the article, designated only as M.J.B., reports examining rose petals forwarded by Darwin, and observing "multitudes of irregular bodies so minute as to present the Brownian molecular motion". M.J.B. concludes that "it is quite astonishing what a multitude of bodies are carried about by the wind in the form of dust".

Indeed, it is equally astonishing that we should still be arguing about yellow rain 125 years later.

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1. *Gdnrs' Chron.* No. 29, 18 July, p.675 (1863); reprinted in *The Collected Papers of Charles Darwin* Vol. 2 (ed. Barrett, P.H.) 81-82 (University of Chicago Press, 1977).