



Psychological profiles of professional actors

Daniel Nettle *

*Psychology, Brain and Behaviour, University of Newcastle, Henry Wellcome Building, Framlington Place,
Newcastle NE2 2JS, UK*

Received 8 February 2005; received in revised form 4 July 2005; accepted 26 July 2005
Available online 15 September 2005

Abstract

The personality profiles and cognitive styles of 191 professional actors were compared to general population samples. Actors of both sexes were significantly higher than comparison groups in extraversion, openness to experience, and agreeableness. There was a trend towards higher neuroticism. The actors also scored significantly more highly than comparison groups on Baron-Cohen's empathizing quotient. The results are discussed with reference to the demands and rewards of acting, and the view that choices of activity are the result of seeking a fit between the person and the environment.

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Keywords: Performing arts; Actors; Personality; Empathizing; Systemizing

1. Introduction

Actors receive more interest from the general public than almost any other social group, yet, like other performing artists, they have been the subject of only sporadic psychological investigation (Kogan, 2002). They are of psychological interest not just because of the public approbation they excite, but also because their profession has unusual characteristics. There is no shortage of entrants to the profession, and indeed most countries have developed complex union membership rules based on training and experience to limit the oversupply. On the other hand, median

* Tel.: +0191 222 8993; fax: +0191 222 5622.

E-mail address: daniel.nettle@ncl.ac.uk

earnings are extremely low, and actors can expect to spend most of their time economically insecure, short of work, and subsidizing their chosen profession by some other means (Phillips, 1991). As well as these inconveniences, actors choose to put themselves into situations that most people find aversive or anxiety-provoking: the constant scrutiny of large groups of strangers under circumstances they do not entirely control.

It is, then, of interest to establish what the typical psychological characteristics of actors as a group are. Similar investigations have been carried out for a number of other visible or unusual social groups, but it is unclear which other groups actors should most resemble. Groups of artistic creators such as writers, poets and visual artists have received considerable attention, and the consensus is that they tend to be high on the five-factor dimensions of neuroticism and openness to experience, or similar constructs (Nettle, *in press*; Nowakowska, Strong, Santosa, Wang, & Ketter, 2005; Schuldberg, 1988). Actors clearly share with these groups an interest in the arts, but a distinction needs to be made between the creative disciplines and the interpretative ones (Kogan, 2002), with the interpretative disciplines such as acting offering a different set of rewards. Politicians share with actors an interest in public attention and influence, and they have been found to be, in five factor personality terms, high in extraversion and agreeableness (Caprara, Barbaranelli, Consiglio, Picconi, & Zimbardo, 2003). Finally, Mount Everest climbers, and others involved in high-risk sports, have been found to be high in extraversion and low in neuroticism (Egan & Stelmack, 2003; Goma-Freixanet, 1991). In as much as the acting life is one of adventure and risk (albeit of an emotional, not physical nature), it could be that actors have similar profiles.

A number of previous studies have compared profiles of actors and controls on personality dimensions, with the most consistent finding being that actors are high on extraversion (Hammond & Edelmann, 1991; Marchant-Haycox & Wilson, 1992). High extraversion in actors is probably related to their orientation towards social attention and reward, as is the case with politicians (Hill & Yousey, 1998). Indeed, theatre actors have even been taken as non-clinical models of histrionic personality disorder, a disorder defined by attention-seeking and excessive emotionality (Cale & Lilienfeld, 2002).

Actors have also been suggested to be high in self-monitoring (defined as the ability to control one's own expressive behaviour; Snyder, 1987), non-verbal emotional expressiveness (Friedman, Prince, Riggio, & DiMatteo, 1980), expressiveness in general (Marchant-Haycox & Wilson, 1992), and social skill (Banks & Kenner, 1997). Whilst these findings are interesting, the interrelationships between these different constructs, and their place in the overall structure of individual differences, is not completely clear. No study of actors has yet used the five factor model of personality (Costa & McCrae, 1992), a model about which there exists considerable consensus, and whose constructs are often used to provide a broad-resolution, general-purpose description of personality variation.

In a series of recent publications, Baron-Cohen and colleagues (Baron-Cohen, 2002; Baron-Cohen, Richler, Bisarya, Gurunathan, & Wheelwright, 2003) have presented two new dimensions, systemizing and empathizing, which they argue capture a broad range of individual-difference phenomena. Empathizing relates to social intelligence and emotional identification with others, whilst systemizing relates to abstract thought in non-social domains, and is associated with interests in technology and science, and, at the extreme, with Asperger syndrome. Empathizing and systemizing can be measured by questionnaire, and are only weakly negatively correlated with each other in general population samples (Baron-Cohen et al., 2003). They are presented as cog-

nitive styles rather than personality dimensions, but as yet their relationships to personality dimensions and other longer-established individual-differences constructs are not clear.

Empathizing in particular has obvious relevance to acting. Modern acting technique is based on the ability of the actor ‘to enter into, comprehend and interpret to others, the experiences of, successively, many others. . . to know all their joys and sorrows, think their thoughts, and veritably to live their lives’ (Cole & Chinoy, 1970, cited in Hannah, Domino, Hanson, & Hannah, 1994, p. 278). This definition closely echoes Baron-Cohen’s definition of empathizing as ‘the drive to identify another person’s emotions and thoughts, and to respond to these with an appropriate emotion’ (Baron-Cohen et al., 2003, p. 361). It is thus to be expected that accomplished actors will score highly on the empathizing dimension.

The purpose of this study, then, is to investigate the psychological characteristics of a large sample of professional actors, using the five factor model of personality, and Baron-Cohen et al.’s (2003) empathizing and systemizing quotients. Previous studies suggest that, for the five factors, actors will be high on extraversion. If they pattern with other groups within the arts, they will also be high in openness and neuroticism, but if they pattern with physical risk-takers like mountaineers, they will be low in neuroticism. If they pattern with other groups receiving public attention, like politicians, they will be high on agreeableness. Such a pattern would also be expected from previous studies finding actors to have high levels of expressiveness or social skill. As for the empathizing and systemizing quotients, actors are expected to score highly on the former, and no lower on the latter than is consequent on the very weak negative correlation of these two scales in the general population.

One previous study has found a correlation within actors between social skill and the amount of acting experience (Banks & Kenner, 1997). This could be interpreted as evidence of either selection or causation, that is, of more socially skilled actors capturing more roles, or the process of acting improving social skills. This result was however obtained using semi-professional actors and drama students. To examine whether psychological characteristics either determined acting success or were changed by acting experience amongst professionals, additional data on length of time in the profession and recent work history were collected.

2. Methods

2.1. Procedure

Data collection was via the World Wide Web. The internet is increasingly widely used in psychological research, particularly on personality. Several studies have demonstrated that five-factor personality inventories delivered in this way can produce satisfactory internal consistency, factor structure and external validity (Buchanan, Johnson, & Goldberg, 2005). Moreover, pencil and paper and internet administrations of the same questionnaires produce very similar norms and factor structures (Gosling, Vazire, Srivastava, & John, 2004; Salgado & Moscoso, 2003). Thus, there seems to be no evidence that the increased sampling ease brought by online participation is outweighed by disadvantages in terms of data quality.

An online questionnaire was set up on a university server, with a title page from which participants followed a link to signal their willingness to participate. Multiple submissions from the

same IP address, and incomplete submissions, were automatically deleted. Participants read a debrief page at the end of the study. All items were coded in such a way as to make non-response to the item distinguishable from selection of the first response option.

2.2. Materials

The questionnaire contained the short five-factor personality questionnaire for use on the internet (Buchanan et al., 2005). This questionnaire consists of 41 of the 50 item five-factor inventory from the International Personality Item Pool (see Goldberg, 1999). In a large internet sample, the questionnaire displays appropriate factor structure, high internal consistency, and the expected correlations between personality traits and self-reported behaviours (Buchanan et al., 2005). Furthermore, the larger 50 item set from which it is drawn yields trait scores that correlate strongly with those produced by the reference five-factor personality inventory, the NEO-FFI (Gow, Whiteman, Pattie, & Deary, 2005). The questionnaire has large quantities of reference data for the general population which were collected online, which can be used for comparison norms (Buchanan, 2001).

The inventory consists of 41 self-descriptive items scored on 5-point scales from Very Inaccurate to Very Accurate or vice versa. In addition to the personality inventory, Baron-Cohen et al.'s (2003) systemizing (SQ) and empathizing (EQ) quotients were administered. These consist of 40 items for each quotient. For the present purposes, the items of the two scales were mixed in together, and the non-scored filler items not given. The scales consist of self-descriptive statements scored on a four-point scale from Strongly Disagree to Strongly Agree or vice versa.

The questionnaire also contained items about the respondents' acting work and history (length of time a professional actor, union membership, training, main areas of work, number of weeks of paid work in previous 12 months, proportion of income from acting in previous 12 months) and some general demographic questions.

2.3. Participants

Professional actors were recruited through the internet by several routes. A notice about the study was placed in a widely-circulated casting newsletter, and information was also posted on three different actors' information web-sites. In addition, a number of actors who have personal web pages were approached by email, and several actors circulated the study information to their contacts.

From the large number of responses, participants were deleted from the sample if they did not answer 'Yes' to the question, 'Are you a professional actor?', or reported that they were still training full time. After these exclusions, 191 participants remained (64 male and 127 female), 175 were based in the UK, with 13 from North America, two from Australasia and one from another location. Ninety individuals (47.1%) were aged in their 20s, and 61 (31.9%) in their thirties, with three individuals under 20 and 37 (19.4%) over 40.

The acting community consists of a broad spectrum from those whose involvement is largely avocational to a smaller professional group. Of the actors in the final sample, 156 (81.7%) were members of the actors' union Equity or their country's equivalent, and 126 (66.0%) had trained full-time at drama school. These relatively high proportions suggest that the professional end

of the spectrum was generally being sampled. As regards work, only 101 individuals (52.9%) reported that they had had paid acting work in more than 10 weeks of the previous year, and 101 (52.9%) reported that they obtained less than 20% of their last year's income from acting. These figures suggest low levels of professional activity in the sample, but two points are to be borne in mind. One is that they are probably quite representative, as even in the unionized core of the profession, supply of actors greatly outstrips demand, and significant periods of non-acting activity are to be expected even amongst the relatively successful. The second is that television and film acting is very time-concentrated, so low numbers of weeks worked would be normal even in a busy career, whilst theatre is time-consuming but not lucrative, so other sources of income are the norm. Ninetyfive actors (49.7%) said that their main source of work was the theatre, and 40 (20.9%), television and film, with the remainder reporting voiceover, other work, or a mixture.

2.4. Analysis

Comparison data were taken from large British general population samples from Buchanan (2001) for the five personality factors, and Baron-Cohen et al. (2003) for the SQ and EQ. Alternative large samples of general-population British data using the same internet presentation as the current study have also been gathered for these questionnaires (Nettle, 2005 and Nettle, unpublished data). These datasets produce extremely similar means, and could have been used as the comparison data here with no change to any of the conclusions. Comparisons reported here therefore used the published data. As there are sex differences on several of these dimensions, results are reported for the two sexes separately. Comparison between actors and the general population was made by considering d (Cohen, 1988), the number of standard deviations difference between the two means. Statistical significance of any differences is determined by t -tests.

3. Results

The actors' scores on the scales were appropriately distributed in terms of item correlations and scale reliabilities (Cronbach's α : Extraversion: 0.86; Neuroticism: 0.85; Conscientiousness: 0.82; Agreeableness: 0.65; Openness: 0.65; EQ: 0.83; SQ: 0.87). Sex differences were as expected, particularly in the large female advantage on the empathizing quotient and large male advantage on the systemizing quotient. Table 1 shows the comparisons between the actors and general population samples for the dimensions of interest. For both sexes, actors were significantly higher in extraversion, openness to experience, and agreeableness than the general population sample. There were no significant differences in conscientiousness, and for neuroticism, the male actors had slightly elevated scores, whilst for the females there was a non-significant trend in this direction. The effect sizes (d scores) would be considered medium (Cohen, 1988)—a d score of 0.6, for example, means that the mean actor falls at the 73% percentile of the general population sample. As Table 1 also shows, actors of both sexes had significantly elevated empathizing quotient scores. There were no differences in terms of systemizing quotient, despite the fact that the EQ and SQ were, as expected, weakly negatively correlated overall ($r = -0.14$, $df = 190$, $p < 0.05$).

It is possible that the differences in cognitive style are responsible for those in personality scores, or vice versa, since the EQ is correlated positively with extraversion, agreeableness, openness and

Table 1
Comparisons between professional actors and general population data

		General population		Actors		<i>d</i>
		Mean	SD	Mean	SD	
N	M	21.57	6.76	23.47	7.15	0.27*
	F	22.95	6.68	24.12	6.92	0.17
E	M	28.21	7.67	30.70	7.17	0.34*
	F	29.66	7.59	34.57	5.74	0.73***
O	M	25.52	5.52	28.75	4.62	0.63***
	F	26.9	4.9	29.57	3.81	0.61***
C	M	32.53	7.47	30.91	6.68	−0.23
	F	33.84	7.25	34.86	7.22	0.14
A	M	25.23	4.81	27.14	3.93	0.43**
	F	26.84	4.60	28.54	3.87	0.40**
EQ	M	38.8	12.4	44.4	10.5	0.49***
	F	47.7	11.0	53.5	9.1	0.57***
SQ	M	30.3	11.5	30.5	10.8	0.02
	F	24.1	9.5	23.2	12.0	−0.08

N: neuroticism, E: extraversion, O: openness, C: conscientiousness, A: agreeableness, source of general population data: Buchanan, 2001, $n = 991$ (males), 1457 (females). EQ: empathizing quotient, SQ: systemizing quotient, source of general population data Baron-Cohen et al. (2003), $n = 114$ (males), 164 (females).

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

conscientiousness in this sample (Table 2). As the relationships between empathizing, systemizing and personality factors have not yet been ascertained in the general population, it is not possible to determine whether the actors would differ in personality from the general population once the correlated effects of their increased EQ had been partialled out.

In an ancillary analysis, EQ and the five personality factors were correlated with length of time as a professional actor (years), number of weeks of acting work in the last year, and proportion of

Table 2
Correlations between the empathizing quotient (EQ), the systemizing quotient (SQ), and the five personality factors

	EQ	SQ
N	0.01	−0.07
E	0.37***	−0.05
O	0.19**	0.16*
C	0.30***	0.17*
A	0.41***	−0.01

N: neuroticism, E: extraversion, O: openness, C: conscientiousness, A: agreeableness) for the sample of professional actors.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

previous year's income obtained from acting. No significant results arose from any of these correlations.

4. Discussion

The data from this large sample of professional actors show them to be distinguished by personalities with high levels of extraversion, openness and agreeableness, and by a strongly empathizing cognitive style. These differences are much as predicted and suggested by previous research in the area. Presumably, extraversion provides a responsiveness towards the strong interpersonal rewards of being the centre of a company or of an audience's attention. High agreeableness probably draws actors towards their most social of all arts in particular, and is a common feature to actors and politicians, another group depending on public approbation (Caprara et al., 2003). High openness to experience is a feature of those interested in the arts in general (Nowakowska et al., 2005). For neuroticism, there were two possible predictions – increased neuroticism is often a feature of creative groups (Nowakowska et al., 2005), but decreased neuroticism permits boldness by reducing anxiety, as in the case of high-risk sports participants (Goma-Freixanet, 1991), and as actors are under performance scrutiny, they might be expected to have low scores. The data show the actors tending towards modestly increased neuroticism, placing them with other artistic groups rather than with the mountaineers.

The actors were also, as predicted, significantly higher than controls on the empathizing dimension. The correlations with personality dimensions found here suggest that high empathizing is generally associated with extraversion, agreeableness, and to a lesser extent conscientiousness and openness, but the conceptual and empirical relationships between cognitive style and personality require further study.

The results demonstrate the utility of considering cognitive style as a feature of particular vocational groups. Whereas scientists and engineers are high systemizers (Baron-Cohen, 2002), and those professions are typified by male predominance, actors are typified by high empathizing. We would thus expect a strong female representation in the acting profession, which is well known to be the case. We might also make predictions about characteristic psychopathology. Central to the empathizing-systemizing model is the prediction of pathologies at the extremes of the dimensional space, notably autism spectrum disorders in the high systemizing/low empathizing quadrant (Baron-Cohen et al., 2003). Actors would be predicted to be free from these disorders, but susceptible if anything to emotional disorders. However, it is to be noted that despite their empathizing advantage, the actors had no systemizing decrement relative to controls. They thus represent the advantages of both styles rather than an extreme combination.

Further research might examine cognitive styles and abilities of actors through experimental tasks rather than self-report questionnaires. Several studies have demonstrated that there is variation in ability to solve higher-order theory of mind problems (Kinderman, Dunbar, & Bentall, 1998; Rutherford, 2004; Stiller, 2002). These are tasks where the participant must adopt the perspective of someone who adopts the perspective of someone who adopts the perspective of someone, and so on up to an arbitrary number of levels of embedding. Whilst most people fail such tasks consistently at the 5th level of embedding, there are individuals who perform at higher levels. It would be expected that empathizing as measured by the EQ would correlate with this ability

(the sex differences are certainly consistent with this; Stiller, 2002), and thus that actors would be successful at a higher than average level of embedding. The actor's habitual rehearsal and preparation processes certainly mimic the structure of the higher-order theory of mind tasks.

The current study did not provide any support for the hypothesis that exceptionally high empathizing would be a predictor of special talent or success in the field, though this is a possibility that further research could address. Nor was any support found for the idea that empathizing is increased as a function of acting experience. In light of the general stability of personality traits, it is more likely that acting selects individuals with the appropriate psychological profiles than that it transforms them. Nonetheless, future research might profitably investigate the process of becoming an actor, since it is not inconceivable that training and experience could influence empathizing and personality. Overall, the results confirm the usefulness of thinking of choices in both vocational and avocational activities as being produced by the seeking of a 'fit' between the characteristic psychological demands of the environment, and the psychological characteristics of the person (Holland, 1985).

References

- Banks, S., & Kenner, A. N. (1997). Are actors more socially skilled? Behavioral and self-report measures. *Psychological Reports, 81*, 1115–1123.
- Baron-Cohen, S. (2002). The extreme male brain theory of autism. *Trends in Cognitive Sciences, 6*, 248–254.
- Baron-Cohen, S., Richler, J., Bisarya, D., Gurunathan, N., & Wheelwright, S. (2003). The systemizing quotient: an investigation of adults with Asperger syndrome or high-functioning autism, and normal adults. *Philosophical Transactions of the Royal Society, B (Biological Sciences), 358*, 361–374.
- Buchanan, T. (2001). *Online implementation of an IPIP Five Factor Personality Inventory [On-line]*. Retrieved, from the World Wide Web: Web address available from the author.
- Buchanan, T., Johnson, J. A., & Goldberg, J. R. (2005). Implementing a five-factor personality inventory for use on the internet. *European Journal of Psychological Assessment, 21*, 115–127.
- Cale, E. M., & Lilienfeld, S. O. (2002). Histrionic personality disorder and antisocial personality disorder: sex-differentiated manifestations of psychopathy. *Journal of Personality Disorders, 16*, 52–72.
- Caprara, G., Barbaranelli, C., Consiglio, C., Picconi, L., & Zimbardo, P. G. (2003). Personalities of politicians and voters: unique and synergistic relationships. *Journal of Personality and Social Psychology, 84*, 849–856.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cole, T., & Chinoy, H. K. (1970). *Actors on acting*. New York: Crown Publishers.
- Costa, R., & McCrae, R. (1992). Four ways five factors are basic. *Personality and Individual Differences, 135*, 653–665.
- Egan, S., & Stelmack, R. M. (2003). A personality profile of Mount Everest climbers. *Personality and Individual Differences, 34*, 1491–1494.
- Friedman, H. S., Prince, L. M., Riggio, R. E., & DiMatteo, M. R. (1980). Understanding and assessing non-verbal expressiveness: the affective communication test. *Journal of Personality and Social Psychology, 39*, 333–351.
- Goldberg, L. R. (1999). A broad-bandwidth, public-domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. De Fruyt, & F. Ostendorf (Eds.), *Personality psychology in europe* (Vol. 7, pp. 7–28). Tilburg: Tilburg University Press.
- Goma-Freixanet, M. (1991). Personality profiles of subjects engaged in high physical risk sports. *Personality and Individual Differences, 12*, 1087–1094.
- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about Internet questionnaires. *American Psychologist, 59*, 93–104.
- Gow, A. J., Whiteman, M. C., Pattie, A., & Deary, I. J. (2005). Goldberg's 'IPIP' big-five factor markers: internal consistency and concurrent validation in Scotland. *Personality and Individual Differences, 39*, 317–329.

- Hammond, J., & Edelmann, R. J. (1991). The act of being: personality characteristics of professional actors, amateur actors, and non-actors. In G. D. Wilson (Ed.), *Psychology and performing arts* (pp. 123–131). Amsterdam: Swets & Zeitlinger.
- Hannah, M. T., Domino, G., Hanson, R., & Hannah, W. (1994). Acting and personality change: the measurement of change in self-perceived personality characteristics during the actor's character development process. *Journal of Research in Personality*, 28, 277–286.
- Hill, R. W., & Yousey, G. P. (1998). Adaptive and maladaptive narcissism among university faculty, clergy, politicians, and librarians. *Current Psychology*, 17, 163–188.
- Holland, J. L. (1985). *Making vocational choices: a theory of vocational personalities and work environments*. Englewood Cliffs: Prentice-Hall.
- Kinderman, P., Dunbar, R., & Bentall, P. (1998). Theory-of-mind deficits and causal attributions. *British Journal of Psychology*, 89, 191–204.
- Kogan, N. (2002). Careers in the performing arts: a psychological perspective. *Creativity Research Journal*, 14, 1–16.
- Marchant-Haycox, S. E., & Wilson, G. D. (1992). Personality and stress in performing artists. *Personality and Individual Differences*, 13, 1061–1068.
- Nettle, D. (2005). An evolutionary approach to the extraversion continuum. *Evolution and Human Behavior*, 26, 363–373.
- Nettle, D. (in press). Schizotypy and mental health amongst poets, artists and mathematicians. *Journal of Research in Personality*.
- Nowakowska, C., Strong, C. M., Santosa, S., Wang, P. W., & Ketter, T. A. (2005). Temperamental commonalities and differences in euthymic mood disorder patients, creative controls, and healthy controls. *Journal of Affective Disorders*, 85, 207–215.
- Phillips, E. (1991). Acting as an insecure occupation: the flipside of stardom. In G. D. Wilson (Ed.), *Psychology and performing arts* (pp. 133–142). Amsterdam: Swets & Zeitlinger.
- Rutherford, M. D. (2004). The effect of social role on theory of mind reasoning. *British Journal of Psychology*, 95, 91–103.
- Salgado, J. F., & Moscoso, S. (2003). Internet-based personality testing: equivalence of measures and assessors' perceptions and reactions. *International Journal of Selection and Assessment*, 11, 194–205.
- Schuldberg, D. (1988). Creativity and schizotypal traits: creativity test scores and perceptual aberration, magical ideation, and impulsive nonconformity. *Journal of Nervous and Mental Disease*, 176, 648–657.
- Snyder, M. (1987). *Public appearances, private realities*. New York: Freeman.
- Stiller, J. (2002). *Perspective-taking and group size in humans*. Unpublished MSc thesis, University of Liverpool.