cubic foot. I have read that a child produces 0.3 cubic foot of carbon dioxide in one hour.[1] Assuming that a baby may produce 0.15 cubic foot, this gives about 6½ hours to fill a whole cubic foot, but much less to displace the comparatively small pocket of air in which the baby's head may rest.

It would be easy to determine the increase in level of the carbon dioxide at the bottom of different types of cots over several hours by taking samples of the polluted air.

I have, I hope, explained why I myself am convinced that carbon-dioxide poisoning is thus the cause of the bulk of these unexplained deaths, and I could be persuaded otherwise only by some practical evidence as to why it is not so.—I am, etc.,

London S.W.1. F. R. NICHOLLS.

REFERENCE

1 Adam, L. C., and Boome, E. J., *Notter and Firth's Hygiene*, 1940. London.

Pause at the Parameter

SIR,—May I thank you for your magnificent analysis of the meanings of the new technical term "parameter" (30 April, p. 1063)? At best, one would say that the word is imprecise and is used to give an aura of innate science.

Use of such terms will dissuade many of us from reading an article further, since we may feel that we have insufficient knowledge of science or statistics to understand it fully. Nevertheless, had the author substituted a simple word such as "measurement," "reading," "value," or "factor" for "parameter," then the paper would have been quite understandable.

The way a new word will attain sudden popularity is a phenomenon of our times. Sir Ernest Gowers, whose recent death is such a loss to us, wrote that ready acceptance of such words seems to some people the sign of an alert mind; to others it stands for the herd instinct and lack of individuality. Sir Ernest took the latter view, and I am sure that he was right.

The English language is, of course, fluid and not static. New words must of necessity be introduced to express new notions. However, it is quite indefensible to allow a new word to intrude if its meaning is less precise than that of an old word already available.

You, Sir, have done a service by your exposé of the woolly term "parameter." You and other editors have the power to help further in that you can extinguish these forest fires at their inception.—I am, etc.,

Solihull, Warwicks. PHILIP JACOBS.

SIR,—I enjoyed your leader on parameters (30 April, p. 1063). I am sure, however, that many medical users of the word have never read the definitions you quoted, and certainly these bore little relation to your examples. A direct translation, such as "measurement alongside" or perhaps "related measurement," comes nearer the common medical meaning, which is exemplified in Dr. R. H. D. Bean's article in the same journal (30 April, p. 1081). In his report of Case 1 he says, "Over the four-year period of treatment all parameters of the disease steadily improved." Here I think "aspects" would be better; the term must presumably include looseness and frequency of stools, loss of blood and mucus, and general well-being, as well as the barium enema, and "aspects" is a shorter and more pleasant word with a recognized meaning which does not smack of pseudo-science, nor pretend to have measured things which have, in fact, been appraised with an expert eye—a much more scientific procedure.—I am, etc.,

Hospital for Sick Children, London W.C.1. NIGEL LEGG.

SIR,—Thank you for a very sensible leader (30 April, p. 1063) which clearly shows the objections to the current usage of this term as implied but not detailed in my letter (17 July 1965, p. 174).

For the consolation of those conscientious students who worry over the word, may I say that a little unofficial research of mine would suggest that the author is little more likely to know its meaning than the reader.—I am, etc.,

Glasgow W.3. D. M. SINCLAIR.

SIR,—You write that "parameter" has come into fashion. You are well behind the times. "They" use "metameter" now. As you don't seem to know what a parameter is, I can have little hope that you can answer my question—"Please, what is a metameter?"—I am, etc.,

London W.C.1. D. R. LAURENCE.

*** The term "metameter" was apparently first used in a paper entitled "A Biological Test for Vitamin P Activity," by Bacharach, A. L., Coates, M. E., and Middleton, T. R., *Biochem. J.*, 1942, **36**, 407. The authors state that Professor Lancelot Hogben suggested the term to them. They used it "to designate the measurement, or transformation of the measurement, used in evaluating biological tests." A slightly more restricted definition is given in *A Dictionary of Statistical Terms*, by Kendall, M. G., and Buckland, W. R., 2nd ed., 1960, London: "A transformed value of a dose or a response (*e.g.* logarithm or probit) obtained by using a transformation equation that is independent of all parameters." Here the term parameter is being used to denote a characteristic of a probability distribution which may be estimated from data but is not otherwise known.—ED., *B.M.J.*

Vaginal Specula

SIR,—I was interested to see the letter from Mr. Bryan Williams (16 April, p. 984) in which he describes his improvement on the standard Cusco speculum by increasing the length of the posterior blade to 5¼ in. (13 cm.).

I have always found the Winterton bivalve speculum superior to the Cusco because both blades are 5¼ in. It is, however, narrow and when used on the multipara with prolapse the redundant vaginal wall bulges between the open blades, restricting one's vision of the cervix.

In pregnancy, however, I have found neither instrument satisfactory, as the cervix almost invariably gets tucked into the posterior fornix. To overcome this A. L. Hawkins & Co. modified Winterton's speculum for me so that the posterior blade is 1 in. (2.5 cm.) shorter than the anterior, quite contrary to the normal vaginal anatomy. Passed, however, into the anterior fornix till resistance is felt, this tends to bring the cervix forward into the axis of the vagina. On opening, the posterior blade misses the cervix and holds back the posterior vaginal wall. A long posterior blade would tend to exaggerate this posterior position of the pregnant cervix.

It is obvious that the type of speculum must be suited to the particular patient.—I am, etc.,

Aberystwyth. GEOFFREY WILLIAMS.

Contact Lenses and Oral Contraceptives

SIR,—I was very interested to read the report of Dr. G. A. Caron's case (16 April, p. 980).

I have not seen any instances of corneal oedema in association with contact lenses due to oestrogen therapy. I have, however, seen corneal oedema supervening in a case successfully fitted with scleral lenses during the patient's pregnancy. The case followed much the same course as Dr. Caron's: the oedema disappeared after the contact lens was discontinued.

The cornea partakes of water retention due to electrolyte imbalance in the rest of the body, especially if its mechanism of dehydration and homoeostasis is stretched, as happens with the wearing of a contact lens. The electrolyte imbalance could be local or general, nervous or hormonic, etc.

I gave instances[1 2] of local electrolyte imbalance causing corneal oedema in the papers entitled "Some Observations on the Physiology of the Cornea" and "Factors in the Genesis of Corneal Oedema."—I am, etc.,

Oxford. M. SARWAR.

REFERENCES

1 Sarwar, M., *Trans. ophthal. Soc. U.K.*, 1953, **73**, 547.
2 —— *Amer. J. Ophthal.*, 1955, **40**, 37.

Duodenitis—Fact or Fancy

SIR,—Your leading article on duodenal inflammation (25 December 1965, p. 1501) is very instructive. We would like to point out remarkable dissimilarities among the groups of cases described as "duodenitis" by various workers.

Beck and his colleagues'[1] cases of "duodenitis" had "perfectly normal duodenal bulbs" on radiological examination. They had not displayed the radiological features of a spastic irritable duodenal bulb with coarse mucosal folds (as appears from your comment). These cases had a normal output of gastric acid. They are quite distinct from those of Ostrow and Resnick,[2] which showed radiological abnormalities and were usually associated with hypersecretion of acid. The only common feature was presence of abdominal pain closely simulating duodenal ulcer.

Raju and Narielvala[3] reported radiological evidence of "duodenitis" with "intensity of changes varying from mild to severe" in all their 59 subjects with hookworm infestation but without anaemia. Their cases were "infrequently" associated with pain resembling chronic duodenal ulcer and had normal

secretory capacity of the stomach, but secreted significantly higher acids in the basal state as compared with their normals. These cases are thus not comparable with the two series[1 2] described above.

We found prominent mucosal folds in duodenum in only 11 with spasticity and in four of the 29 adult males with severe hookworm anaemia (mean haemoglobin 4.46 g./100 ml., S.E. 0.24). Ten out of these 29 cases had complained of upper abdominal pain with some resemblance to ulcer pain. Out of these ten cases four had prominent duodenal folds, with spasticity in two. Among the cases without abdominal pain seven out of 19 showed similar changes, with duodenal bulb irritability in two of them. There was no correlation between abdominal pain and radiological appearances which could be considered as suggestive of "duodenitis." In all these cases gastric acid secretion was reduced irrespective of the presence of prominent mucosal folds or the abdominal pain.

We have not studied duodenal histology in these cases. However, it would be of interest to note that in a separate study we could not find any correlation between morphological changes and the radiological appearances of prominent mucosal folds with or without irritability of the jejunum, where hookworm infestation is most marked.

We feel that there is no convincing proof of existence of "duodenitis" as a distinct clinical, radiological, and pathological entity, and therefore use of this term in scientific communications should be condemned and the more considered approach of Fraser and his colleagues[4] and your leader should be followed.—We are, etc.,

H. K. CHUTTANI.
R. K. GOYAL.
Maulana Azad Medical College,
New Delhi, India.

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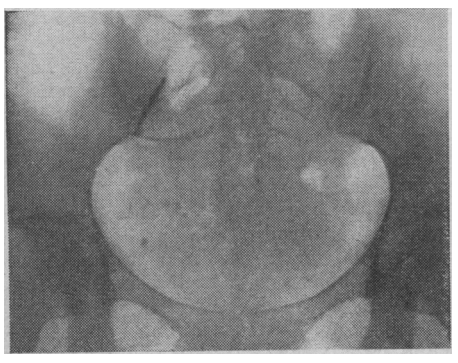
1 Beck, I. T., Kahn, D. S., Lacerte, M., Solymar, J., Callegarini, U., Geokas, M. C., and Phelps, E., *Gut*, 1965, **6**, 376.
2 Ostrow, J. D., and Resnick, R. H., *Ann. intern. Med.*, 1959, **51**, 1303.
3 Raju, S., and Narielvala, F. M., *Gut*, 1965, **6**, 540.
4 Fraser, G. M., Pitman, R. G., Lawrie, J. H., Smith, G. M. R., Forrest, A. P. M., and Rhodes, J., *Lancet*, 1964, **2**, 979.

Accidental Perforation of the Uterus with an Intrauterine Contraceptive Device

SIR,—Contributions recently have stressed the potential dangers of intrauterine contraceptive devices after insertion.[1 2] This case illustrates one of the hazards of insertion.

Mrs. P.M., a multiparous woman aged 33 years, was admitted complaining of severe stabbing abdominal pain since the previous night. Ten days earlier a Margulies spiral contraceptive device (Gynekoil) had been inserted, at which time she had experienced a sharp pain low in the abdomen. The pain had persisted at a somewhat lower intensity, exacerbated on the two occasions when intercourse had been attempted, and following the second occasion six days earlier the pain had increased, becoming acute during the 24 hours prior to admission. There had been no bleeding since cessation of the lochia following delivery six weeks earlier.



On admission her general condition was good, and there was only slight lower abdominal tenderness. Vaginal examination revealed no evidence of the device. In view of the history it was decided to perform examination under anaesthesia, but when carried out no evidence of the device was found in the vagina or in the uterine cavity. Bimanual pelvic examination failed to reveal the device in the pouch of Douglas, but *x*-ray showed the device to be in the right iliac fossa region (see Fig.). At laparotomy the device was found free in the pelvis high up on the right side, and was removed from amongst coils of small intestine. Examination of the uterus, which was normal-sized and well-anteverted, revealed a small area on the posterior surface in the midline just above the isthmus region which was thought to be a healing perforation. Both ovaries and tubes were normal. Pomeroy sterilization was carried out and the abdomen closed. Recovery was uneventful.

Devices like the Gynekoil are inserted by extrusion from a firm plastic tube in which they are introduced into the uterine cavity. Their specific shape is assumed after extrusion, and the plane in which they lie is indicated by a marker on the tube. Before insertion the plane of the uterine cavity and its length should be determined by a sound.

It would seem that in this case the extreme uterine anteversion was not recognized and the plane of the coil was antero-posterior. Thus the introducing tube, in contact with the posterior wall of the uterus, directed the sharp-ended "centre" of the coil, emerging first, to perforate the wall. With further extrusion it passed through and coiled up in the pouch of Douglas, subsequently coming to lie freely outside the uterus, probably aided by movement of related bowel and possibly by coitus.—I am, etc.,

B. J. E. COOKE.
University College Hospital Medical School,
London W.C.1.

REFERENCES
1 Thambu, J., *Brit. med. J.*, 1965, **2**, 407.
2 Ibid., 1965, **2**, 249.

Lord Moran's Diaries

SIR,—Pertinax (30 April, p. 1108) is talking through his hat. To compare a statement made by Montgomery about Napoleon with giving clinical details about a patient who died 12 months ago is just fantastic—especially as these clinical details will distress the living. Lord help us if the state of affairs in the U.S.A. is duplicated here.

So G. M. Trevelyan's "History" is the supreme deity to which everything has to be sacrificed. The proper course of action would have been for Lord Moran to have left the clinical history to be published, say, 25 years after his death.—I am, etc.,

Manchester 8. B. HIRSH.

Drug Advertisements

SIR,—Mr. C. A. Pitt-Steele and Dr. D. D. Brown rightly point out in their letters (19 March, p. 740, and 16 April, p. 984) that by no means all of the advertising material that comes to us is worthless. One of the problems about it, however, is to devise an efficient method of storing those pieces of literature which look like being useful for future reference.

Surely the interests of both the advertisers and the recipients would be served if pharmaceutical firms could reach agreement about the form of their more factual literature. I, for example, being a bacteriologist, should like to have readily available the data on antibiotics and other antibacterial substances sent to me by a wide range of advertisers. If they agreed to use standard-sized cards with suitable tabs protruding at the top to show the name of the substance, I could easily build up a card-index system to which each apparently useful new item could be added on arrival. Individuality of different drug houses could still express itself in all sorts of other pieces of eye-catching but ephemeral literature, and only the "data cards" would need to be standardized; even these could have distinctive colours and styles.—I am, etc.,

D. C. TURK.
University of Newcastle upon Tyne.

Early Diagnosis of Carcinoma of Breast

SIR,—Though not a doctor but a nurse I am writing to you as, in view of present-day attempts in encouraging the public to seek early medical advice for the treatment of cancer, you may be interested in this case.

Just over a year ago my maternal aunt found a small nodule in her left breast. Without delay she attended surgery, and was greeted by the doctor: "I suppose you think you've got cancer; I'm sure you haven't." He sent her away without examination.

My aunt had somewhat mixed feelings over this reception, and a few weeks later went to see the other partner at the surgery. She was greeted in the same way, but at this stage insisted on being examined. At the local hospital a diagnosis of cancer of the breast was made. Soon after she had a mastectomy at a leading cancer hospital in another part of the country, and speaks very highly of the staff.

Last week she found a nodule in her right breast, and paid a visit to the outpatient department of this same hospital. She was told, "It's a very small nodule; could you come back in a few weeks?" This time my aunt was more "with it," and the result is that she returned to the hospital this week for a biopsy and follow-up.

As she puts it: "We're told daily in the press, in the women's magazines, and on television to seek early advice. I did, and came up against a medical brick wall."—I am, etc.,

B. J. TRESMAN.

Family Care Service Ltd.

SIR,—I can sympathize with Dr. B. R. Samuels and Dr. M. C. Flasher in their