third case developed sepsis after a Caesarean section. The condition was critical on the sixth day, and the patient was given 400 c.cm. of citrated blood while in a delirious and semi-conscious condition. Temperature fell next day to normal, and she was sitting up in bed reading after forty-eight hours. Convalescence was, however, complicated by the development of an extra-peritoneal abscess round the site of the abdominal scar, which nevertheless settled down after drainage.

It is not suggested that blood transfusion should be regarded as a specific or only employed as a *dernier ressort* in critical cases, but it is thought that its employment would appear to have some physiological justification, and at any rate should do no harm.—I am, etc.,

W. LIONEL FRETZ, V.H.S.,
Rawalpindi, N. India, Dec. 9th, 1933. M.B., B.S., Major R.A.M.C.

Use of Quinine in Normal Labour

SIR,—On reading Dr. Douglas Mitchell's letter in your issue of July 15th, 1933 (p. 126), I determined to try his method of giving small doses of quinine during the last few weeks of pregnancy.

In November I was consulted by a primigravida, aged 21 years; last menstrual period was one week late, and occurred at the end of March; general build slight; teeth all perfect; pelvic measurements normal. She did not come, as directed, to see me again four weeks later, but on December 7th sent for me. At 2 p.m. she had experienced some discomfort "in the back passage" and had a bowel motion. At 4 p.m. she had slight recurrent pains; at 5.40 she delivered herself of a female child weighing 6¾ lb. The child was delivered by one long continuous pain, which expelled all the uterine contents, including placenta. The nurse, who was present, stated that she hardly seemed to be in labour before this pain occurred. The birth was followed by a fairly brisk haemorrhage for five to six minutes, controlled by pituitrin, and her subsequent history was entirely uneventful.

Had I administered the doses of quinine I should have been much impressed by the easy labour that followed such treatment. I may add there was no doubt that the patient was a primigravida.—I am, etc.,

A. G. HAWTHORNE ENGLISH.
Birkenhead, Dec. 21st, 1933.

Vision of Colour and Brightness

SIR,—I have read with the greatest pleasure the report of Professor Haldane's lecture in the *British Medical Journal* of December 23rd, 1933. I have for many years given similar demonstrations to the Physiological Society and elsewhere without anyone disputing the facts, and with the same conclusions. These facts were predicted by my theory of colour vision (see "Simultaneous Colour Contrast," *Journal of Physiology*, 1911; "Simultaneous Colour Contrast," *Proceedings of the Royal Society*, 1912; "Colour Adaptation," *Proceedings of the Royal Society*, 1913; *Physiology of Vision*, G. Bell and Sons, London, 1920).—I am, etc.,

F. W. EDRIDGE-GREEN.
Board of Trade, S.W.1, Dec. 24th, 1933.

SIR,—Professor J. S. Haldane, in his interesting address (*Journal*, December 23rd, 1933, p. 1153), admirably refutes mechanical materialism, but in doing so he unfortunately falls into the camp of idealism. Materialism to-day has progressed considerably since the days of the French mechanical materialism, with its ponderable matter like billiard balls and its knowledge of absolute truth. Materialism to-day simply states that objects exist independently of our sensations, and these give us a correct reflection of this objective reality, providing us with relative truths.

Professor Haldane states that we cannot find consistency, which is the mark of truth, in the supposed correspondence of our perceptions with an objective world existing apart from our sensations. He also states that our physical and mathematical interpretation of phenomena is only partial and abstract. Naturally we agree that these interpretations are only partial—that is, that biological phenomena can never be fully explained by physical, chemical, and mathematical means only. We must also use, as Professor Haldane states, "the biological conception of life" in our interpretations; but we deny that these interpretations are abstract and have no mark of truth. These physical, chemical, and mathematical interpretations are true reflections of objective biological reality. The mere fact that we can use these interpretations for our own purpose in practice points to their correspondence to objective truth and reality, for if our interpretations of them were at all divergent from their objective existence then we would fail in our use of them, and only then would "Nature mock at us."

To take the example of brightness and colour: although Professor Haldane states "we cannot have any objective measure or standard of brightness and colour; we can only have a 'human' measure thereof," we must realize that our human measure and standard gives a true, if only approximate, measure and standard of reality, as evidenced in our use of these standards with success in our practical day-to-day life. If, for instance, a new colour or degree of brightness is discovered existing in Nature to-morrow, by means of any instrument, surely it does not imply that the colour or degree of brightness did not exist yesterday because we did not perceive them. We are thus constantly making and renewing our standards, which, although relative, are continually approaching absolute reality as our knowledge advances with the progress of the human race.

Professor Haldane concludes by co-ordinating objective and subjective worlds in his biological interpretation of phenomena. Unfortunately his theory is an idealistic one, for his objective and subjective worlds are both spiritual—that is, mental—in form. His physical is an abstraction from the biological, the biological is an abstraction of the personality or psychological, and the individual personality is derived from the divine personality: thus, after a whole series of abstractions, we come to the supreme abstraction. Professor Haldane thus teaches that mind is the prius, and matter is derived from it, whereas the biological sciences and the law of evolution prove that mind is derived from matter. With the growth and evolution of the nervous system in animals we find simultaneously the growth and evolution of the mind, until now, in man, it has become the highest function of matter—that is, the brain.

We may well ask Professor Haldane what was the interpretation of the world millions of years ago, when the world was a molten mass and no life existed thereon. The answer, I suppose, would be, "The Creator's only"; and at the time of the ichthyosaurus the answer would be, "That of the ichthyosaurus plus the Creator." Until we realize that matter is the prius and mind is derived therefrom—until we recognize the existence of an objective reality and our approximate interpretation thereof—we shall find scientists tending to lapse into fideism.—I am, etc.,

S. LEFF.
London, E.5, Dec. 31st, 1933.