# IMPOSTOR PHENOMENON IN TERTIARY STUDENTS

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*Abstract*: The impostor syndrome was first brought to the attention of educators through the work of the feminist psychotherapist, Pauline Clance. Imposterhood is defined as the sense of personal inauthenticity in individuals who evidence achievement. Clance noted this trait was often found in high achieving women, but later work revealed it is found in both male and female samples. In this project we describe the development of a brief impostor scale suited for tertiary student groups. The scale identifies three dimensions, social phoniness, personal phoniness, and inclination to discount success. In a sample of 136 undergraduates we found that impostor scores correlated with pessimism and low need for cognition. Significant relationships were not evident between impostorhood and several measures of general knowledge and vocabulary, although impostors tended to believe they had underperformed on these measures relative to their peers. Significant gender differences in impostor scores were not found.

Presented at Annual Conference, Adelaide, December 1998

Australian Association for Research in Education

Research into the impostor phenomenon (IP) began with the work of the American clinical psychologist Dr Pauline Clance (Clance and Imes, 1978; Clance, 1985; Matthews & Clance, 1985). Writing from the perspective of feminist psychotherapy, she detailed the existence of high levels of self-doubt within many high-achieving women. However, this specific form of self-doubt could not be readily equated with factors such as self-esteem, anxiety, or any of the other generally recognised psychological traits. Instead, their self-doubt seemed to revolve around a profound sense of*inauthenticity.* Such people appeared unable to internalise success in life, believing this to be the result of "fooling" other people, by "faking it", by having the right contacts, by exerting extraordinary levels of effort, or just luck. Regardless of past objectively-indexed success and recognised accomplishments, these women retained the belief that potentially they could be exposed as frauds.

Besides the clinical findings, survey research into IP was made possible with the use of scales published by Harvey (1981), Topping and Kimmel (1985), and Clance (1985). Clance's own scale tends to reflect her clinical orientation with items targetted on fears of being evaluated and exposed. In the present study we sought to devise a further scale, a brief instument directly suited to tertiary student samples, and to investigate further the correlates of the syndrome.

Use of the Harvey and Clance scales in survey work has disclosed the fascinating observation that IP is not an effect found only within female samples. Several studies suggested that levels in male and female populations are very similar (Cozzarelli & Major, 1990; Fried-Buchalter, 1992; Harvey, 1981; Lester & Moderski, 1995). Topping and Kimmel (1985) actually reported higher levels of IP in male professors than female professors. One

recent study with university undergraduates, however, did report higher levels of IP in females (King & Cooley, 1995).

Correlational studies have related IP levels to self-reported depression, anxiety, self-esteem, and self-consciousness (Chrisman, Pieper, Clance, Holland & Glickauf-Hughes, 1995), fear of success (Fried-Buchalter, 1992), and to indices of psychopathology including irrational thinking (Holmes, Kertay, Adamson, Holland, & Clance, 1993; Lester & Moderski, 1995; Okoth, Moderski & Lester, 1994). Cozzarelli and Major (1990) argued that the IP may simply reflect a general trait toward negative affect. But Clance and her colleagues argue that the IP can be seen as a distinct diagnostic syndrome, with the scales possessing sufficient convergent and discriminative validity to justify this notion (Chrisman et al., 1995).

As further challenges to Clance's position, Kolligan and Sternberg (1991) suggested that the IP could be subsumed under the construct of *perceived fraudulence*. Also Fried-Buchalter (1992) suggested that the IP is a symptom of *fear of success*. But whether or not these are more generic constructs is unclear. The present writers fundamentally agree with Clance's position that the IP can be recognised as a distinct psychological trait that cannot be equated with other more widely recognised syndromes.

How does one become an impostor? Based largely on her clinical work, Clance proposed four key developmental elements: Viz, (a) as children impostors learn they are not typical for their backgrounds, (b) they receive feedback from others, especially teachers, that indicates they are very capable children, (c) the family may not recognise the child's manifest capabilities, and (d) the family conveys the message that cleverness or success should come with little effort.

At present, it is not possible to evaluate these clinical hypotheses. But it can be noted that Harvey (1981) did find that impostors rated themselves more highly in terms of feeling atypical. Also, King and Cooley (1995) found a significant correlation between IP scores in undergraduates and their perceptions of the achievement orientation in their families. Impostors appear to come from homes in which success is assumed, and seen as somewhat automatic. But whether or not this specific child actually has the necessary qualities for high success is left ill-defined. Clance's position would be that the school is possibly more likely to affirm the child's ability status than the home, with this discrepancy contributing to the child's nagging self-doubt.

In the present study we sought to develop a brief measure of IP suitable for survey research with undergraduate student samples. We also sought to investigate additional possible correlates of the IP, specifically generalised *optimism-pessimism*, and the personality factor *need for cognition*. The data gathered in our survey also enabled us to investigate if scores on the IP measure would relate to several different test measures of *general knowledge*, and to perceived success level on these tests. We also had data on our subjects' *beliefs on New Age* and *spiritual values*. Thus, our data enabled us to investigate if the impostor's feelings of personal cognitive inadequacy have any substance in terms of actual intellectual qualities.

## METHOD

### Subjects

Data were collected from 136 undergraduate students (112 female, 24 male). They were enrolled in different topics on the Magill Campus and recruited by asking for volunteers to complete a questionnaire battery immediately after tutorial classes. Completed questionnaires were obtained from 39 ECE students, 78 primary education students, and 19

Arts/Communication students (ie Journalism and Psychology). The targeted classes were largely from first and third year topics, but students from other year levels also attended those topics.

Questionnaires

*Impostor Scale.* We devised a short form by adapting items from the Clance and the Harvey IP scales. We excluded items that reflected the luck factor. Previous factor analyses (Chrisman et al., 1995) indicated the existence of three factors operating within Clance's scale which they called faking, discount, and luck. We felt that the luck factor would be of less relevance and meaning to a tertiary education sample and so excluded these items in the interests of achieving a short form of only 15 items.

Reliability analyses revealed that 14 of the 15 items contributed toward the total scale. Factor analyses revealed that the items grouped into three factors which we labelled *social phoney, personal phoney, and discount.* The discount items refer to the tendency to discount one's capabilities (see Table 1).

*Optimism scale*. We used items from the Life Orientation Test (LOT, Scheier & Carver, 1985) but extended it by adding in 2 additional questions. These two items correlated with the existing scale, and added to the alpha coefficient. Two sample items are, *"Overall, I expect more good things to happen than bad"*, and *"I rarely count on good things happening to me"* (reverse item). It should be noted that this scale taps into optimism as defined in terms of generalised expectancies, rather than the notion of optimistic explanatory style.

*Need for cognition.* The 18-item Need for Cognition scale (Cacioppo, Petty, Feinstein & Jarvis, 1996) taps the extent to which individuals prefer to accept or avoid complex intellectual effort. Two sample items are *"I would prefer complex to simple problems"*, and*"I only think as hard as I have to"* (reverse item).

*Beliefs Questionnaire*. This 30-item questionnaire taps into several aspects of common beliefs and superstitions. For the present project we isolated the items that reflected (a) New Age beliefs, 8 items, such as *"Certain crystals possess magical healing properties"*, and (b) spiritualism, 4 items, including *"The Biblical version of human origins is basically correct"*. Both of these scales had been identified from a factor analysis upon the entire questionnaire.

*Knowledge tests.* We constructed a series of brief tests including (a) 3 vocabulary tests based upon concept classifications (animal, mineral, vegetable), (b) 4 tests of identification of famous people in different walks of life, (c) an Author Recognition Scale, (d) a TV personality recognition scale, and (e) knowledge of significant dates in history. These scales yielded 10 separate scores, but a factor analysis indicated that they all loaded upon two factors which reflected popular knowledge and intellectual knowledge. Oblimin solution then indicated than the factors correlated at 0.45 so we tallied all the tests to form a single score reflecting general knowledge.

*Subjective estimations.* Subjects were asked to estimate their scores on 5 of the knowledge tests, as scores between 0 and 100%. These data were then tallied to form a single score. We also asked them to estimate the average scores of other (peer) students on the same tests.

## Results

*Impostor scales.* The 3 impostor indices all correlated significantly (see Table 2). It was found that the impostor scores did not vary in accord with gender, faculty, student year level, or student age (self-reported).

*Beliefs Questionnaire*. The beliefs questionnaire yielded two major indices: New Age Beliefs, and Spiritualism. It was found that the Personal Phoney score correlated with Spiritualism ($r$ = -0.27, $p$ = .002), indicating that people who felt themselves phonies also tended to be more sceptical about accepting spiritual beliefs. It was also found that the males tended to be less sympathetic to New Age Beliefs than females. Across 8 items, scoring 1 to 7 with 4 as midpoint, the averaged means were 2.9 and 3.75, $F$ (1,132) = 9.03,$p$<.01).

*Correlations*. The major findings concern the pattern of correlations as depicted in Table 3. Impostor scores were found to correlate significantly with optimism/pessimism and with low need for cognition. Imposterhood did not correlate significantly with general knowledge or with New Age beliefs. The correlation between impostor scores and subjective estimates of test performance achieved significance at a low level.

*Subjective estimations*. How well the students believed they had done on the knowledge tests related significantly to actual knowledge, to gender, and to impostor scores (see Table 3). A stepwise regression indicated that impostor scores continued to predict estimated scores even after the variance attributable to knowledge and gender had been removed. Ratings concerning how well the students believed others (average peers) did on the tests did not relate to impostor scores.

*Impostor classification*. We divided the sample into high and low status groups with respect to the impostor scale, using the median split point of 37. This enabled 59 students to be classed as high and 55 as low, with those on the median being excluded. This classification was then used in the analysis of the test ratings, along with a median split classification used on the actual knowledge scores. A repeated measures 2 x 2 x 2 ANOVA on ratings target (self vs others), impostor status, and general ability status, indicated significant effects due to ratings target, and ability status. But most importantly, the ratings-impostor interaction term was found to be significant ($F$ (1, 78) = 5.31, p=.024), indicating that impostors exhibited more depressed ratings than non-impostors when they rate themselves, relative to others. The mean scores reflecting this interaction are depicted in Figure 1.

## Discussion

The major findings of the study are that

(a) it is possible to identify significant levels of impostorhood feelings within an undergraduate sample,

(b) impostorhood has at least three distinct contributing sources, social phoniness, personal phoniness, and the tendency to discount one's achievements,

(c) all three contributing sources correlated significantly with each other and contributed to the total imposterhood tally,

(d) impostor scores did not relate to gender or year of study at university,

(e) impostors tend to be pessimists in terms of their generalised expectations of favourable life outcomes,

(f) impostors tend to express preference for simple rather than complex cognitive and intellectual tasks,

(g) impostors score fail to relate to actual measures of general cultural knowledge and intellectual capability, and

(h) impostors are inclined to assess their performance on knowledge tests to be less than that of the expected peer average level.

The present data contribute to the construct of impostorhood. We found the trait related meaningfully to two specific psychological tendencies: ie, optimism/ pessimism, and need for cognition. The LOT is specifically a test of generalised expectancies concerning favourable outcomes, targeted into the future. The impostor's fear that exposure is a possibility effectively may deprive the individual of faith in a benign future. Prior studies have reported relatively high correlations between impostor scores and self-reported depression (Holmes et al., 1993; Lester & Moderski, 1995). Plainly, impostorhood implies an enduring negative emotional state.

The association of impostorhood and low need for cognition is not immediately explicable, especially as the data clearly indicate that impostorhood is not related to objective measures of intellectual competency. However, it may be that the pervasive feelings of phoniness and impending social comparison have induced impostors to "play safe" by avoiding exposure through cognitive competitiveness and intellectual challenge. Matthews and Clance (1985) identified a group of capable female students who declined invitations to participate in honours degree programmes on the basis of perceived intellectual inadequacies. It appears that impostorhood brings with it the desire to keep life simple by not exposing oneself to complex testing situations. In short, impostors may present with reduced levels of aspiration, motivated in part by the need to avoid challenge to personal equilibrium.

Consistent with this interpretation, we can also note the findings of a survey published by Fried-Buchalter (1992) based on a sample of adult marketing managers in New York. She found that individuals high on impostor dimensions also were high on certain items from a fear of success scale, notably those items that suggested that success in our society is overly valued, and can bring personal unease, sadness and loneliness.

It was found that within our sample, students in general typically rated their own performance on the knowledge tests as inferior to others, as indexed by the hypothetical average peer. However, this tendency to devalue one's own performance was relatively stronger in the case of students identified as impostors. On average, impostors told us that they underperformed their peers by 12%, whereas the non-impostors estimated their performance deficit as 8% less than their peers. Initially, such a difference may not seem great. But, on the other hand such a perceived deficit may be a significant impediment to effortful striving and outcome confidence in potentially complex or competitive situations. A minor discrepancy (such as 8%) between one's level and others may motivate positive agency, whereas a greater perceived discrepancy (such as 12%) may elicit total despondency. In short, our data do suggest a subtle mechanism that has the potential to destroy motivated behaviour.

Why should educators be interested in the impostor effect? If Clance's clinical observations are correct, then schools are implicated directly in the initial creation of this feeling state and character trait. The very nature of schooling entails identifying intellectual talents, and some

children will receive feedback somewhat discrepant with their customary family role. Harvey (1981) did find that impostors reported feelings of being atypical, a situation that may emerge from an individual's school experiences.

Further, as Matthews and Clance (1985) reported, imposterhood appears linked directly to levels of aspiration and motivation within one's educational career. In the present study we found that impostors devalued their performance level on cognitive tests. Clance (1985) found that feelings of impostorhood plagued many individuals who achieved highly on recognised educational achievement criteria. That is, just because one has matriculated, or got a PhD, is no guarantee of mental peace. Indeed it may be the reverse since higher levels of educational achievement leave the impostor even more exposed and vulnerable to a potential unmasking.

Finally, as we noted in the introduction, there are now sufficient data to regard impostorhood as a trait distinct from other syndromes. An individual may present with high self-esteem, low anxiety, high achievement, and outward success. But, deep down, this person feels a phoney. Assuredly, this individual is not alone.

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**(The following Tables and Figure may need page reframing for your printer/browser)**

**Table 1**

**Impostor Scale: Varimax Rotation Loadings**

| Item | Statements | Loadings |
|---|---|---|
| *Factor 1: Social phoney (eigen 4.26, variance 32.8%)* | | |
| 12 | In truth, I am not as clever as others expect me to be. | .744 |
| 1 | In general, people tend to believe that I am more competent than I really am. | .740 |
| 3 | Sometimes I am afraid I will be discovered for who I really am. | .699 |
| 8 | Sometimes I am afraid others will discover how much knowledge or ability I lack. | .613 |
| *Factor 2: Personal phoney (eigen 1.35, variance 10.4)* | | |
| 7 | I feel highly confident that I will succeed in my future career (R). | .835 |
| 6 | At times I feel I am in my current career position (or studying) through some kind of mistake. | .775 |
| 15 | Unfortunately. I may not possess all the personal qualities needed to achieve. | .610 |
| 10 | I tend to feel like a phoney. | .531 |

| *Factor 3: Discount (eigen 1.23, variance 9.5%)* | | |
|---|---|---|
| 11 | The major cause of success in my life is my high ability. (R) | .660 |
| 4 | I find it easy to accept compliments about my intelligence (R) | .659 |
| 5 | I feel that I deserve the honours, recognition, or praise that I receive. (R) | .632 |
| 14 | Most of the people I mix with are brighter than I am. | .493 |
| 2 | My present level of achievement results from my true ability.(R) | .390 |
| | *Items which failed to load on above factors* | |
| 9 | My accomplishments are adequate for this stage of my life. (R) *(Accepted as it correlated 0.33 with total scale)* | |
| 13 | When I succeed it is because I do try much harder than the others.*(Discarded)* | |

Notes: (a) Items scored in reverse are marked by (R), (b) n = 136, and (c) the response options, scored 1 to 5, were as follows: strongly disagree/ disagree/ neutral/ agree/ strongly agree.

Table 2 : Correlations between impostor dimensions

| | Means (sd) | Alpha | Personal phoney | Discount |
|---|---|---|---|---|
| Social phoney | 11.42 (3.14) | 0.78 | 0.56** | 0.40** |
| Personal phoney | 9.10 (2.93) | 0.76 | | 0.35** |
| Discount | 11.72 (2.2) | 0.48 | | |
| Total Impostor | 37.4 (7.13) | 0.82 | | |

Notes: (a) the alpha coefficients reflect internal consistency for each scale. (b) * p<.05, ** p , .01, two tailed

Table 3

Correlations: The major variables

| | LOT | nCog | General Knowledge | Success Estimate |
|---|---|---|---|---|
| Impostor Scale | -0.56** | -0.39** | ns | -0.18* |
| Optimism (LOT) | | 0.46 | 0.174* | Ns |
| Need for Cognition (Cacioppo) | | | 0.24** | Ns |
| General Knowledge (Tally of 10 tests) | | | | 0.64** |
| Estimated Success on Tests | | | | |

Notes: (a) n = 136, (b) * p<.05, ** p , .01, two tailed, (c) ns is not significant.

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