tactics summed up by Stevenson in his book *Ethics and Language*.¹ Teachers may resort to emotive techniques in order to change the attitudes of children towards various methods of behaviour.

It is my opinion, however, that any attempt at crude emotivism will fail. We should present the children with the medical facts against a background of caring, now about their parents, later about their dependants.

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¹ Stevenson, C L, *Ethics and Language*. New Haven, Yale University Press, 1944.

Flautist's chin: a companion to fiddler's neck

SIR,—A 32-year-old female amateur flautist presented with a persistent eruption on her chin which had been present intermittently for two to three years. The only symptoms were of discomfort when playing the flute, but the eruption subsided if she stopped playing for two to three weeks. Examination revealed acneiform lesions confined to the central mid-portion of the chin consisting of inflammatory pustules, papules, and some slight hyperpigmentation. Elsewhere on the face there were a few inconspicuous open comedones and there was mild seborrhoea. She had not had significant acne as a teenager. Oxytetracycline 250 mg daily produced rapid improvement and she was able to toot her flute in complete comfort.

Peachey and Matthews¹ described an acneiform eruption on the necks of violinists and viola players related to contact with and friction from their instruments. A similar situation pertains to the chins of flautists with the additional factor of constant wetting with saliva. "Flautist's chin" and "fiddler's neck" appear to be close companions in the acne orchestra demonstrating variations on the theme of acne mechanica.² Perhaps more musical diseases such as "cellist's thigh" or "bagpiper's midriff" will yet be recorded.

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¹ Peachey, R D G, and Matthews, C N A, *British Journal of Dermatology*, 1978, **98**, 669.

² Mills, O H, and Kligman, A, *Archives of Dermatology*, 1975, **111**, 481.

*. Examples of "guitar nipple," "guitarist's groin," and even "cello scrotum" were reported in these columns during 1974.—ED, BMJ.

Thyrotoxic Graves's disease after primary hypothyroidism

SIR,—We were interested to see the report by Dr S Olczak and others (2 September, p 666) of a patient who developed thyrotoxicosis after well-documented primary hypothyroidism, for we have recently seen a similar case.

Our patient, who is a female nursing officer aged 56, was seen in 1975 complaining of increasing tiredness for one year, a husky voice, puffiness of the eyelids, mental and physical slowness, marked intolerance to the cold, and slight ataxia. There was no significant past history and there was no family history of thyroid disorder, diabetes

mellitus, or pernicious anaemia. On examination she had a dry skin with a puffy face, typical of hypothyroidism, the pulse was 80/min, there was slow relaxation of the deep reflexes, and the thyroid gland was not palpable. The serum thyroxine was <10 mmol/l (<0.8 μ g/100 ml), triiodothyronine <0.1 mmol/l (<6.5 mg/100 ml), and thyroid-stimulating hormone 80 mU/l. She was started on thyroxine and soon regained her normal health, being maintained on 0.2 mg daily.

She remained perfectly healthy for two years but in March 1978 she reported the loss of 1 stone (6.4 kg) in weight in spite of a good appetite and her colleagues had noted that she was nervous and jumpy. She was unusually tired in the hotter weather, but there was no excessive perspiration and no palpitations. She had noticed a little tremor. The serum thyroxine was 237 mmol/l (18.4 μ g/100 ml) and triiodothyronine 5.3 mmol/l (6.35 μ g/100 ml), so the dosage of thyroxine was reduced and ultimately stopped. Six weeks after stopping thyroxine completely the symptoms continued and she was more hyperactive; the pulse was 88/min, regular in rhythm; there was considerable swelling of the eyelids with minimal exophthalmos, and slight lid retraction with lid-lag; there was no pretibial myxoedema. The thyroid was just palpable on both sides. The serum thyroxine was 185 mmol/l (14.4 μ g/100 ml) and triiodothyronine 6.0 mmol/l (0.39 μ g/100 ml); thyroid autoantibodies were absent. She has been treated with carbimazole with marked improvement in her general symptoms, but there has been further aggravation of the exophthalmos. A thyroid scan, radioiodine uptake, and TRH-TSH stimulation tests were not performed. However, it is clear clinically that she has now developed Graves's disease with exophthalmos and thyrotoxicosis and it is equally clear that she had a history of hypothyroidism for at least one year before this diagnosis was established.

We have seen several patients who have had hypothyroidism and have then become euthyroid with a goitre typical of autoimmune thyroiditis, but we have not previously seen anyone develop frank hyperthyroidism and we have no further observations to explain this unusual phenomenon.

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Carcinoma of the breast in women under the age of 30

SIR,—I was very interested to see the analysis by Mr A S Purandare and Dr J Finbow of the ages of their female patients with carcinoma of the breast (9 September, p 771). In a somewhat smaller hospital than the Doncaster Royal Infirmary, serving a smaller population and sharing 60 general surgical beds, I have seen 213 female patients with the same condition. This is a very similar number to that seen by Mr Purandare and Dr Finbow in one year. The number of patients aged under 30 is the only significant difference in the age distribution in the two series (see table). Both series are small, but the incidence in this hospital of 1.4% aged under 30 agrees with the 1.2% figure given for Haagensen's very large number of cases.¹

Age distribution of women with carcinoma of the breast in two series

Age (years)	20-30		-40		-50		-60		-70		-80		>80		Total
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	
Purandare and Finbow	10	5.1	16	8.2	45	23.1	43	22.1	42	21.5	31	15.9	8	4.1	195
Logan . . .	3	1.4	20	9.4	43	20.2	53	24.9	46	21.6	38	17.8	10	4.7	213

It would appear that Mr Purandare and Dr Finbow have been unfortunate to have had so many young patients, but it was worth while to bring their findings to the attention of all doctors. The three patients under 30 in my series were not suspected of having malignant tumours and this was only discovered after biopsy. None of these patients has been shown to have metastases after several years.

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¹ Haagensen, C D, *Diseases of the Breast*, 2nd edn, p 352. Philadelphia, Saunders, 1971.

Hormone receptors in breast cancer

SIR,—Your leading article (8 July, p 77) gives an excellent survey of the situation with respect to hormone receptors in breast cancer. As you note, some tumours may be composed of a mixed population of receptor-positive and receptor-negative cells; continued growth of negative cells would then lead to hormonal insensitivity. In fact, direct evidence that hormone-responsive mammary tumours are heterogeneous populations of cells has been obtained in studies of mammary cancer in mice^{1,2} and rats.³ Endocrine ablation affects only the hormone-dependent cells in these tumours, leaving the hormone-independent cells intact.^{1,2} Progression from hormone dependence to autonomy in mammary tumours appears to be a manifestation of sequential clonal selection.¹⁻³ It seems likely that the hormone-responsive human breast cancers also are mixed populations of hormone-dependent and -independent cells. Thus breast cancers which have been treated with hormones, hormonal ablation, or antioestrogens practically all recur after a certain period of time and ultimately all become autonomous. This indicates that the endocrine treatment only stops growth of the receptor-positive cells and not of the receptor-negative cells. Better therapeutic results with these cancers might be achieved by combining endocrine treatment at an early stage with chemotherapy, when the autonomous cells are still only few in number. In this way perhaps only low doses of cytostatics suffice to kill all the autonomous cells present in the tumour. It would be worth while to compare this form of treatment with the conventional form in which chemotherapy is not given until autonomous cells have been given the chance to form a sizable tumour and high doses of cytostatics have to be applied to achieve regression.

Lipmann *et al*⁴ have reported that tumours with low or absent oestrogen receptor have a much higher response to chemotherapy than tumours with high oestrogen receptor values. They conclude that oestrogen receptor values are an important predictor of response to cytostatic chemotherapy. However, studies on mammary tumours in mice indicate that cytostatic treatment affects cells with different