

The Modification of Personality and Lie Scale Scores by Special 'Honesty' Instructions

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Four experiments are reported in which the effects of ordinary instructions on scores on various personality inventory scales and a Lie scale score are compared with scores under 'honesty' instructions, i.e. when subjects are explicitly warned about the presence of items which might enable detection of dissimulation. In the first experiment, random samples of British subjects were tested under conditions of low motivation for dissimulation; relatively little in the way of change in neuroticism or psychoticism scores was found, although the L scale scores did change. In the second experiment, samples of black South African subjects were tested under conditions of high motivation for dissimulation; quite considerable changes in neuroticism, psychoticism and L scale scores were found. In the third experiment groups of prisoners were employed; here 'honesty' instructions produced a sizable change in N and L scores. In all three experiments, the correlation between L and the pathological scores bore out the previously found rule that degree of motivation for dissimulation in a group is positively correlated with the size of these correlations (which are, of course, in the negative direction). It was concluded that in conditions which are likely to provide high motivation for dissimulation (or are actually shown to provide such motivation by virtue of the high correlation between L scale and the pathological scales), it may be useful to employ 'honesty' instructions in order to obtain scores on the personality scales nearer to the levels which would have been achieved under low motivating conditions. Extraversion scores were not influenced by either motivating conditions or differences in instructions. In the fourth experiment, normal subjects were given 'fake good' instructions, and it was observed that increases in E and L were balanced by decreases in N and P; the expected increase in NL and PL correlations was also found.

It is well known that personality inventories are very susceptible to 'faking good', and that under suitable motivating conditions (e.g. in an employment selection situation) candidates will resort to such dissimulation (Green, 1951; Heron, 1956; Searless & Leonard, 1934). Lie scales have been constructed, following the original work of Hartshorne & May (1928), in an attempt to measure the degree of 'faking proclivity'; such a scale forms part of the Eysenck Personality Inventory (Eysenck & Eysenck, 1965). The use of Lie scales for the purpose of correcting recorded scores on other personality variables runs into certain difficulties; one of the main ones seems to be the fact that Lie scale scores have at least two distinct sources of variance (in addition to error and specific variance). One of these sources of variances is indeed dissimulation, while the other seems to be a stable personality configuration (possibly identifiable with the 'inaccurate and uninsightful', but honest, self-assessment suggested by Dicken, 1959). Michaelis & Eysenck (1971) have provided experimental evidence for this dual source of variance, and have also demonstrated that the degree of faking which takes place in a given situation can be indexed by

changes in the size of the L score, and also by the change in the size of the correlation between the L score and the N score (the correlation is of course negative). They showed that when situations were manipulated in such a way as to increase motivation to dissimulate (fake good), Lie scores went up and correlations between L and N increased; for low motivation groups correlations approximated zero, while for high motivation groups they ranged from 0.5 to 0.6. L scores for high motivation groups reached values more than double those of low motivation groups. It would thus seem that L scales do validly measure dissimulation, and may be used for correcting N scores when the correlation between the two scales is high enough to indicate dissimulation.

An alternative method of reducing dissimulation might be to impress on subjects the fact that the test included a scale which would enable faking to be detected, and to warn them not to put themselves in the best light, but answer truthfully. This method has been used by I. Montag in Israel in his work on the personality characteristics of traffic offenders (unpublished), and forms the subject of three investigations here reported.

EXPERIMENT I

The first study was carried out using a random sample of male and female subjects resident in London; these were collected together by a market research firm for the purpose of testing advertising matter and other similar commercial factors, and were given the questionnaire described below as part of a two-hour programme in which they were shown advertising films, and questioned about their social class, education, buying habits, etc. Two groups were studied, on separate occasions; the experimental group received 'honesty' instructions, the control group received the ordinary instructions usually given to subjects taking part in questionnaire studies. 'Honesty' instructions were as follows: 'We have found in the past that some people give answers which they feel put themselves in a better light. For example, one of the questions might be: "Have you ever told a lie?"—the obvious answer to this is "Yes", but we still find that there are a number of people who say "No". Therefore the questionnaire includes some items to check those people on this.' Finally, after some details about filling in the questionnaire, the instruction was included: '. . . be as truthful as you can'. These instructions were given verbally to the group as a whole by an M.C. who had already introduced the films and the other material involved in the commercial part of the programme.

The personality inventory used was an as yet unpublished revision of the Eysenck Personality Inventory (EPI), which contained 29 items measuring P (Psychoticism), 22 items measuring E (extraversion), 23 items measuring N (neuroticism), and 21 items measuring L (Lie scale). The E, N and L items are similar to those in the EPI; the P items are similar to those used in previous versions of this scale (Eysenck & Eysenck, 1969). Reliabilities of the scales are usually around 0.8, except for P which is somewhat lower, particularly for women (women tend to have much lower scores on P, which restricts the range, and may be responsible for the lower reliabilities).

Table 1 gives the intercorrelations between scales, and their reliabilities, for males and females separately. There are 178 male and 193 female subjects in the control

conditions, and 178 males and 269 females in the experimental conditions. It will be seen that reliabilities are very much as expected; the change in instructions has not made any significant change in reliabilities (KR20) Correlations between scales are low and very much in line with expectation; our interest of course centres on r_{LN} . In the ordinary group this was very small (-0.12 and -0.06), suggesting that there was little motivation for dissimulation in the testing conditions. This seems reasonable as nothing depended on the outcome of the study for the subjects; they knew that their responses would remain anonymous. Under experimental conditions, r_{LN} was somewhat higher (-0.17 and 0.21), but the differences do not reach acceptable levels of significance. If we use r_{LN} as a measure of the amount of dissimulation present under a given set of conditions, then we would have to say that there was no change from one condition to the other.

Table 1. *Correlations between P, E, N and L test scores under two kinds of instructions*

<i>Males</i>		P	E	N	L		
		0.73	0.02	0.13	-0.24	P	
		—	0.83	-0.21	0.14	E	Standard
	P	0.64	—	0.86	-0.12	N	instructions
Honesty	E	0.09	0.84	—	0.79	L	
instructions	N	0.16	0.08	0.84	—		
	L	-0.15	-0.00	-0.17	0.75		
<i>Females</i>		P	E	N	L		
		0.60	0.13	0.10	-0.21	P	
		—	0.82	-0.26	-0.12	E	Standard
	P	0.58	—	0.83	-0.06	N	instructions
Honesty	E	0.05	0.83	—	0.81	L	
instructions	N	0.14	-0.10	0.82	—		
	L	-0.29	-0.08	-0.21	0.82		

Table 2 gives the means and s.d.s for the four scales, for males and females separately, under the two conditions. Asterisks indicate that for both sexes the L scale scores have decreased significantly ($P < 0.01$) under experimental conditions; of the

Table 2. *Means and standard deviations for P, E, N and L scales under ordinary and 'honesty' instructions*

	P	E	N	L
<i>Male</i>				
Ordinary instructions ($n = 118$)	5.78 ± 3.74	14.09 ± 4.68	11.16 ± 5.36	7.43 ± 4.15
Honesty instructions ($n = 178$)	6.08 ± 3.32	14.03 ± 4.89	11.10 ± 5.10	6.01 ± 3.64
Difference	+0.30	-0.06	-0.06	-1.42**
<i>Female</i>				
Ordinary instructions ($n = 193$)	3.91 ± 2.68	14.44 ± 4.49	12.90 ± 4.85	8.91 ± 4.37
Honesty instructions ($n = 269$)	3.57 ± 2.48	14.01 ± 4.66	13.78 ± 4.64	7.81 ± 4.48
Difference	-0.34	-0.43	+0.88*	-1.10**

* $P < 0.05$. ** $P < 0.01$.

other scales only the N scale show a significant increase ($P < 0.05$), for females only. All other scale changes are insignificant, and not even suggestive. Even the significant change in N for the women is small, being less than 1 point. The L scale change is only slightly bigger than this, being less than $1\frac{1}{2}$ points. We must conclude that the results indicate that there is little in the situation to encourage dissimulation, and that the experimental instructions consequently had very little effect. The fact that even when little dissimulation was present, nevertheless the L scale had a high reliability, indicates clearly that under these conditions it measures a personality trait itself unconnected with conscious dissimulation. There is no decline in reliability when subjects are working under 'honesty' instructions; this too argues in favour of this hypothesis.

EXPERIMENT II

Our second experiment differs from the first in several ways, but primarily in motivation to dissimulate. Eysenck (1964) has published a great deal of evidence to show that under employment selection conditions subjects are very much more strongly motivated in many measurable ways (pursuit rotor reminiscence, conditioning, perceptual tests, etc.) than are similar subjects under non-selection conditions, and Green (1951), Heron (1956) and Searless & Leonard (1934) have shown that under selection conditions there is much more 'faking good' than under control conditions. In this experiment subjects were all coloured South Africans who applied for jobs (almost all as drivers, but some also as clerks) with a Johannesburg bus company; there was much competition for these jobs, and a high selection ratio. Ages ranged from 26 to 39, and within these limits the sample is believed to be fairly representative of coloured urban South Africans.

Virtually all the subjects had at least a Standard 5 education, and most of them had a higher standard. (In African schools standard 6 is the end of elementary education.) Again, two groups were compared, one with traditional instructions, the other with special 'honesty' instructions. These honesty instructions differed from those employed in the first experiment, for obvious reasons; in such different situations identical instructions would not be workable or applicable. We thus have three main differences between the two experiments: (1) motivation, (2) Coloured *v.* White sample, and (3) different instructions. It is not possible in any strict sense to allocate any observed differences to one or the other of these factors, but it will be argued that in all likelihood the motivational factors are the most important.

The 'Honesty' instructions start off by saying: 'This is a test to see whether you are an honest person or a liar!' Subjects are then told about the questionnaire, and how to fill it in; at the end, in order to reinforce the 'lie' threat, they are told: 'Remember it is no use lying. Yesterday three people told lies—but we found this out at once, and they all failed.' Two reasons may make this rather strong wording intelligible. In the first place, subjects are very highly motivated to present themselves in a good light because the bus drivers are paid very highly in comparison with other jobs carried out by blacks; furthermore, successful candidates not only receive free driving training but very good pay during the training period. In the second

place, according to social mores of the African population, lying is often regarded as 'clever', not amoral. (This is not always all that different in white samples, and in other countries, of course.)

The test used was similar to that used in Experiment I, but constituted an earlier version. It contained 24 P questions, 22 E questions, 22 N questions, and nine L questions. It might be argued that this constitutes a fourth major difference between the experiments, but the questions used were largely identical, and the two inventories correlate together about as highly as the reliabilities permit. This is not thought to present an important difficulty in making a comparison. Five hundred and forty-nine subjects were given the standard version of the instructions, and 409 the 'honesty' version. Table 3 gives the intercorrelations between the scales. The important ones are of course those between N and L; it will be seen that these are significantly higher than they were in the first experiment. ($P < 0.01$ and $P < 0.001$ respectively for control and experimental instructions, using for comparison's sake only the male sample from experiment one.) The two correlations within the experiment are not significantly different. These results suggest strongly that, as expected, the group with supposedly higher motivation for dissimulation did in fact show greater dissimulation than did the low drive group. This would lead us to expect greater changes in L, N and P scores in the high drive group, with changed instructions.

Table 3. *Correlations between P, E, N, L and TAT test scores under two kinds of instructions*

	P	E	N	L	TAT	
	—	-0.01	0.21	-0.15	0.20	P
		—	0.17	-0.10	0.03	E
	P	—	—	-0.38	0.08	N
	E	0.06	—	—	0.08	L
Honesty	N	0.36	0.24	—	—	TAT
instructions	L	-0.27	-0.16	-0.47	—	
	TAT	0.25	0.03	0.08	0.05	—

The observed changes are shown in Table 4. 'Honesty' instructions produce very significant changes on L (less lying), N (higher neuroticism), and P (higher psychoticism). There are again no changes in E. It is difficult to compare the absolute amount of change observed between the two experiments, as the numbers of subjects were unequal (which makes the significance tests non-comparable), and as the tests used were not identical. It seemed likely that ratios (differences induced by changed instructions, divided by the observed s.d.s.) would furnish us with a reasonable comparison. These ratios were as follows. For P: 0.46, as compared with 0.08. For N: 0.47, as compared with 0.01. And for L: 0.95, as compared with 0.34. In every case, the high drive group shows a much larger change than does the low drive group. We may conclude, therefore, that our expectations have been fulfilled.

The changes in the means shown in Table 4 become more meaningful when looked at in the context of the actual percentages making each particular score before and

Table 4. Means and standard deviations of PEN and L scales under two kinds of instructions

	P	E	N	L
Ordinary instructions	4.64 ± 2.19	8.58 ± 2.62	7.95 ± 3.19	6.13 ± 1.69
Honesty instructions	5.65 ± 2.56	8.86 ± 2.34	9.44 ± 3.56	4.52 ± 2.00
Differences	+ 1.01***	+ 0.28	+ 1.49***	- 1.61***

*** $P < 0.001$.

after the introduction of the new instructions. Thus for the L scale, we might put a score of 7 or over as arbitrarily singling out 'liars'; with the old instructions, 46 per cent would have been liars, but with the new instructions only 18 per cent. Similarly, if we regard subjects scoring 4 or below as 'truth-tellers', we would have had 17 per cent with the old instructions, but 48 per cent with the new instructions! The differences are quite considerable, and may well make it worthwhile to introduce such instructions in situations which are highly motivating for dissimulation. (The 'doubtful' category of subjects scoring 5 or 6 would be almost equal in the two groups—31 and 34 per cent.) Comparisons for the N and P scales are similar, though less extreme.

In addition to differences in means, Table 4 also suggests that the new instructions produce changes in variances; the s.d.s of P, N and L are definitely greater under 'honesty' instructions than under standard instructions ($P < 0.05$ in each case). The differences are not very large, but it is notable that they are apparent in all scales on which there has been a change in means. In Expt. I there is no such tendency; in fact, changes tend to be in the opposite direction. Thus it appears that increases in variance are a function of highly motivating conditions; in neutral conditions no such increases are observed.

In addition to the various scales discussed so far, it also proved interesting to calculate a C (criminality) scale; this had been originally put together by Eysenck & Eysenck (1971) to distinguish criminals from non-criminals. This scale also showed a marked effect of instructions, means increasing from 12.98 ± 3.88 to 14.20 ± 4.73 ($P < 0.001$.) On this scale the applicants fall somewhere halfway between our control and criminal groups, which have means of respectively 10 and 17.

Table 3 also contains figures referring to another test administered to the candidates, namely a TAT scored according to rules set out by Shaw & Sichel (1971) to predict personality aspects of good and poor driving risks. The TAT assessments are summarized for prediction purposes in a single figure, and this was correlated with the P, E, N and L scores for both groups. In both groups TAT scores were almost identical (4.45 ± 0.52 and 4.42 ± 0.57), and in both groups correlations with P, E, N and L are almost identical. High scores are poor prognosticators, and are seen to correlate with P (significantly) and with N (significantly when both groups are combined.) There is a slight increase in the correlation between P and TAT in the groups receiving the 'honesty' instructions, but this is quite insignificant.

EXPERIMENT III

In view of the disparity in racial composition and test used, which made direct comparison between Expts. I and II difficult, Expt. III was undertaken with white prisoners in London, using the same inventory as was used in Expt. I. Ninety-nine prisoners in Wandsworth Prison were given the inventory with 'honesty' instructions similar to those used in Expt. I; two groups of prisoners in the same prison were given ordinary instructions. Also available were data from a group of London Transport workers, similar to the prisoners in social status and age. (All the prisoners were of course male, as were the comparison groups here listed.)*

The main results are shown in Table 5. It will be seen that there are no changes of any importance in P or E, due to change in instructions. Changes in L and N, however, are quite marked; for L they are 2.41 or 3.05 (depending which of the two separate prisoner control groups is being used), and for N they are 1.09 and 2.16. All these changes are statistically significant, and they are clearly much greater than corresponding ones in experiment one. It is interesting to note that the L scale scores of prisoners under ordinary instructions are not significantly different from those of the control group in experiment one; thus size of L scale score alone is not a good indicator for the dissimulation motivation existing in a group, or the likely change to be expected when 'honesty' instructions are introduced. As argued by Michaelis & Eysenck (1971), it is more informative to look at the size of the correlation between L and N, and this correlation is clearly elevated in the prisoner group, as compared with the control group in Expt. I. The actual correlations observed in the prisoner groups are: -0.30 ('honesty instructions'); -0.28 (first control group); -0.25 (second control group). For the two control groups combined, $r = -0.27$. These values are significantly above those reported in Expt. I, suggesting that dissimulation motivation was higher in the prison groups. The correlations between P and L were also somewhat higher in the prison group, values being -0.33, -0.21 and -0.32, with the combined control (prison) groups having a correlation of -0.27. This is not significantly different from the control group in experiment one ($r = -0.24$.)

It is found again, as in the preceding two experiments, that honesty instructions do not lower the correlations between L and N. This is a curious finding; one would have expected that if the correlation between the two scales is produced by dissimulation and if the dissimulation is lowered or eliminated by 'honesty' instructions, then the correlation would also be lowered or eliminated. Instead of this we find that if anything it is increased. This cannot be explained by any appeal to a possible 'true' correlation between L and stability, which is being interfered with by dissimulation; as we have seen, when circumstances are not dissimulation motivating, the correlation is zero. It seems possible that the 'honesty' instructions do not dissuade the greatest liars to a greater extent than the average or least liars from

* Prisoners were tested prior to/allocated to their final destination, and although assured that the questionnaire results would not influence allocation it is unlikely that this assurance would have completely reduced motivation to 'fake good'. Hence it seems likely that this group of prisoners would have had some motivation to make themselves appear better.

Table 5. *Mean personality scores of prisoner and control groups receiving different instructions*

(There are two prisoner groups receiving ordinary instructions; these were tested on separate occasions.)

	<i>n</i>	P	E	N	L
Prisoners, 'honesty' instructions	99	6.76	14.65	14.00	4.46
Prisoners, ordinary instructions	102	6.79	14.05	12.91	6.87
Prisoners, ordinary instructions	108	6.30	14.75	11.84	7.51
London Transport workers	75	4.73	14.48	8.49	8.95
Male group, Expt. I.	178	5.78	14.09	11.16	7.43

dissimulation, but lower the scores of all subjects to an equal absolute extent (which means that it lowers the scores of low L scorers disproportionately). Such an hypothesis can only be tested by administering the same test twice to the same group, once under ordinary instructions, the other time under 'honesty' instructions. Until such an experiment is carried out, this question must be left without an answer.

EXPERIMENT IV

It seemed likely to prove instructive if we could reverse the motivational properties of 'honesty' instructions by instead suggesting to subjects the desirability of 'faking good'. Using the same kind of population as in Expt. I (152 males, 217 females), and the same inventory, we administered the following instructions: 'We are trying to find out how well people can guess the kind of personality employers would like them to have. When filling in this Personality Questionnaire, please would you try to present yourselves as you think an employer would like you to be, regardless of how you would truthfully answer. We would like you to put yourselves in the "best light", in fact, as if you were trying to impress a prospective employer.'

It was anticipated that these instructions would lead to changes in mean scores and correlations opposite in direction to those produced by the 'honesty' instructions, i.e. N and P scores would decline, L scores increase, and the NL correlation increase. Table 6 gives means, s.d.s, and reliabilities for the four inventory scales, for the male and female groups separately; these can be compared directly with the results for ordinary and 'honesty' instructions groups presented in Table 2, both inventories and groups being similar.

Table 6.

'Fake good' instructions		P	E	N	L
Means and s.d.s	M	5.50 ± 3.54	15.99 ± 4.43	7.26 ± 4.70	10.34 ± 5.72
	F	3.32 ± 2.77	15.94 ± 4.43	9.24 ± 5.54	11.83 ± 5.05
Reliabilities	M	0.73	0.83	0.86	0.79
	F	0.60	0.82	0.83	0.81

As far as means are concerned, our 'fake good' group has the lowest P score, both for males and females; only one of the differences, however, is statistically significant ('fake good' *v.* ordinary instructions in females; $P < 0.05$). As far as E is concerned,

the 'fake good' group has much the highest score for both males and females, and the differences from both ordinary and 'honesty' instructions groups are highly significant at the 0.001 level. This is curious, as the 'honesty' instructions did not lower E scores at all; one might have expected some sort of reciprocal effect, but this expectation is clearly not borne out. On N, the 'fake good' group is clearly much lower than the other two; all differences are well beyond the 0.001 level of significance. Conversely, the L scores are now very much higher, again at similar levels of significance. The mean changes on these scales are roughly $\frac{1}{2}$ point on P, $1\frac{1}{2}$ points on E, $3\frac{1}{2}$ points on N, and $3\frac{1}{2}$ points on L. These changes are large, and in the expected direction.

We would also expect certain changes in the intercorrelations between scales; if we accept the Michaelis-Eysenck suggestion that the NL correlation indicates the degree of simulation motivation, then we should in this experiment have some significant increases in this correlation. The observed correlations are -0.30 and -0.52 ; both are significantly higher than the corresponding ones for the comparison groups. Similarly, the PL correlations have risen significantly; they are now -0.48 and -0.38 , for males and females respectively. We also find that P and N are now more highly correlated (0.32 and 0.22), and that similarly E and N are more highly correlated (-0.35 and -0.34). The psychological significance of these changes, which are quite reliable statistically, is not easy to see. On the whole, we may say that where predictions were possible, they have been borne out by the results, but we must add that there are some additional unpredicted features of the observed data which do not admit of any very obvious explanation.

DISCUSSION

The results of the four experiments reported in this paper enable us to formulate certain conclusions, albeit somewhat tentatively because of certain differences in populations sampled, instructions given, and tests used. These conclusions in part replicate results obtained in an earlier study, which makes it likely that the various differences mentioned above are not crucial for our purposes. It seems, then, that: (1) under conditions judged to be motivating for dissimulation, correlations between L and N (and sometimes between L and P) are significantly higher (negative) than under conditions judged not to be motivating for dissimulation; (2) special 'honesty' instructions significantly increase N (and sometimes P) scores, and lower L scores, as compared with ordinary instructions, but only when motivation to dissimulate is high; when motivation to dissimulate is low, such changes are small or non-existent; (3) L scale scores have high internal reliability, and this reliability is not changed as a function of instructions; this suggests that L scales measure not only tendency to dissimulate, but also a stable personality trait, which is independent of P, E and N. It would be desirable to verify these conclusions in further studies using similar populations, and identical instructions and tests; in the absence of such studies these conclusions may in part at least be a function of other differences between the experiments noted above.

If we may assume that the results achieved under 'honesty' conditions give a truer

picture of the subjects' N and P scores than do the results achieved under ordinary conditions, then the question may be raised whether we can use a person's L score (under ordinary conditions of testing) to correct his P and N scores statistically in such a way as to make it approach more closely to what it would have been had he been tested under 'honesty' instructions. It is of course possible to use some simple regression formula, but as the correlation between L and the pathological scales is not very high, even under motivating conditions, the resulting correction would be rather small. It would also seem that it would be necessary to conduct a special research in which the same group of people would be administered both versions of the test (i.e. the ordinary and the 'honesty' instructions) in order to compare each individual's change in pathology score under changed instructions with his L score. It seems reasonable to expect that high L scorers would change most, but there is no direct evidence on this point, and it would certainly be important to know just how high this particular correlation turned out to be. Our data cannot in the nature of things give any information on this point.

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