tenderness, the former will generally not restrict spinal movement, and the latter—by virtue of being an articular derangement—usually will. The suggestion by Howes and Isdale that generalized hypermobility of the joints may be the cause of some cases of backache is an interesting hypothesis, and should encourage many workers in the field to look out for it.

[1] *Annals of the Rheumatic Diseases*, 1970, **29**, 324.
[2] Kirk, J. A., Ansell, B. M., and Bywaters, E. G. L., *Annals of the Rheumatic Diseases*, 1967, **26**, 419.
[3] Howes, R. G., and Isdale, I. C., *Rheumatology and Physical Medicine*, 1971, **11**, 72.

Pupillary Mobility and Skin Colour

Attempts to correlate colour of the iris with race[1] have led research workers to neglect a related and more important topic—namely, whether pupillary dynamics are correlated with race or colour of the skin. This has now been partly remedied.

U. P. Emiru[2] has measured the pupillary diameter after instillation of 4% homatropine and later 4% phenylephrine in both eyes of 14 Africans of unspecified ethnic group (mean age 32·5 years), four albino Africans (mean age 22 years), and five Europeans (mean age 43 years). He continued his observations for an hour. The data from this comparatively simple measurement raise a number of problems, and some yield interesting information too. In the first place the pupils in the three groups do not seem to have reached their maximum dilatation at the end of the measurements. Indeed there is no indication when it is likely to be complete. Secondly, the normal Africans' pupils apparently did not dilate to more than about 60% of the amount to which the pupils of the albino Africans and the Europeans dilated. The comparisons are encumbered by the different mean ages of the three groups. As the iris ages it constricts more readily but the normal pupil exhibits senile contraction[3] even when it is dilated. Emiru's data for Europeans and African albinos are consistent with these observations. What is therefore specially significant is that his normal Africans differ appreciably from the other two groups. Their incomplete dilatation is accompanied by a clear reduction in the rate of dilatation. Normal Africans need at least 8 more minutes to reach their estimated semimaximal dilatation than do the two other groups.

As an adaptation to the environment these observations are easy to understand. In so far as light may constitute a hazard to the retina,[4] natural selection makes it hard for the negroid pupil to dilate. But the underlying physiology is obscure. Emiru makes the interesting observation that negroid irises are thicker than European ones and that they possess fewer crypts. This means that the effective iridal surface is smaller in the African and that the mydriatic is therefore offered a smaller surface across which to act. But this argument is true only if the extra-iridal aqueous volumes under comparison are equal. This is plainly not a matter anyone would wish to subject to measurement. Emiru's point about the African iris being almost twice as thick as the European is more helpful in this context in providing a possible explanation for his observations.

This pioneer study needs extending. An adequate definition of the clinical material is called for, as Emiru's place of work (Uganda) enables us to guess but not to know who the patients are. Moreover, it is important to establish a complete dilatation curve with an unambiguous terminal plateau, so that it may be reliably established whether the "African" pupil gets there ultimately if rather slowly or—and this would be more interesting—if it gets stuck well below the non-coloured maximum.

[1] Kalmus, H., *Genetics*. London, Penguin Books, Pelican Series, 1952.
[2] Emiru, U. P., *British Journal of Ophthalmology*, 1971, **55**, 538.
[3] Weale, R. A., in *Scientific Basis of Medicine Annual Review*, p. 244. London, Athlone Press, 1971.
[4] Noell, W. K., and Albrecht, R., *Science*, 1971,**172**, 76.

British Society of Digestive Endoscopy

The endoscopic examination of the gastrointestinal tract is in a stage of rapid development for several reasons. Firstly, the use of fully flexible fibreoptic instruments has turned oesophagoscopy and gastroscopy into minor procedures which can be performed on outpatients as a matter of course and with very small risk. Secondly, new instruments have appeared for duodenoscopy and colonoscopy, thus rendering accessible to view lesions which were previously hidden.[1-3] Thirdly, and perhaps most important, all the latest instruments are equipped for taking biopsy specimens and cytological samples under direct vision.[4] The biopsy can be so precisely located that the term "target biopsy" has been used to describe it.

These procedures have various uses. They often permit an exact "tissue diagnosis" in such situations as an ulcerating carcinoma presenting with the same radiological and gastroscopic features as a benign gastric ulcer.[5] They open the possibility of increasing our knowledge of the course of diffuse inflammatory conditions, such as chronic gastritis, of which we are at present largely ignorant. The biopsy specimens, being completely fresh, are capable of being studied in a variety of ways, such as by electron-microscopy, tissue culture, and enzymatic assay, so there are possibilities for fundamental research into a great variety of mucosal functions.

These reasons underlie the formation of the British Society of Digestive Endoscopy, which has just come into being. The society is anxious to assist in the training and education of novice endoscopists, for there can be no question but that a great expansion will occur in the use of the new instruments in gastrointestinal diagnosis. In addition, the society has the laudable aim of bringing together not only endoscopists but other workers with related interests such as histopathologists, cytologists, radiologists, and biochemists interested in the gastrointestinal tract. Details of the society are obtainable from its honorary secretary, Dr. K. F. R. Schiller, St. Peter's Hospital, Chertsey, Surrey.

[1] Ogoshi, K., Tobita, Y., and Hara, Y., *Gostroenterological Endoscopy* (Tokyo), 1970, **12**, 83.
[2] Classen, M., *Gut*, 1971, **12**, 330.
[3] Salmon, P. R., Branch, R. A., Collins, C., Espiner, H., and Read, A. E., *Gut*, 1971, **12**, 729.
[4] Williams, D. G., Truelove, S. C., Gear, M. W. L., Massarella, G. R., and Fitzgerald, N. W., *British Medical Journal*, 1968, **1**, 535.
[5] Gear, M. W. L., Truelove, S. C., Williams, D. G., Massarella, G. R., and Boddington, M. M., *British Journal of Surgery*, 1969, **10**, 739.