Letters

Gulf war illness

Why it took so long to decide to investigate

EDITOR—As it is now six years since the Gulf war, it is reasonable to ask why the problem of Gulf war syndrome has not been resolved.[1] As surgeon general in 1991-4 I want to comment on the unravelling timetable during these six years.

At no time have we denied that Gulf veterans have been ill—indeed, whenever possible we have actively recommended their appropriate medical management. Secondly, despite press reports, we have always kept an open mind on the presence of a specific Gulf war syndrome.

The Gulf conflict in 1990-1 itself was short, casualties mercifully few, and the sickness rates unremarkable; likewise, when troops returned to the UK the daily sickness rate did not increase. Also at that stage little evidence existed of psychiatric illness or post- traumatic stress syndrome.

Some 18 to 24 months later, however, we became aware of a campaign by lawyers to recognise a specific Gulf illness. Up to 200 people were on their books, but despite widespread appeals for them to come forward, including two television appeals, only 15 approached the armed forces medical services. Not surprisingly, among these 15 no pattern of illness emerged. They were all managed appropriately.

As we were keen to solve the problem, in October 1993 we appointed a single consultant physician, Group Captain Coker, to see all such patients. At first only a trickle of patients came forward—even by June 1994 (three and half years later) he had seen only 30 patients. Over the next two years, however, these numbers increased so that by January 1997, 1100 had been registered, 920 had been seen and fully investigated, and results had been completed and analysed in 519.

A preliminary paper in the summer of 1996 concluded: "From our small database it would not appear that there is a unique cluster of symptoms which would suggest a new pattern of illness in veterans."[2] There was, however, a higher than normal incidence of psychiatric and stress related illness. A large battery of tests was uniformly performed on all the patients, with further investigations as necessary.

Now it has been agreed that full epidemiological studies are to be undertaken into the incidence of ill health among UK Gulf war veterans and into their reproductive health. In answering the criticism that these expensive studies should have been instigated earlier, I have tried to show how difficult it has been to decide exactly when this decision could have been made. Early on there were very few patients and no evidence of a syndrome. At all stages we have liaised with our counterparts in the United States. They embarked a little earlier on similar studies as they had similar results to their investigations but dealt with greater numbers.

An important reason for writing this letter is because our armed forces may well be placed in similar alien environments in future and we owe it to them to provide the best medical support, which of course includes planned protective and scientifically justified measures against likely threats to their health.

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1 David A, Ferry S, Wessely S. Gulf war syndrome. *BMJ* 1997;314:239-40. (25 January.)
2 Coker WJ. A review of Gulf war illnesss. *Royal Naval Medical Service Journal* 1996;82:2.

Family doctors should be aware of assessment programme

EDITOR—Your editorial by David *et al* on Gulf war illness[1] was prompted by the recent publication in *JAMA* of four papers on this topic. Rightly, the authors point out that these papers provide more questions than answers and are "hypothesis generating rather than hypothesis testing."

Yet surely the studies they cite indicate that there is too much smoke in this area to exclude the existence of a genuine fire; in other words, the possibility remains that some veterans of this conflict have become ill directly as a consequence of their service in the Gulf war.

That more research is needed is generally agreed, and we welcome the projects recently approved by the MRC and funded by the Ministry of Defence, even though it has taken over five years to reach this point. The Royal British Legion believes that not all veterans of the Gulf war who now have health problems are aware of the opportunities open to them. There exists a thorough medical assessment programme organised by the ministry. We write primarily to draw the attention to family doctors to this programme. Veterans who are unwell may be referred to Lt Col Bhatt, Central Medical Establishment, Kelvin House, 32-34 Cleveland Street, London W1P 6AU (0171 636 4651, ext 211). In a recent letter to the legion the assistant private secretary to the ministry has undertaken to provide travel warrants and, where necessary, overnight accommodation for veterans travelling to London to take advantage of this programme. Details are available from the legion.

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1 David A, Ferry S, Wessely S. Gulf war illness. *BMJ* 1997; 314:239-40. (25 January.)

Chronic forearm pain

Thermography is a sensitive adjunct to diagnosis

EDITOR—Reporting on thermographic changes in keyboard operators with chronic forearm pain, S D Sharma and colleagues suggest that thermography needs further evaluation as a diagnostic tool and that it may become a useful means of assessing the efficacy of treatment.[1] Our experience over a five year period of the use of thermography as an aid to diagnosis and later as a means of

Advice to authors

We receive more letters than we can publish: we can currently accept only about one third. We prefer short letters that relate to articles published within the past four weeks. We also publish some "out of the blue" letters, which usually relate to matters of public policy.

When deciding which letters to publish we favour originality, assertions supported by data or by citation, and a clear prose style. Letters should have fewer than 400 words (please give a word count) and no more than five references (including one to the BMJ article to which they relate); references should be in the Vancouver style. We welcome pictures.

Letters should be typed and signed by each author, and each author's current appointment and address should be stated. We encourage you to declare any conflict of interest. Please enclose a stamped addressed envelope if you would like to know whether your letter has been accepted or rejected.

We may post some letters submitted to us on the world wide web before we decide on publication in the paper version. We will assume that correspondents consent to this unless they specifically say no.

Letters will be edited and may be shortened.

objective assessment of the effects of treatment on horses in a veterinary practice strongly supports this view.[2]

The initial subjects were 49 horses suffering from persistent non-specific lameness or chronic back pain which had not responded to standard veterinary treatment. All were referred for manipulative treatment using osteopathic techniques. More recently some 400 horses have been assessed before and after treatment, and in 80% of equine cases with chronic back pain, no orthopaedic or neurological pathology was found.[3] The parallel with back pain in humans is at once apparent.

Like Sharma and colleagues, we were able to show that many subjects had areas of distinct cooling in the affected limb, or in our cases often over the paravertebral musculature. Thermography after treatment showed resolution or partial resolution of these areas of cooling where there was clinical improvement.

Thermographic changes correlate well with radiographic changes.[4] However, in our experience thermography is useful in detecting more subtle forms of dysfunction which often seem to be related to difficult clinical areas currently at the edge of, or beyond, present concepts of disease. Many of these require a terminology containing prefixes such as "non-specific," "atypical," "primary," and "functional."

Although much work is needed in standardising and interpreting thermal images, thermography can provide a sensitive, non-invasive, and relatively inexpensive adjunct to the diagnostic process, and an objective means of assessing the efficacy of a range of treatments.

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1 Sharma SD, Smith EM, Hazleman BL Jenner JR. Thermographic changes in keyboard operators with chronic forearm pain. *BMJ* 1997;314:118. (11 January.)
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Repetitive strain injury is an unhelpful term

EDITOR—I find it distressing that the *BMJ* can publish an article which accepts and seeks to propagate the term repetitive strain injury.[1] S D Sharma and colleagues show that patients with undiagnosed pain exacerbated by work had alterations in their skin blood flow after performing a task which made their pain worse. It is well accepted that pain can cause changes in skin blood flow and thereby in temperature. Exactly the same effects would be found in a series of patients with osteoarthritis of the knee asked to use a treadmill. The study simply shows that these patients have arm pain that is made worse by exercise; it does not prove the existence of repetitive strain injury. The use of the term is misleading and unhelpful to patients and those who treat them. The British Orthopaedic Association's working party was clear that there was no evidence that repetitive strain injury was a real disease,[2] and this has been confirmed in a recent editorial by the council of the American Society for Surgery of the Hand and an editorial in the *BMJ*.[3 4]

In a series of 70 patients with a presenting diagnosis of repetitive strain injury, I have been unable to make a firm medical diagnosis on only five occasions. The diagnosis of repetitive strain injury profoundly affects that patient's future prospects, both of recovery and future employment. I have had several patients with clearcut clinical diagnoses who have told me, "I cannot get better, I have RSI." They have then declined treatment and left the clinic. A doctor would do much better to explain to the patient that they have arm pain for which present medical knowledge can supply no diagnosis. Referral to a pain clinic is usually then appropriate for pain management as opposed to disease treatment.

Patients attending my clinic have usually been off work for several months, and clinical signs can be hard to elicit. We therefore send all patients for a controlled exercise programme to get the arm back into use. This will temporarily increase the pain but will allow clinical signs to show and treatment to be started. Simultaneously patients are referred to the pain consultant for management of symptoms until treatment is organised. Patients with what I term "complex upper limb pain" should not be given the dangerous diagnosis of repetitive strain injury. Rather than being seen in general orthopaedic or rheumatological clinics they should be seen in specialist clinics, where the facilities described above are available and which have a high success rate in diagnosing and treating such patients.

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1 Sharma SD, Smith EM, Hazleman BL, Jenner JR. Thermographic changes inkeyboard operators with chronic forearm pain. *BMJ* 1997;314:118. (11 January.)
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Disorders of spermatogenesis in Finland

Is this a period effect, and if so, why?

EDITOR—Jarkko Pajarinen and colleagues report a dramatic deterioration in spermatogenesis between 1981 and 1991 at necropsy in middle aged Finnish men who died suddenly.[1] The rate of abnormality seems extremely high, even in 1981. Could this be explained by, for example, the different fixatives used or by varying delay between death and necropsy? Have similar findings been reported in other comparable studies?

The authors discuss the discrepancy between their findings and the evidence that sperm concentration has not declined in Finland up to as recently as 1994.[2] The explanation given, that blocked seminiferous tubules together with normal spermatogenesis can coexist with an impaired sperm count, cannot account for observations that are the other way around. What could be relevant, however, are differences in age distribution and in location within Finland.

Assuming that these findings can be accepted as real, a key question is whether they are due to a cohort effect or a period effect. A cohort effect corresponds to an exposure in early life that led to a permanent defect. A period effect results from an acute or chronic exposure that occurred, or at least had its effect, between 1981 and 1991. Pajarinen and colleagues could have investigated this by analysing each of their cross sectional studies by age (allowing for a possible "normal" background deterioration): a cohort effect would predict that older men had better spermatogenesis, whereas a chronic period effect would predict the reverse as older men would have been exposed for more years. If both effects were present they would tend to counterbalance one another. An acute period effect would predict no relation with age, unless susceptibility varied with age.

On the face of it, the steep rise in arrested spermatogenesis would suggest an acute period effect—that is, a sudden event that occurred between the two studies. One possibility is the Chernobyl accident of 1986, during which Finland received an appreciable dose of radiation; the peak radiation dose in southern Finland occurred somewhat to the east of Helsinki.[3] A slight rise in congenital malformations showing a dose-response relation[4] was reported in Finland after the accident.[3] Although the external dose was small, certain substances, such as plutonium and indium, are actively taken up by the adult testis[5] and could cause appreciable damage by emitting high energy radiation.

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1 Pajarinen J, Laippala P, Penttila A, Karhunen PJ. Incidence of disorders of spermatogenesis in middle aged Finnish men, 1981-91: two necropsy series. *BMJ* 1997;314:13-8. (4 January.)
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Author's reply

EDITOR—Michael Joffe presents an interesting hypothesis of a possible association between deteriorating spermatogenesis in Finland and the Chernobyl accident in 1986. We do not think that radiation could entirely explain our finding, however, as most of our necropsy data came from the Helskini area, which avoided the peak of radiation. The hypothesis does, however, raise new questions which should be considered in future investigations.

The incidence of normal spermatogenesis (56%) in our series correlates well with another study which reported normal spermatogenesis in 50% of cases.[1] In addition, our series included heavy drinkers, in whom there is a high incidence of disorders of spermatogenesis.[1-3] This significantly decreased the mean incidence of normal spermatogenesis in our series. Interestingly, when moderate drinkers were analysed in the 1981 series normal spermatogenesis was found in four out of five men. The role of alcohol consumption in the deterioration of spermatogenesis was not, however, included in our study.

To allow for confounding from the various types of fixation methods we assessed the effects of certain fixatives on spermatogenesis in a previous study.[2] Formalin caused detachment of germinal epithelium in seminiferous tubules, making the scoring of spermatogenesis to some extent more difficult. Neither formalin nor Bouin's solution had an effect on the state of spermatogenesis. Recently, we investigated the effects of fixation on testes with an identical state of spermatogenesis. No association was observed between testicular morphology and the type of fixative solution (unpublished data). In addition, we do not think that the slight difference of 0.3 days (3.5 in 1981 *v* 3.8 in 1991) between death and necropsy could explain the difference between the two series; reasons other than technical might explain this finding.

As we pointed out in our article, blockage of seminiferous tubules has been observed in several oligospermic men, suggesting an inconsistency between semen analysis and state of spermatogenesis.[4] The total sperm reserve is unlikely to be completely depleted after one ejaculation.[5] A slight deterioration in spermatogenesis, such as partial spermatogenic arrest, could produce enough spermatozoa to make a comparison with normal spermatogenesis difficult, especially if analysis was performed after a period of abstinence, during which sperm reserves become replenished. If semen analysis was performed at more frequent intervals differences in spermatogenesis might become more apparent.

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1 Kuller LH, May SJ, Perper JA. The relationship between alcohol, liver disease and testicular pathology. *Am J Epidemiol* 1978;108:192-9.
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Penetrating intraoral trauma may occur in adults as well as children

EDITOR—R C Law and colleagues present an excellent account of the hidden dangers of penetrating intraoral trauma in children.[1] Although this type of injury is more commonly seen in children,[2] it should not be overlooked in adults.

We recently treated a 28 year old man who had been assaulted with an umbrella. An obvious lip injury was noted, but an oropharyngeal injury, in the same trajectory, was missed, and he presented 24 hours later with hemiplegia and aphasia. Contrast computed tomography and angiography confirmed thrombosis of the carotid artery secondary to trauma to the posterior pharyngeal wall (fig 1). Thrombosis can also occur secondary to blunt head and neck trauma.[3]

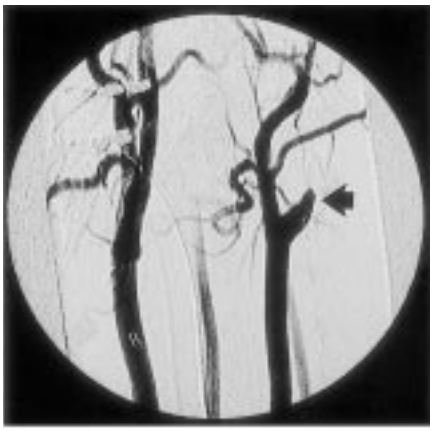

Fig 1 Intravenous digital subtraction angiogram arch aortagram showing complete occlusion of left internal carotid artery (arrow)

We would re-emphasise the need to make parents aware of the dangers of children walking around with sharp objects in their mouth. We would also recommend thorough oral examination in patients—adults as well as children—presenting with perioral as well as intraoral trauma.

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Suspension of nurse who gave drug on consultant's instructions

Consultant is grateful for readers' support

EDITOR—I wish to thank the many readers who have supported my action and that of the sister in a day hospital in giving a psychotic patient surreptitious drug treatment.[1] Needless to say, this was very much a last resort. I did not give the patient his drugged tea myself because he would not have accepted it from me; the nurse concerned naturally hesitated when I asked her to give it, and I foolishly assured her that I would take full responsibility.

Since then I have done everything in my power to persuade the hospital administration to put matters right—without success. I hoped that publicity might facilitate this. The chairman of the trust, however, has told me that it is up to the chief executive, while the chief executive has told me that she will take no action. Meanwhile, the senior nurse who initiated the disciplinary action has been promoted and has left, while the sister in the day hospital continues to give devoted service to her patients without complaint, though she is deeply hurt by the treatment she received.

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1 Suspension of nurse who gave drug on consultant's instructions [letters]. *BMJ* 1997;314:299-301. (25 January.)

Patients should be alert to doctors' willingness to use subterfuge to give drugs

EDITOR—I am appalled to learn that a substantial number of doctors believe that it is sometimes acceptable to use subterfuge to give drugs to cognitively intact patients who have not been detained under the Mental Health Act without their consent and that some of these doctors are prepared to put their beliefs into practice.[1 2] I had hitherto assumed that patients who claimed that such things were going on were paranoid, but I wonder now if on occasion my attempts to reassure them were misplaced. Until the General Medical Council sees fit to condemn this behaviour, I suggest that it should issue the following advice to the general public:

"In certain circumstances a doctor may decide to give you a treatment that you have not consented to, or even one that you have specifically refused. He or she may do this by concealing a drug in your food or drink, or

by lying to you about the treatment given to you and claiming that it has some other purpose. For example, if a doctor thinks it would be deleterious for you to have any more children he or she may give you an injection of a long acting contraceptive while telling you that it is an immunisation.

"If you wish to guard against receiving treatment without your knowledge then you should refrain from eating or drinking anything offered to you by health professionals unless you have closely supervised its preparation, or unless it has first been sampled by somebody else, preferably a member of staff. You should also check closely any drug that you are offered—for example, by reading an account of its effects in the *British National Formulary*. This publication also provides a description of the colour and shape of the tablets so that you can make sure that you are not being given something other than what you have been told.

"The safest course of action if you wish to avoid being treated surreptitiously is to maintain a constant state of vigilance and to regard all activities of medical and nursing staff with the utmost suspicion. Try to have as little to do with them as possible, and if you are at all concerned that something underhand may be going on then do not hesitate to make good your escape."

That should put everybody in the picture.

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1 Kellett JM, Griffith D, Bell A, Short J, Adshead G. A nurse is suspended. *BMJ* 1996;313:1249-51. (16 November.)
2 Suspension of nurse who gave drug on consultant's instructions [letters]. *BMJ* 1997;314:299-301. (25 January.)

Allowing relatives to witness resuscitation

Editor—In response to the Resuscitation Council's proposals,[1] Kevin Stewart and Leslie Bowker cautioned doctors against inviting relatives of adult patients to witness resuscitation.[2] Their arguments are that the relatives have no legal rights and that a complaint may arise from a breach of patient confidentiality. The risks they mention, although correct, are far outweighed by the potential benefit to the relative or close friend.

The Resuscitation Council's recommendations presuppose that legal principles are contingent and not absolute and are outweighed by humane considerations. For some people it is extremely distressing to be separated from their loved one at this time,[3] and there is also some evidence that being there, even briefly, can be beneficial to grieving.[4] If aware, the patient may also benefit. I know of no evidence that most patients would not want their relatives present, assuming the relative wants to be there.

Obtaining the patient's consent is obviously impossible, but I feel it would be wrong to deny all relatives the potential benefit of being with their loved one at the end for what is a theoretical risk of complaint. However, any known pre-existing wishes of the patient should be respected. The Resuscitation Council's guidance provides safeguards, including that the patient takes priority.[1] In emergencies we act in good faith to do what we believe is best for patients and their relatives.

In the current state of knowledge, the Resuscitation Council project team felt that the legal and confidentiality issues are generally outweighed by humane considerations.

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Medicine, postmodernism, and the end of certainty

Postmodern philosophy offers a more appropriate system for medicine

Editor—Paul Hodgkin equates postmodernism with the death of belief.[1] A more appropriate interpretation is that postmodernism argues against universal belief.[1] Interpreting postmodernism according to the statement "where one version of truth is as good as another anything goes" is in fact a mistake. Postmodernism is an attack on dogma. It is for openmindedness and about other ideas and views. Postmodern philosophy would argue that there can be a truth which is not based on any particular belief system but on an agreed basis within a society at a particular time.[2] As Hodgkin puts it, "To the postmodern eye truth is not out there waiting to be revealed but is something which is constructed by people."

I suspect that Karl Popper would argue strongly against evidence based medicine as a sole way forward. After all, the evidence is based only on our current value systems, which can dramatically alter with new advances in our understanding of nature.[3] The postmodern philosophy in fact offers us a more appropriate system for medicine. The truth is based on a system agreed by society in terms of current scientific knowledge, cost, and the personal preference of individual patients. We have to question why so many of our patients resort to so called alternative therapy with minimal or no scientific evidence. It is because we try to impose our truth on our patients, who may have their own truth. We have to become more postmodernist if we are going to treat our patients appropriately rather than simply impose our dubious value systems on them.

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1 Hodgkin P. Medicine, postmodernism, and the end of certainty. *BMJ* 1996;313:1568-9. (21-28 December.)
2 Cahoone I. *From modernism to post modernism.* Oxford: Blackwell, 1996.
3 Popper K. *Conjectures and refutations.* London: Routledge, 1963.

Doctors have a duty to remain true patient advocates

Editor—Paul Hodgkin is right to sound the alarm.[1] If indeed "one version of the truth is as good as another," then anything goes.[1] The postmodern world of fuzziness and futility which he paints rejects the possibility of absolutes, whether of scientific truths or guaranteed treatment outcomes. This denial of overarching frameworks, expressed by Jean-Francois Lyotard as a "suspicion of meta-narratives," inevitably leads to the demise of traditional orthodoxies, whether philosophical or medical.[2]

Initially this view seems quite attractive: free agents uncluttered by old hierarchies and anachronistic practices. As certainties pass away, competing ideologies and treatments step into the health supermarket. In this brave new world who needs licences and mandates to practise? Free market competition dictates that "licensure should be eliminated as a requirement for the practice of medicine."[3] All providers are welcome to bid, and the consumer decides.

Such deregulation shatters the hierarchical division between scientific and alternative medicine. The traditional autonomy of the medical profession collapses as corporations and competing therapists invade the newly created health market. Indeed, this is already beginning to happen.[4] Here the consumer picks and mixes medical care options from the shelves of enticing therapies. This is where McDonalds meets Mrs Thatcher.

The beauty of traditional general practice has been its ability to be both patient advocate and health service gatekeeper. This potentially compromised dual role has survived intact to date. Such a possibility reflects a meta-narrative that speaks of licensed doctors who act with integrity, seeking to balance patient need, service capability, and scientific evidence. Such doctors continue their privileged role by consensus and through agreements over what is true and trustworthy.

Although the postmodern world will persist in challenging all our assumptions and practices,[5] we have a duty to remain true patient advocates, not least as robust defenders of the scientific medical heritage. We must firmly resist the idea that nothing can be known, that truth is what you make it. That way leads to superstition and a new dark age.

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1 Hodgkin P. Medicine, postmodernism, and the end of certainty. *BMJ* 1996;313:1568-9. (21-28 December.)
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Studies of environmental risk must not be subject to bias from pre-existing beliefs

EDITOR—The editorial by Paul Hodgkin on the impact of postmodernism on medicine raises issues that are particularly relevant to the practice of public health medicine.[1] How can public health doctors hope to persuade people of the dangers of some forms of behaviour or environmental exposure and reassure those same people about the comparative harmlessness of other behaviours and exposures when certainty is dead?

For every viewpoint the media can usually identify someone or some group with the opposite view. Postmodernists would argue that both viewpoints are equally valid, whatever the evidential basis of those views. This is manifest most starkly when the beliefs of professional and lay communities differ, as in the assessment of health risks associated with environmental pollution incidents.[2,3] These differences would merely be an indication of the need for improved public education were it not that prior lay knowledge or belief poses the real risk of undermining the basis of professional public health knowledge. Any epidemiological study that is conducted to investigate the impact of an environmental influence on human health could be subject to bias if the study population had already decided the issue. Thus in a postmodernist world epidemiological studies may serve only to reinforce prevalent viewpoints rather than to determine absolute truths. This was most clearly shown when a strong association between tap water consumption and adverse pregnancy outcomes was identified in California.[4] Eventually the authors suggested that the likely explanation for this association was that intense local anxiety stimulated by press reports on unsafe water had biased reporting of exposure. The critical issue for epidemiology in postmodernist society is how to design studies of environmental risk that are not subject to bias from pre-existing beliefs, either from lay or professional communities. But perhaps this was always the issue.

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1 Hodgkin P. Medicine, postmodernism, and the end of certainty. *BMJ* 1996;313:1568-9. (21-28 December.)
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Complex systems result in a new kind of fundamental uncertainty

EDITOR—Paul Hodgkin asks why medicine still retains a modernist view of knowledge while many other subjects have abandoned the search for an objective understanding of external reality in exchange for the relativism and uncertainty of postmodernism.[1] He suggests that this is because medical technologies have in fact delivered many universally applicable results, particularly within the biomedical sciences. In contrast, clinical practice has had to confront an increasing number of social, ethical, political, and economic issues whose nature remains unclear. Instead of science removing uncertainty, the failure of science in these areas has increased uncertainty by raising the possibility that there is no truth "out there" waiting to be discovered. Postmodernism, with its discursive, qualitative methods, may simply move in to take over where quantitative methods have failed.

In recent years there has been increasing interest in complex systems—that is, systems consisting of large numbers of interconnected non-linear units.[2] Biological and psychosocial systems are all examples of complex systems. An essential feature of these systems is that the properties of the whole cannot be predicted from the properties of the component units. Instead, properties emerge. Placed within an evolutionary framework, complex adaptive systems evolve, selected on the basis of their emergent properties. Their structure is not designed: it is self organising. There are no internal mechanisms to be discovered.

These observations have major implications for research into clinical practice. They indicate that there may be a limit to empirical science. As many aspects of clinical practice are emergent properties of complex systems, there is no "thing out there" to be discovered. We are likely to be dealing with a new kind of fundamental uncertainty.

Interestingly, complexity could provide a theoretical underpinning to postmodernism. Work within the artificial life paradigm suggests that the biological apparatus and cultural structures needed for the generation and perception of higher level emergent behaviour—for example, language, meaning, or metaphor—could simply have evolved without the need for any internal symbolic representational schema.[3] This is in keeping with postmodern ideas that all meaning is constructed by a hermeneutic process and that all theories are metaphors which evolve as sociohistorical movements, selected by their rhetoric strength rather than any concept of proof.[4]

Complexity has been described as the third epoch of science, after mathematics and empirical science. The future of medical science may be uncertain.

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Rationing breast reduction surgery

EDITOR—We are concerned with restricted access policies for breast reduction by health commissions described by Margaret Somerville.[1] Certain health commissions request referral to other specialties before funding a plastic surgery consultation. We studied the rationale of patient selection by this method by examining the symptoms of patients whose outcome was determined by the health commission.

Between February 1995 and January 1996, 58 patients from three health commissions with restricted access policies were referred by their general practitioners to Salisbury District Hospital for breast reduction. A standard letter was returned to the general practitioners explaining that the referral could not be accepted without approval of the health commission. In 22 cases the general practitioners took no further action; in the remaining 36 cases the health commission was contacted. In 16 cases the health commission accepted the general practitioner's opinion and funded the procedure. In three of the 36 cases the health commission refused outright to fund the request. In these patients the symptoms reported in the referral letter were not different to those of the other patients. In 16 of the 36 cases the health commission required a referral other than for plastic surgery (15 psychiatric opinions and 1 orthopaedic opinion). Symptoms of patients funded for a psychiatric referral differed significantly from those funded directly for plastic surgery referral only on "ridicule" ($P = 0.04$, Fisher's exact test), and not on pain, posture, breathing, intertrigo, asymmetry, clothes, sport, anxiety, depression, unhappiness/emotionality, or embarrassment.

Thirteen of 15 psychiatric opinions were favourable, 1 was unfavourable, and 1 unknown. The health commission accepted 11 of the favourable reports but refused to fund two. The favourable orthopaedic opinion was accepted. Finally, 28 of the 58 patients were funded for a plastic surgery consultation.

There seem to be discrepancies in restricted access policies. The grounds for outright rejection of patients by the health commission were not specified. The grounds for referral to another specialist were unclear as symptoms of patients funded with general practitioner's support were the same as those requiring psychiatric referral. Since 14 of 15 referrals to other specialties resulted in favourable reports, psychiatric and orthopaedic resources are wasted in providing consultations which almost invariably led to consultations with the plastic

surgeon. Direct referral from a general practitioner to plastic surgeon seems to provide the most satisfactory and cost effective approach. Psychological assessment, if required, could follow and be performed by a clinical psychologist or psychiatrist experienced in assessing this patient group. Breast reduction surgery has been shown to be beneficial to patients,[2 3] and a uniform policy should be established to ensure equitable access.

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Authorship

See editorial by Smith and p 1009

Guidelines exist on ownership of data and authorship in multicentre collaborations

EDITOR—Richard Smith and Richard Horton have expressed concern regarding research misconduct and, in particular, misappropriation of information and ideas and definitions of authorship.[1 2] Issues of data ownership and authorship are particularly problematic for multicentre projects, where the need to "publish or perish" among the increased number of researchers is compounded by the requirement for research accountability. Multicentre collaborations are becoming increasingly common: they give greater breadth of experience and expertise in developing and implementing protocols, facilitate recruitment of subjects, and allow a greater variety of setting to enhance generalisability or results. Despite its importance, little has been written about this area.[3-5]

The National Psychosis Research Framework (currently coordinated at PRiSM, Institute of Psychiatry) recently established guidelines for multicentre collaboration.

(1) A publication plan should be constructed early on to avoid overlap of contents and ensure fair allocation of authorship. Prior written agreement must be obtained from the principal investigators of all centres whose data is to be used in any paper, and policy on authorship, correspondent, and acknowledgement for each paper should likewise be agreed.

(2) Individuals interested in data collected at other sites should circulate their publication proposals to those sites, giving a reasonable specified time period in which to respond.

(3) Authorship should reflect relative contributions to the writing of the paper as well as to the analysis, design, and conduct of the study. It may be appropriate for some contributions to be recognised by an acknowledgement.

(4) The final draft of any paper must be circulated to all authors, whose written agreement regarding content and target journal must be obtained before each submission for publication. Consent must also be obtained from those whose contribution has been acknowledged.

(5) When a public presentation of data is to be made and data are taken from a paper already accepted for publication, collaborating authors must be acknowledged. Where the data for presentation are taken from a paper still in preparation, permission must be obtained from the relevant authors for their findings to be presented and the authors likewise acknowledged. Agreement may be given in advance for certain categories of presentation.

(6) All papers which combine data from more than one site should state the affiliation to the wider research collaboration. Papers should be distributed to all members.

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Team approach to assigning authorship order is recommended

EDITOR—Deciding the order of authors on research papers is a recognised problem.[1-5] Currently, authorship order cannot be interpreted by readers and editors. The last position often carries more status.[3] In some papers the senior investigator is named last, in others it is the head of the laboratory or department, and in others it is the person who contributed least.

Burman recommended that the research supervisor should be second author and the head of laboratory last,[4] while Riesenberg and Lundberg proposed that order should reflect contribution.[1] Most writers agree that the person most closely associated with the research should be the first author.[1-4] The Council for Biology Editors recommend that each journal specifies criteria for authorship order, but journals tend to leave this to authors. To our knowledge no practical scheme for allowing group consensus on authorship order has been published, although there are techniques for calculating credit.

We undertook a piece of participative research to assign authorship order to our work[5] by means of peer judgments. We compiled a list of contributions involved in carrying out our research (see box). Team members spoke briefly about their contributions and ticked the list appropriately. Using this list and background knowledge about the development and execution of the project, each team member compiled three rankings of colleagues' contributions, excluding themselves. The first was for the project as a whole, and the others for each of two papers. A top rank was given eight points, a second seven, and so on. We collated the rankings to give a total score for each team member, and all nine authors discussed and agreed the resulting order. Despite initial trepidation and discomfort, we agreed that the outcome of this process was fair.

Authors' possible contributions to research project

- Impetus or initiative
- Preparation
- Planning meetings
- Sampling
- Questionnaire design
- Administering the survey
- Interviewing subjects
- Coding questionnaire
- Qualitative analysis
- Quantitative analysis
- Drafting paper
- Commenting on drafts
- Attending meetings
- Conference preparation

Our approach makes each author's involvement explicit within the team and uses an anonymous democratic process. As the rankings can be secret, abuse of power, status, and reputation are minimised. This may help to reduce difficulties experienced by researchers. Determining authorship in advance may reward those who promise at the expense of those who deliver, whereas our approach reflects the team's view of actual contributions. We suggest that others test this process for themselves.

Authorship order reflects peer group views on overall academic and practical contribution to the project and is therefore rank order.

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New bill offers control for mentally disordered offenders

EDITOR—In his recent editorial Derek Chiswick commented that clause 36 of the Crime (Sentences) Bill "runs contrary to modern concepts of psychiatric practice."[1] Central to this debate is the issue of responsibility, the extent to which a psychiatric patient can be held responsible for a criminal act. Policy in this area has followed the recommendations, in 1975, of the Butler committee: "Prosecution should be seen as a last resort,"[2] which were subsequently reaffirmed by the Read review in 1992: "Wherever possible receive care and treatment from Health and Social Services rather than in the Criminal Justice System."[3] The bill is a major change from this position; it offers the court the opportunity to combine treatment and punishment and thus to consider the issue of a patient's individual responsibility for an offence.

The change should be welcomed. The majority of high profile failures of community care have involved patients with a history of offending behaviour. They rarely face prosecution because of the current policy. I have looked after several patients who have assaulted members of the public, staff, and other patients, both in the community and in hospital. They have rarely, if ever, been prosecuted. This problem has increased in recent years with the development of community care and the widespread availability of psychoactive drugs. Community care offers new opportunities and freedoms for patients, but with it comes a responsibility for patients to cooperate and help in the management of their own illness. Current practice often seems to place psychiatric patients above the law, without risk of prosecution for a range of offences. In this context prosecution may have benefits beyond the immediate protection of the public. It offers the prospect of encouraging patients to comply with their treatment regimen, whether this is compliance with prescribed medication or avoidance of psychoactive drugs that might themselves trigger a relapse; it may also have some value in increasing patients' insight into the seriousness of their behaviour when ill, and it emphasises the responsibility of the patient to assist in cooperating with their own care and treatment.

The opportunity should be seized to provide a legal framework that will underpin and strengthen the controls for managing mentally abnormal offenders in the community. This would include wider prosecution of offences, greater use of sentences such as "probation with treatment as a condition," and a new section of the Mental Health Act 1983, such as a community treatment order which would build on the acknowledged success of restriction orders.[4]

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Traders' views on sale of cigarettes to children

EDITOR—If the high prevalence of smoking among children[1] is to be reduced then a comprehensive approach is required.[2] Part of this approach is a reduction in the availability of cigarettes. The Children and Young Persons' (Protection from Tobacco) Act 1991 strengthened the law on the prevention of sales of cigarettes to children aged under 16. We investigated traders' knowledge of and opinions on the health issues related to smoking by children and the legislation itself.[3]

We invited the 54 trading premises that sold tobacco in three areas in northeast Wales to participate in the study. Thirty two traders agreed to do so and were visited by a researcher and given a self completion questionnaire.

Thirty respondents said that health was the main reason for the act, but three thought that smoking had no effect on children's health and 10 did not know that becoming a smoker before the age of 15 carries a higher risk of lung cancer than does starting smoking at the age of 25.[4] Eighteen respondents thought that they had some responsibility for children's health, and over half thought that they had a health promotion role for children: 21 by preventing sales of cigarettes to them and four by informing them of the dangers of smoking. Thirty one respondents said they would not personally sell cigarettes to children, but a few mentioned exceptional circumstances when they would—namely, if they were told that the cigarettes were for an adult, if they received written parental consent, and if the cigarettes were for a parent in a family that they knew or for a disabled adult in a car outside. The dilemma arising when young people look older than they are was mentioned. All the respondents were familiar with the act, but 13 did not know the current maximum fine (£2500 ($4000)).

Twenty nine respondents said that children attempted to buy cigarettes from their premises. Seven showed these children the statutory notice relating to sales of cigarettes to children under 16, and 11 asked for identification as evidence of age. Most premises had guidelines for sales staff, but owners generally showed more awareness and commitment than managers. Many traders thought that the government could help them in various ways (table 1).

As Devine and Vickers suggested, traders would benefit from education about the reasons for the age limit for sales of tobacco as well as about the act itself.[5] Our respondents also believed that they would be helped by action by the government, especially the introduction of identity cards with photographs.

We thank the trading standards department and all the participants for their help in this study. AC's work is supported by the Cancer Research Campaign (grant No CE1055) and DJ's work was supported by the Clwydian Community Care NHS Trust.

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Table 1 Changes in law relating to sales of cigarettes to children that traders would like to see government implement. Figures are numbers (percentages)

	Newsagents (n=14)	Grocers (n=9)	Petrol stations (n=6)	Off licences (n=3)	Total sample* (n=32)
Issue identity cards with photographs	12 (86)	9 (100)	6 (100)	3 (100)	30 (94)
Change current law (make it illegal for children to buy cigarettes, or raise age limit)	6 (43)	6 (67)	2 (33)	2 (67)	16 (50)
Ban smoking in public places	5 (36)	5 (56)	2 (33)	0	12 (38)
Ban cigarette advertising	2 (14)	3 (33)	2 (33)	0	7 (22)
Increase tobacco prices	0	3 (33)	2 (33)	0	5 (16)
Other	3 (7)	0	0	0	3 (9)

*Some respondents gave more than one answer.

Head up tilt testing has a place in distinguishing certain conditions from epilepsy

EDITOR—In their editorial J W A S Sander and M F O'Donoghue place great reliance on clinical characteristics to differentiate between epilepsy, convulsive syncope, and non-epileptic attacks.[1] This seems unwise because the diagnostic success rate even of specialists may be as low as 50% on the basis of history and examination alone.[2] Furthermore, direct observation of seizures by trained staff in a specialised inpatient unit resulted in only 80% diagnostic accuracy.[2]

One important omission in the editorial was the failure to mention head up tilt testing, which has assumed an important role in diagnosing syncope in recent years.[3] Even when used in reported cases of epilepsy head up tilt testing has been shown to be valuable in detecting convulsive syncope and seizures of psychogenic origin.[3] We recently reported four cases of primary cardiovascular disease misdiagnosed as epilepsy.[4] One of these patients was a middle aged woman with classic tonic-clonic seizures who had 38 seconds of asystole on head up tilt testing, followed by a short lived generalised seizure. Her seizures resolved with permanent pacing. We subsequently identified two additional patients with suspected epilepsy who had profound vasodepressor reactions to head up tilt testing associated with reported seizures. Another patient with so called intractable epilepsy developed violent, semipurposeful shaking of the limbs within two minutes of head up tilt testing but without associated haemodynamic or electroencephalographic changes and was concluded to have non-epileptic attack disorder.

In the first three patients the seizure activity was clearly genuine, but the cause was mistaken. The cause was global cerebral hypoxia, which in turn was the result of global cerebral hypoperfusion due to sudden profound hypotension. What must be recognised is that cerebral hypoperfusion may cause what look like epileptiform movements. To both lay and skilled observers this phenomenon may be indistinguishable from epilepsy caused by a generalised discharge of cerebral neurones while cerebral perfusion is preserved. If seizure activity due to hypotension is mistaken for epilepsy many young patients who are prone to reflex syncope may be labelled epileptic. This has profound effects on prospects for life, work, marriage, childbearing, and driving. Indeed, data on patients with a first seizure show that most do not have epilepsy confirmed by electroencephalographic abnormalities.[5] Many of these patients might have reflex syncope with seizure activity that is misinterpreted as a primary cerebral disturbance. Although reflex syncope is not always benign, its diagnosis has far less severe connotations than a diagnosis of epilepsy.

It is important that reflex syncope is considered in patients presenting with seizure activity. Although far from perfect in sensitivity and specificity, head up tilt testing provides a tool for objective assessment of such patients and avoids relying solely on the well documented limitations of a clinical evaluation.

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Prognosis for babies of less than 28 weeks' gestation

EDITOR—Win Tin and colleagues provide further help for parents at risk of delivering babies of less than 28 weeks' gestation.[1] They concluded that "these data should not be used to establish an arbitrary 'threshold' below which resuscitation should never be offered at birth" but did not mention how many of the 342 babies born at 22 to 24 weeks were resuscitated and admitted to intensive care and how many were just kept comfortable and cuddled by the parents. Although data on profound and severe handicaps were useful, it would have been more important to know about the incidence of normal outcome at each gestation age.

In clinical practice a major problem for expectant parents is not being supplied with consistent and realistic information and advice by obstetricians, midwives, and neonatologists. The data of Tin and colleagues support the need for parents to know that babies born at 26 weeks and earlier are at very high risk of death or handicap.[2] Communication, as in a recent case of a baby of 23 weeks' gestation,[3] is especially difficult in the emotionally charged atmosphere of delivery suites, when parents can have problems understanding and remembering, no matter how well the information had been given. Over the past two and a half years I have routinely recorded (with consent) my conversations with parents using a "walkman" tape recorder, a tie-clip microphone, and standard C60 cassettes. At the end of the conversation I give the tape recorder with the cassette to the parents so that they can listen to the information at leisure (and repeatedly if necessary). Parents seem to benefit from such a simple adjunct in communication. There were two parents who on listening to the recording of the conversation claimed that the conversation never took place.

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Teleconferencing should be extended to include job interviews

EDITOR—Twice in the past five years I have made trips from Australia to Britain for the sole purpose of attending an interview. On both occasions I was unsuccessful. This prompts me to suggest that professor D M B Hall's indications for teleconferencing[1] should be extended to include job interviews. He notes that in the British Paediatric Association's experience teleconferencing has reduced the overall cost of holding a meeting by half to two thirds in view of the reduction in "travel and catering costs." The savings available by holding teleconference interviews for overseas candidates are far greater. For example, my latest trip entailed two weeks' absence from work (half my annual leave), 10 days' accommodation and subsistence in the United Kingdom, in addition to the cost of a transglobal flight arranged at short notice.

According to Whitley Council standards, NHS hospitals have been liable for travel costs for interviewees from their point of entry to Britain, and candidates have had to accept the cost of their journey to Britain as the price of gaining overseas experience. Teleconferencing makes many of these costs unnecessary. One would hope that any reasonable prospective employer would not insist on the candidate making such a financial commitment when a viable alternative to face to face interview exists.

Some employers may think that this is an issue for the candidate and his or her purse. It may, however, become more of an issue for the interviewing hospital. The Whitley Council standards discriminate against all candidates from overseas, including those from other countries within the European Union. If this breaches the European agreement on free movement of goods and labour employers may find that they have a responsibility for reimbursing travel expenses from any point within the European Union. This must be an incentive for NHS employers to utilise teleconferencing for interviews.

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