Public attitudes to earnings

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In this, the first of two articles, the writers look at the image of the ophthalmic optician, as seen through financial spectacles and set in the context of other people's earnings. In the second article, to be published in the next issue *of The Ophthalmic Optician,* the earnings of graduate optometrists are examined and the issues raised further discussed

Over the last year, a foreigner observing our society through the media, the newspapers and television, might be forgiven for coming to the conclusions that (i) optometrists earn more than their training, skills and enterprise warrant, and (ii) the general public are fed-up with them. We found these impressions given by the media puzzling because it was only a few years ago that one of us, in collaboration with Mike Mellor and Lynn Parry, had concluded that the public in this country were reasonably happy with the service provided (French *et al*, 1978a, 1978b). The study had been largely about communication between practitioners and their patients, and had failed to reveal any major lacunae.

We thought it might be timely to have another look at the image of opticians to see if we could detect any changes. At the same time we thought it would be useful to investigate how much *a* graduate optician earns to see if it could be considered excessive. Certainly, amongst our colleagues and friends, there appeared to be no consensus over what average earnings were likely to be. It was our hope that we might be able to shed light on the nature of the 'unrest' in the country.

Attitudes to earnings

The original communication survey was carried out in the summer of 1977. We asked people (i) what do you think the average practitioner earns each year, and (ii) how much do you think they ought to earn? We asked these questions with respect to dentists and general practitioners as well as opticians. The results are summarised in Table 1 which also includes the results of a *Which?* survey carried out on its readers in December 1976 along with figures for doctors from the Department of Employment's New Earnings Surveys for April 1977 and 1978. Statistical comparisons revealed that all the differences between professions were significant, but only one of the differences between 'guessed' and 'ought to' figures — that for doctors. Thus, at that time we were unable to detect any evidence of gross public dissatisfaction with optometrists' earnings. People, on average, did not seem to think that they earned too much, although it seemed to us at the time that they might have underestimated opticians' earnings.

Table 1: Estimates by the general public of average earnings (mean ±standard deviation) in the summer of 1977. They were asked to *guess* practitioners' earnings and then say what they felt they *ought* to earn. Estimates of real earnings from a December 1976 *Which?* readers' survey and the April 1977 and 1978 New Earnings Surveys are also given

1977 Earnings estimate	Dentists	Doctors	Opticians
'guessed earnings'	£7,800±£3,300	£8,300±£2,800[1]	£7,000±£2,700
'ought to earn' *Which?*	£7,400±£2,500	£9,400±£3,500[1]	£6,900±£2,300
survey New Earnings	£9,700	£9,100[2]	£7,900
Survey		£7,500/£8,100[3]	

[1]general practitioners; [2]doctors/surgeons; [3]*medians* for medical practitioners — possibly prior to their April increases and for employees only

We asked similar questions again this time with slight changes to the wording, but added a few more occupations to our questionnaire and approached our sample in a different manner. The new respondents were 205 members of the general public, largely from the Midlands and North-West, chosen at random and interviewed in the street. Their age, sex and socio-economic status are given in Tables 2, 3 and 4, from which a comparison can be made with the population at large over 15. Our sample can be seen to have proportionately too many men, people of groups A and B, and those over 65. It was interviewed during the months of December 1980 and January 1981. We did not limit our questions to ones about opticians, because we thought this would be too pointed and possibly irresponsible, but also because controls would be essential if we were to reach any valid conclusions. Our subjects were asked to *guess* the earnings of the average secondary school teacher, general

Table 3: Distribution of social-occupational class in our sample compared with the population of England and Wales

Social/occupational class	Sample (per cent)	Population (per cent)
AB (Managerial, administrative, professional)	22	15
C1 (Clerical/ supervisory)	24	22
C2 (Skilled manual)	27	32
DE (Semi-skilled, unskilled, others	27	31
	100	100

Table 4: Distribution of age in our samples compared with the population of England and Wales

Age	Sample (per cent)	Population (per cent)
15-29	31	29
30-44	26	24
45-64	29	25
65+	14	22
	100	100

Table 2: Distribution by sex in our sample of 205 compared with the population of 16-year-olds and over in England and Wales

	Sample (per cent)	Population (per cent)
men	56	48
women	44	52
	100	100

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practitioner, dentist, ophthalmic optician, professional engineer, solicitor, hospital porter and ambulance man (in that order), and also estimate what would be a *fair* earnings figure for each. It was suggested that they should picture the average person as someone in his late 30s, and the jobs were described and explained in a little more detail during the interview.

To some extent our selection of occupations was arbitrary. We did not want to test the patience of our respondents with too long a list, but we did want to include a few professions of equivalent status to optometrist as well as some of lower wage earners. With the latter we chose to keep to the health care sector. Where people chose to respond with monthly or weekly figures these were converted to annual figures later and prior to any analysis. To act as an anchor, each person in the sample was told that the average man in this country earned about £7,300 per annum. This figure was our own guestimate arrived at by extrapolation from Government figures published in the Employment Gazette. Even if our guess turns out to have been too high (which seems likely in retrospect) it will still have served its function which was to increase the likelihood of 'realistic' earnings figures and minimise the number of absurdly low and high appraisals.

The results can be reported in a number of ways. The most explicit is in the form of histograms. If we do this for those pertaining to OOs we obtain the two histograms in Figures 1 and 2. These give the 'guessed' and 'fair' earnings in thousands of pounds with the relative frequency with which such figures were proposed. Both distributions are positively skewed with a slight tendency towards bimodality. In fact, the raw data (before rounding to the nearest £ 1,000) have identical, main modes of £10,000. Indeed,

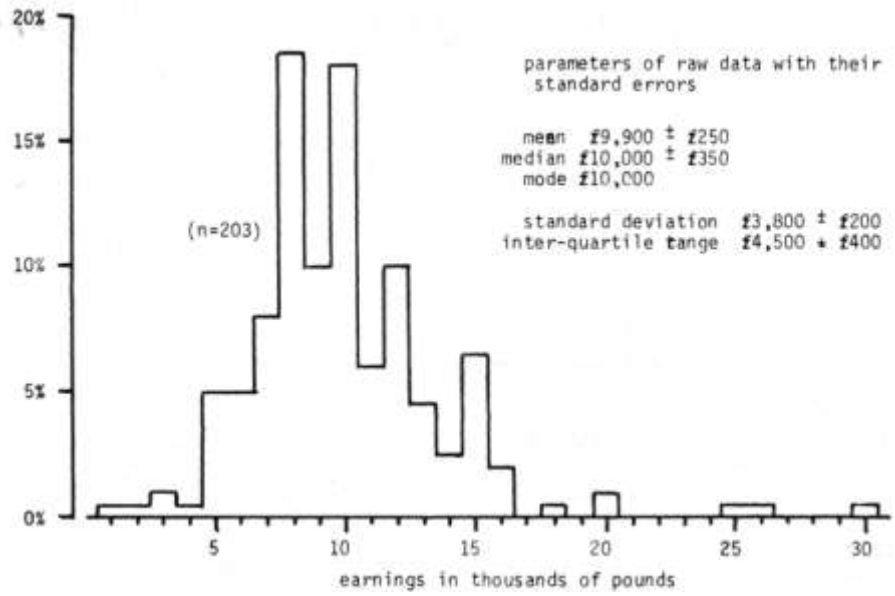


Fig 1. Guessed estimates of OO earnings

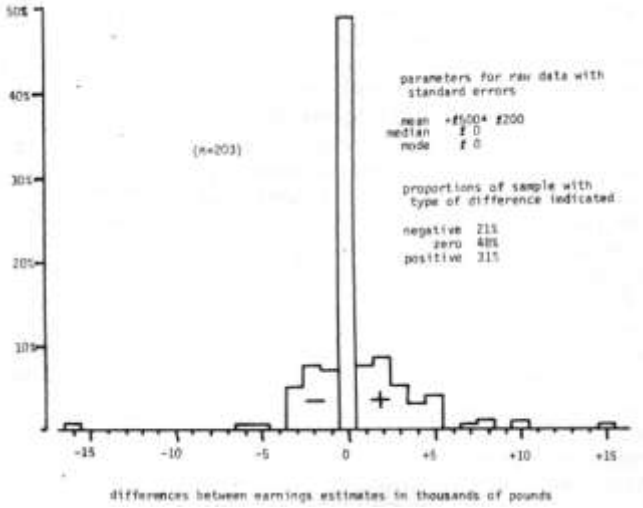
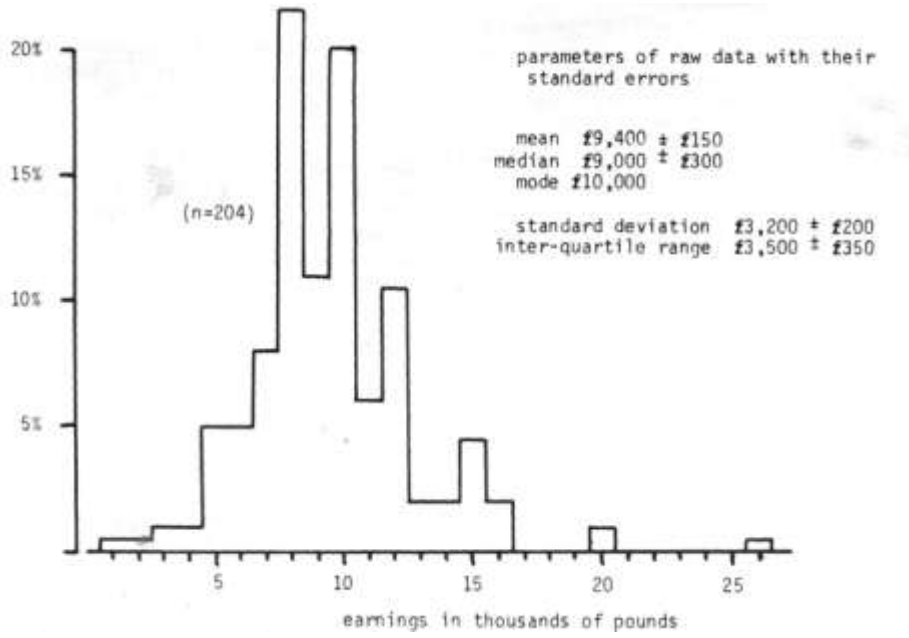


Fig 3: Difference *between* guessed and fair estimates of OO earnings

Fig 2: Fair estimates of OO earnings



both distributions look similar, but careful examination of the associated parameters shows that fair means and medians are both lower than their corresponding guessed figures. This is made more evident by producing a histogram of the guessed-fair differences in Figure 3. Almost half of the people approached clearly thought that what they believed the average optician to earn was in fact a fair figure and gave pairs of identical estimates. The negative differences reflect the 21 per cent who considered opticians underpaid, while the positives reflect the 30 per cent who thought them overpaid. It needs to be emphasised that these people had no way of knowing what an average optician actually earns.

Analogous figures were obtained for the other forms of employment and the main statistics are presented in Table 5. The occupations most clearly seen as underpaid were those of porters and ambulance men, although even here, as with all jobs, the modal difference response for the raw data was still zero — indicating the amount of

Table 5:

	earnings estimates						estimate differences (guess-minus-fair)					
	guess			fair								
	mean	median	mode	mean	median	mode	mean	median	mode	-	0	+
Ambulanceman	5,400	5,000	6,000	6,200	6,000	5,000	-900	-500	0	58%	38%	4%
Hospital porter	4,500	4,200	5,000	5,100	5,000	5,000	-700	-500	0	57%	37%	6%
Secondary teacher	6,600	6,000	5,000	7,400	7,000	7,000	-800	0	0	42%	48%	10%
Engineer civil, etc	10,300	9,100	10,000	10,500	10,000	10,000	-200	0	0	29%	49%	22%
General practitioner	12,000	12,000	15,000	11,900	11,100	10,000	+100	0	0	22%	57%	21%
Ophthalmic optician	9,900	10,000	10,000	9,400	9,000	10,000	+500	0	0	21%	49%	30%
Dentist	11,800	11,800	15,000	10,800	10,000	10,000	+1,000	0	0	20%	40%	40%
Solicitor	14,100	12,600	10,000	11,800	10,000	10,000	+2,300	+2,000	0	6%	33%	61%
Aggregate of occupations	9,400	8,900	7,700	9,400	9,000	7,700	0	0	0	32%	44%	24%

Statistics have been given to the nearest £100 and are usually based on 205 estimates. The '-', '0' and '+' columns give the proportions, whose *fair* estimates in comparison with their *guess* estimates were larger, equal and smaller, respectively. The statistical significance of the 'horizontal' comparisons (differences between corresponding guess and fair estimates) are discussed in the main text. 'Vertical' comparisons reveal that all means for each profession differ from one another with the following exceptions on matched-pairs, two-tail t-tests: for guesses — opticians *v* engineers and GPs *v* dentists; for fair estimates — dentists *v* engineers and GPs *v* solicitors; and for 'guess-minus-fair' differences — teachers *v* porters, teachers *v* ambulance men, teachers v engineers, GPs *v* opticians and GPs *v* engineers.

There is an alternative mathematical treatment of the guess-fair discrepancy and that is to express the fair estimates as a percentage of the guesses. We have carried out this computational exercise and, while there are some small variations in the levels of statistical significance, the overall results are in essence unchanged.

respect shown by the general public for the *status quo* (here 37 and 38 per cent of those interviewed). The mean difference between guessed and fair earnings for these two groups were -£700 and -£900; differences both large and highly significant on a 2-tail, matched-pairs t-test. Median figures were of the same order at -£500 each. Fifty-seven to 58 per cent thought that these people earned too little while only a handful (6 to 4 per cent) thought they earned too much.

Secondary school teachers, too, were seen as underpaid by a sizeable minority of 42 per cent although almost half thought they were fairly paid. Ten per cent thought they were overpaid. The mean figure for average guessed-fair differences was -£800 but the median difference was zero (mean difference significant at 5 per cent level according to t-test).

None of the remaining groups were seen as underpaid with the possible exception of professional engineers ('qualified, chartered ... electrical, mechanical, civil... design bridges, etc'). Here the mean difference was -£200, but this is well within sampling range of zero and not statistically significant. The median difference was zero and the proportion feeling that engineers were underpaid was at 29 per cent only slightly greater than those feeling they were overpaid, 22 per cent. General practitioners came next. The mean difference for these was +£100 and again this was well within sampling range of zero. For GPs the 'too little's balanced the 'too much's (22 per cent v 21 per cent) with a large proportion of 57 per cent supporting the *status quo.*

Next came the opticians and here a statistically significant ($p < 0.005$) positive tendency creeps in for the first time with people on average feeling that they are overpaid. Dentists appeared to come out a little worse. The mean difference for them was +£1,000 ($p^{1}\wedge$ 0.001), although the median was zero. The proportion feeling that they earn too much was almost twice that feeling they were paid too little. Bottom of our poll came the solicitors. Here the average amount by which our sample felt the average solicitor was overpaid was a mean of +£2,300 and a median of+£2,000. Sixty-one per cent thought they were overpaid in contrast with only six per cent who thought they were underpaid. However, it should be emphasised that even here at the bottom, far away from the porters and ambulance men, around a third were happy with what they believed to be the *status quo.* Of course it could be argued that this was not so much a respect for prevailing patterns of remuneration but simply a lack of strong feelings one way or the other.

We also analysed responses by looking at the sex, age and socio-economic status of those interviewed, along with whether or not they wore spectacles. Somewhat surprisingly, none of these *a posteriori* examinations revealed any significant tendencies. This would appear to minimise the seriousness of our sample's shortcomings summarised in Tables 2, 3 and 4. There was the modest 'suggestion' that the oldest and youngest members of our sample along with those from group E gave smaller estimates of guessed and fair earnings as though they were perhaps less in tune with the current financial climate, but this tendency did not reach statistical significance.

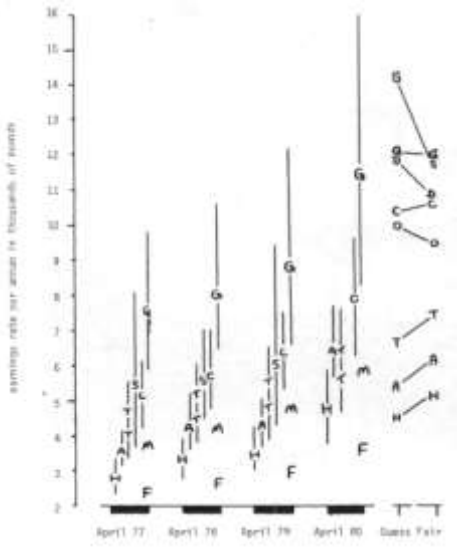
Actual earnings

Of course, it would be very interesting to compare the guesses of our sample with the actual earnings for the occupations under scrutiny. Unfortunately this is not possible. Each year the Department of Employment publishes the rate of earnings of employees for the previous April in the New Earnings Survey. Section D, which breaks down these figures by occupation and sex, is published each January. It does not distinguish between dispensing and ophthalmic opticians when conducting its survey, but this' is academic as the figures for opticians (as for dentists) do not appear to have been published. This is because the sample sizes are considered too small.

In Figure 4 we show the annual earnings rates of employees for the month of April for the years 1977 to 1980 inclusive. For each occupation the median earnings rate is given along with 25-percentile and 75-percentile points. The vertical lines, then, show the range within which half the earnings for each group fell. All the figures are for men over 21 in full-time employment except for those for secondary school teachers and the whole population where the medians for both men and women are given separately.

It needs to be mentioned that sometimes settlement dates can vary from year to year with a consequent distortion of apparent relativities between professions. For example, in 1980 all groups covered by the

Fig 4: Employees' annual earnings for April from 1977 to 1980



The letters above indicate the median earnings rates for the various occupations: A ambulance men; C - civil engineers (similar to other qualified engineers); D - dentists; F - all full-time women, aged 18 and over, whose pay was not affected by absence; G - general medical practitioners; H - hospital porters; M - all full-time men; O - ophthalmic opticians; S - judges, barristers and solicitors; T - secondary school teachers. The lines indicate the extent of the inter-quartile, ranges. Figures are from the New Earnings Survey and relate to men over 21 in full-time employment whose earnings have not been affected by absence; except for teachers where the medians for both sexes are given and also the figures for *all* women. The Guess and Fair medians on the right come from our survey and were for December 1980 to January 1981. Standard errors of the NES medians are all less than three per cent. Most medical practitioners in general practice are self-employed and, like the corresponding engineers, dentists, solicitors and opticians, are excluded from the NES.

Civil Service National Whitley Council for April 1980 had their increase included although they were not paid until May 7, whereas the teachers[1] April, 1980 increase was too late for inclusion. This accounts for the unusual proximity of ambulance men's and secondary teachers' pay for the April of that year.

The April, 1981 figures will not be published until January 1982. In their place we have included the median estimate by our sample for December, 1980 - January, 1981. Obviously, it is difficult to compare these with the 'real[1] figures, but even so it is evident from Fig 4 that people have tended to under-estimate the earnings of hospital porters, and ambulance men — the very groups which were seen as most underpaid. It is also striking that the earnings of the group which was seen as most overpaid, the solicitors, may possibly have been over-estimated although extrapolation from the published, real figures is problematic for three reasons: (i) the 1980 survey did not report on their earnings; (ii) the survey figures refer to 'judges, barristers, advocates, solicitors', not just 'solicitors'[2]; and (iii) most solicitors are self-employed and therefore excluded from the survey.

From Figure 4 it is apparent that some of the differences between guessed and fair earnings are accountable by movement towards the overall mean with people in general appearing to favour a narrowing of differentials over what they believe to be the current situation. The results for professional engineers and doctors appear to go against this trend.

The current earnings of doctors and opticians are difficult to assess. It is not entirely clear, but it would appear that the medical practitioners' 30 per cent increase of April 1, 1980 awarded by the Doctors and Dentists Review Body, because it was not finalised until May 19, may well have been too late for inclusion in the April, 1980 figures. Also, most doctors in general practice are self-employed and not in the survey. Thus it is perhaps likely that people currently tend to underestimate GPs' earnings. The position with respect to opticians is also uncertain. Nationwide in November 1980 suggested that they earned between £12,000 and £15,000. If this is true it would mean that the general public had clearly under-estimated their remuneration, too.

National Health Service costs

While we are primarily concerned with earnings, we thought it might be useful to take the opportunity to ask a few questions about National Health Service costs to see how well informed the public are and whether we could detect any strong feelings. These questions were not posed until *after* the earnings estimates had been extracted.

Almost 80 per cent of those seen knew that the medical prescription charge was £1, six per cent would not guess what it was and most of the remainder thought it was less than £1. We also asked people to estimate what they thought would be the minimum charge for a pair of spectacles under the National Health Service. The results are displayed in the form of a histogram in Figure 5. The median guess was £10.40 with more people tending to over-estimate the cost (58 per cent) rather than under-estimate it (29 per cent). Thirteen per cent declined to give a figure at all. Those who normally wore spectacles (56 per cent of our sample) gave estimates of the cost which were on average of the order of £5 less than those who did not. Overall it would appear that the public seemed to be reasonably well informed.

Having told people that the medical prescription charge was £1 and the minimum cost of a pair of spectacles would be £7.64\ we asked them how they felt about medical, dental and optical National Health Service charges. In general, did they feel that these charges were 'too little', 'fair' or 'too much'? The results are given in Table 6.

'The following explanations were given. 'Actually it's one pound, although you may not have to pay in every circumstance'. 'Dental charges are a little complicated to explain/ 'Actually it's £7.64 but there are National Health Service frames which are more expensive and special lenses cost more so it is possible for NHS spectacles to cost £13 or exceptionally £20. But then of course, as with medicine and teeth, some people don't have to pay at all.'

Table 6: Proportions saying that they felt National Health Service charges were 'too little', 'fair' or 'too much' after the charges (with the exception of dental ones) had been outlined to them (n=205)

	'too little' (per cent)	'fair' (per cent)	'too much' (per cent)	'don't know' (per cent)	all (per cent)
NHS prescription charges	8	38	35	1	100
NHS dental charges	5	38	38	19	100
spectacle charges	10	63	25	2	100

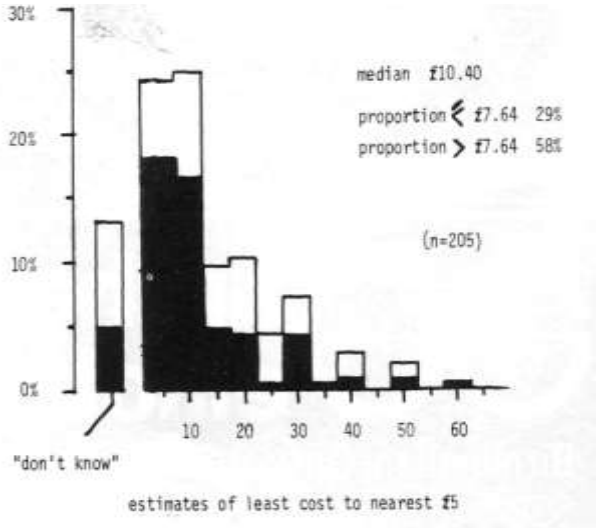


Fig 5: Guesses of least patient would have to pay under National Health Service for a pair of spectacles

Dark area of the histogram indicates the responses of those who normally wore spectacles (n=56%)

[1]For those who would like to know more about relative pay movements, there is Routh's book Occupation and Pay in Great Britain, 1906-79.

Dental charges produced the largest number of 'don't know's at almost one fifth of those interviewed, and this may have been a direct result of our not providing any information in this direction. The proportion feeling that NHS charges were 'too little' varied between five and 10 per cent. Medical prescription charges produced the largest proportion saying that they were too high (53 per cent), while spectacle charges produce the largest number feeling that the cost was 'fair' (63 per cent). This last result is of most interest to an optician. Almost three-quarters of our sample felt that the cost of National Health Service spectacles was fair or too little. Only one quarter thought they cost too much. These results were not affected by whether or not the respondent wore spectacles.

Discussion

In the summer of 1977 we gained the impression that the public considered opticians fairly paid. Our present survey shows a small tendency to regard them as overpaid. It is conceivable that this represents a real change in public attitudes. It is interesting to note that the apparent change towards OOs has been accompanied by parallel shifts in attitudes towards dentists and doctors. On average, dentists are also now seen as overpaid while GPs are no longer seen as underpaid.

Such changes in attitude would not be unexpected at a time of deep economic recession. When asked to think about *other people's* earnings, it is very credible that people are more likely to associate these with their own living costs. Ask anyone about costs or prices and usually they will say 'too much' or 'too expensive'. On the other hand, it 'is true that we cannot entirely eliminate the possibility that these changes may in some way be an artefact reflecting the different ways the subjects were approached, the questions couched, and the sample selected. Whichever explanation one prefers, it is comforting to opticians to note that we have no evidence at all of an adverse change in their position relative to doctors and dentists. Such a change might have been expected in view of the campaigns in the media. Of course, it is also comforting to find that the optician's image does not appear as black as that of the solicitor[5].

It would seem that the general public underestimate optician's earnings. In our next article we will see whether this can be confirmed. We will be presenting the results of a survey carried out on UMIST graduates. On the question of NHS optical costs, the public appear informed and satisfied. Their estimates of minimum charges for spectacles appear not unreasonable in view of the ignorance that they sometimes exhibit, but as has to be expected there are a number, particularly amongst those who do not wear spectacles, who overestimate the costs. Attitudes towards NHS charges reveal that most feel that the £1 prescription charge is too high, but an even larger majority feel that the charges for spectacles are reasonable.

[4]Of course, images are not necessarily warranted and we imply no criticism of solicitors.

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