

Edition 70
Spring 2014

Psyche

The newsletter of The Psychometrics Forum



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Letter from the Chair

Xanthy Kallis – Chair of the Psychometrics Forum



Xanthy Kallis

Dear Member, Hello!

Once again it has been a very busy year for the Committee and we have lots of exciting news to share with you! Some of which are ‘actions’ we have taken, following findings from our survey of members last spring. Others are decisions taken at our meetings. Firstly, we have decided to organise four meetings a year with the fifth reserved for a training workshop. Secondly, and due to popular demand, we have arranged two meetings this year around the theme **Selection and Assessment**.

Events for 2014

The theme of our meeting on **2nd April** was ‘**Digital Psychometrics: Personality Assessment in the Social Media & Big Data Era**’. It was with great pleasure that we welcomed Dr Tomas Chamorro-Premuzic Professor of Business Psychology at UCL and Rob Bailey Principal Consultant, Research and Development at OPP Ltd. Topics included the role that social media can play in recruitment, dos and don’ts and some of the challenges faced. Attentive readers will also note a linkage here with Paul Barrett’s recent article in edition 69 of *Psyche* - Big data and workforce analytics: an unresolved ambivalence.

The second meeting, on **25th June**, will focus on ‘**Ability Assessment**’ and brings together Paul Barrett Chief Research Scientist at Cognadev and Eugene Burke Chief Science & Analytics Officer at CEB-SHL. Both will discuss ‘cognition, cognitive processes and psychometric ability’, but from two contrasting approaches. Following what promise to be two fascinating presentations, we anticipate a lively Q&A panel with both speakers taking questions from the audience.

Our final two events for the year are still being finalised, but on the **25th September**, our topic will be ‘**Illuminating the Dark Side**’. We take great pleasure in welcoming back Dr. Bob Hogan, President of Hogan Assessment Systems. The year ends with our **New Frontiers** event on **25th November**, which aims at bringing you the latest developments in psychometrics. In recent years New Frontiers has grown into a very popular event that attracts an impressive line up of speakers. Hugh McCredie’s summary of the 2013 event is contained within this edition along with the initial flyer for the 2014 event.

Additional benefits to members

1) Networking event

You will probably already be aware that fully paid up members of the forum enjoy a 30% fee reduction on each meeting that they attend. What will be new to you are the two free events we have organised as additional benefits

to members. The first of these was our ‘mulled wine and mince pies’ networking that followed the New Frontiers event last November - Incidentally, this also coincided with the 25th anniversary of the founding of the forum. This is something that we intend to repeat annually and build on, although I must say the attendance was pretty good for a pilot run!

2) Training event

The second annual event is a training and accreditation event. This year this will be a free two-day training event on the Lumina Spark tool that is being held exclusively for TPF members! This accreditation event is being organised by Stewart Desson, CEO of Lumina Learning, who presented to us last September. We say a great big ‘thank you’ to Stewart, for offering this to you, our members!

YOUR role in the Forum

As always we encourage YOU to participate, as interaction takes two (just like the Tango!). There are many ways you can do this:

- By volunteering to help the committee out on a specific project or event. Many thanks to those who have already stepped forward.
- By volunteering to 'write-up' one of the sessions you attend (either morning or afternoon), and by so doing becoming a 'contributor to this newsletter. As well as being read by our full membership Psyche currently reaches nearly 5000 LinkedIn affiliates from around the world!
- By responding (with comments) to the Blog 'Fresh Perspectives to Psychometrics', which can be found on our website.
- By Tweeting at our meetings to increase the traffic on our Twitter account ([@TPF_UK](#)). Although we strongly encourage this to be during breaks/ lunchtime in respect to our speakers of the day.
- By giving us your ideas for topics and speakers and suggestions for improvement.

Honorary life member

Finally, I am happy to announce that **David Roberts**, a very valued and convivial colleague, has been made an **Honorary Life Member of the Forum**. Many of you will know David as our Newsletter Editor of many years until 2010. We confer this distinction on David as a token of thanks for his many years service and for the hard work he put into making the Forum and its predecessor the success that it has become. This award is a mark of the very high esteem in which we hold him. Thank you David.

There is no denying the hard work that all Committee members put in to ensure that we continue to bring you high value and quality. You can also see from the above how we have taken action based on the findings of last year's survey (a copy of which is available to you, just contact us). We are a unique group, both in profile and independence and aspire to strengthen our position as an authoritative voice in occupational assessment and development.

Copy deadlines 2014

Summer – Wednesday 21st May 2014

Autumn – Wednesday 8th August 2014

Winter – Wednesday 5th November 2014

To book a place on any of the events please contact our Administrator **Caro Leitzell** on **01962 880920** or email her at admin@psychometricsforum.org

Details of membership are available on the Forum website: www.psychometricsforum.org

Heroes, landmarks and blind alleys in personality assessment –

3. Measures originating in clinical data

Dr. Hugh McCredie – TPF Vice Chair

Minnesota Multiphasic Personality Inventory (MMPI) (1939)

The earliest known personality measure, Woodworth's Personal Data Sheet was a 'narrowband' instrument published in 1917 to measure susceptibility to shell-shock. The MMPI, developed in 1939 by Hathaway and McKinley (1940), was more of a landmark because of its broader nature. Its raison d'être and the manner of its construction are best explained in the words of the introductory paragraphs to the 1940 paper:

For several reasons it has seemed that a multiphasic personality schedule might be constructed which would be of greater value in the medical or psychiatric clinic than is true of personality inventories already available. It is desirable that more varied subject matter be included to obtain a wider sampling of behavior of significance to the psychiatrist, rather than to utilize independent sets of items for special purposes such as one might use in studying any particular reaction type. Then too in dealing with clinic patients, there seemed to be a need for simpler wording and a simpler method of presentation than is usually the case, in order to stay within the comprehension of those individuals who are not of high intellectual or cultural level. Finally, it seemed desirable to create a rather large reservoir of items from which various scales might be constructed in the hope of evolving a greater variety of valid personality descriptions than are available at the present time.

The individual items were formulated partly on the basis of previous clinical experience. Mainly, however, the items were supplied from several psychiatric examination direction forms, from various textbooks of psychiatry, from certain of the directions for case taking in medicine and neurology and from the earlier published scales of personal and social attitudes.

Thus, the MMPI was and is aimed primarily at clinicians. Its items have been validated solely against psychiatric criteria and no attempt has been made to elicit an underlying structure of personality. For these reasons we shall simply note its existence and continue our search for measures of normal adult personality.



Dr. Hugh McCredie

Hans Jurgen Eysenck (1916 –1997)

Eysenck was born in Berlin but came to England in the 1930s. He undertook PhD studies under the supervision of Sir Cyril Burt at University College London and graduated in 1940. For a lengthy period, until his retirement in 1983, he was director of the psychology department and Professor of Psychology at the Institute of Psychiatry, King's College, London

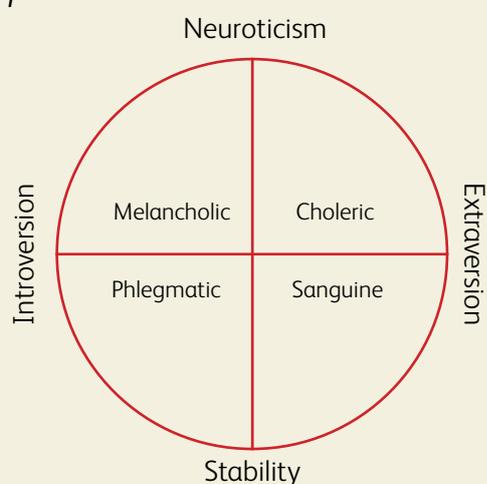
Extraversion (E) and Neuroticism (N) study

Eysenck started his post-doctoral career in the Mill Hill Emergency Hospital exploring the personality factors underpinning the 'neuroses' of servicemen referred on account of their 'failure to adapt to army routine and discipline' during World War II. 'The commonest symptoms were those of anxiety, hysteria, depression, hypochondriasis etc.' The research is documented in *Dimensions of personality* (1947), which was republished with a new introduction on its 50th anniversary (Eysenck, 1997).

For his personality study, Eysenck included 700 male 'patients suffering from mainly reactive types of mental illness'. For each he had a comprehensive 'Item Sheet', which included Social Data, Family History, Personal History, Personality (mainly dysfunctions), History of presenting illness, Symptoms and findings, Aetiology, Diagnosis and Treatment. From this vast array of information, Eysenck selected 39 items, which he correlated and factor-analysed data. He extracted 5 factors accounting for 40 per cent of the common variance; the first two factors accounted for 14 and 12 per cent and Eysenck named them Neuroticism(N) and Introversion-Extraversion(E) respectively. He suggested that his Neuroticism factor most closely resembled the Slaters' (1944) 'Neurotic constitution' and Introversion, Jung's (1923) same-named construct which, unlike that of others, was independent of neuroticism.

Jeffrey Gray (1971, 1987, p.344), who will feature in the fifth article in this series, related Eysenck's two factor model to Galen's temperaments as shown in Figure 1 below.

Figure 1



Psychoticism(P)

In 1952 Eysenck reported on a third dimension of personality, Psychoticism(P). He administered over 30, mainly performance, tests to '100 normal subjects and 100 psychotic subjects...consisting of 50 manic-depressives and 50 schizophrenics'. The tests included:

four tests of fluency, the Crown Word Connection List, a work-curve test, a colourform test, a mirror-drawing test, a social-attitude test, two level of aspiration tests, a concentration test, 11 tests of expressive movements, two tests of perseverance,

one test of dissociation...one test of tapping, four tests of oscillation, one speed-accuracy test, one suggestibility test, one tracing test, and one persistence test. (p.216)

He commented:

it is interesting to note that those tests which had in past work been shown to have high correlations with neuroticism, or to discriminate well between normals and neurotics, do not show even a tendency to discriminate between normals and psychotics. (p. 216)

This finding ran counter to the Freudian notion of a single dimension of mental regression with psychoticism being a more severe regression from the normal than was neuroticism.

Eysenck concluded:

We have shown...that neither neurotics nor psychotics are something sui generis, qualitatively different from normal people; instead, we have been able to show that there exists a 'neuroticism' continuum linking normals with neurotics, and a 'psychoticism' continuum, linking normals with psychotics. (p.222)

In other words, there are two distinct continuous, rather than categorical, dimensions separating the normal from the potentially clinical conditions: one of these dimensions is neuroticism and the other is psychoticism. Goldberg & Rosalack (1994) found moderate correlations between P and low scores on two of the Big Five factors: Agreeableness ($r = -0.45$) and Conscientious ($r = -0.31$)

The biological basis of personality

In 1967, Eysenck took a qualitative leap in the study of personality measurement when he postulated the neurological underpinnings of E and N, based on a review of extant literature. His broad strategy was to look for differences in the excitability of specific brain systems likely to be associated with variations in scores of the two dimensions. He wrote:

The position which will be argued...accepts as a fundamental reality the existence of two major, independent dimensions of personality, E and N. It identifies differences in behaviour related to the former with differential thresholds in the various parts of the ascending reticular activating system, and differences in behavior related to the

latter with differential thresholds of arousal in the visceral brain...i.e., the hippocampus, amygdala, cingulum, septum, and hypothalamus. (p.230)

He added:

We have two sets of loops...connected with each other. The first of these is the cortico-reticular loop... concerned with information processing, with cortical arousal and inhibition, and in its application to personality differences with introversion and extraversion.... The second loop involved concerns the visceral brain and the reticular formation... It is this loop that is concerned with emotion, and in its application to personality differences, with neuroticism/emotionality. (pp. 231–2)

At a later point Eysenck asserted:

Our general statement of the theory relating extraversion-introversion and the reticular formation arousal system postulated a higher level of arousal in introverts and a higher level of inhibition in extraverts. (p.241)

In other words, the natural state of the introvert's cortex (the outer, thinking part of the brain) is one of arousal and additional stimulation from the outside world, especially people, can cause overloading and attempts to reduce this by withdrawal. In contrast, the extravert brain is naturally less aroused and revels in external stimulation.

Eysenck located differences in neuroticism in the arousability of the autonomic nervous system (ANS, aka visceral-nervous or involuntary-nervous system) which functions mainly unconsciously, and controls visceral functions such as heart rate, digestion and breathing rate. Jeffrey Gray postulated that such arousability was the result of conditioning to threat or reward, so that those higher on neuroticism were likely to be more sensitive to one or other of these challenges. The ANS is centred below the cortex which it pre-dated in human evolution.

Eysenck's major contributions to personality assessment are, firstly, his identification of the biological underpinnings of the two pre-eminent factors of personality, which demonstrated that they were more than just the product of language. His second was his demonstration that differences between normal and potentially pathological personalities were quantitative, not categorical. In the latter part of his career he may have been guilty of some intemperance

in his pronouncements but the main body of his work clearly identifies him as a hero in this author's eyes.

Eysenck published a succession of tests incorporating his personality theories: The Maudsley Medical Questionnaire (1952), The Eysenck Personality Inventory (1964), The Eysenck Personality Questionnaire (1975, 1985). The most recent version is Eysenck Cripps Cook Occupational Scales (ECCOS) (2008) which is currently under revision.

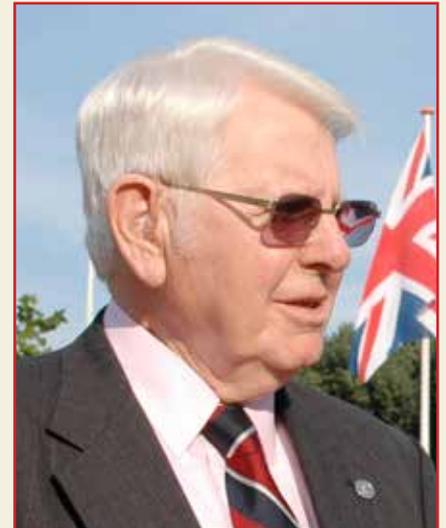
The next two articles planned for this series are (4) The later psycho-lexical trait studies and the emergence of the Big Five and (5) The contribution of the laboratory and experimental psychology: The work of Jeffrey Gray.

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New tests for recruits and the changing nature of warfare

Sidney H. Irvine



Sidney H. Irvine

My previous article for *Psyche* was about BARB, the long-lasting British Army Recruit Battery researched within Plymouth University and now to be outsourced and replaced under contract to the Ministry of Defence by a commercial company. What had been achieved by BARB and its successors in The United States, Belgium and Germany will soon become general knowledge in view of the imminent publishing of my book, **Computerised Test Generation for Cross-National Military Recruitment***. Moreover, a British Psychological Society conference theme for May 2014 is warfare and its psychology, with a keynote by Simon Wesseley. Far beyond NATO boundaries, a multinational Conference on the use of tests for Special Forces was recently held in Pretoria, attended by General Maphwanya and organized by Adelai van Heerden of the South African Council for Scientific and Industrial Research. Educational Testing Service (ETS), the world's largest private nonprofit educational testing and assessment organization, has also created a Military Test Workforce under Pat Kyllonen. Change is in the air ...



Some African delegates in the group photograph at the CSIR Military Testing Conference in Pretoria, December 2, 2013 General Maphwanya is seated with Adelai Van Heerden and Sidney Irvine

My aim, given a renewed interest in military test application, is not to dwell on past contributions of psychometrics, but to apprise the existing constraints in the field for those now actively pursuing guidelines for development of military tests and measurements. As a consequence of wide ranging talks with colleagues, I feel able to provide some headings - at least for reference and discussion. In all of this, the overarching need is to recognise the high rate of attrition in the armed forces in all democratic countries: how best to forecast it; to reduce its effects on efficiency; and eliminate its cost to the taxpayer.

What is military recruit testing like today?

In every country military testing is a politically defensible system, mindful of diversity and empowering the officials who use it. Approaches vary in length and scope, often taking an extended testing time. A growing awareness of the centrality of working memory tests has followed the decomposition of general tests of aptitude in the last twenty years, but international implementation has not been quick in the past decade. Common core tests tend to include literacy, numeracy and figural tests of spatial orientation, often of a traditional nature and subject to compromise. Attainment tests may also feature in mathematics, mechanical and electrical principles. The delivery of tests in the past has been by secure intranet systems linking national recruit offices. Some countries now encourage initial applications on-line. One such is operated on behalf of the British Army against a background of television advertisements. It has the potential at present of a window to collect data on item types for future use.

Personal attribute appraisal is made through biodata self-reports, security checks and medical examinations. There is a widespread distrust at government level of self-report data because of official beliefs that it is (i) unpatriotic if it advises against an individual's wish to serve; (ii) not reliable; and (iii) can easily be faked. Personality test reports and professional judgments of all materials by psychologists (military) following interviews are known to occur in Belgium. The extent to which the Belgian model is used elsewhere is not known; and authorities seldom disclose details.

Many countries place a great deal of weight on attendance at a short residential gateway (two to three days) where observations of individuals in group situations are made and used as part of a final grading process. In the UK, the gain in attrition reduction over the initial selection tests is small and the effect size is constrained by overall quality. The major source of material for a categorical review of the dimensions and limits of research, reports of progress, indicators of success and barriers to criterion predictions is still to be found in the annual web account of the International Military Testing Association (IMTA) proceedings.

Internet outreach and military organisations

The outreach of i-phones and i-pads has changed forever the way people communicate with each other: and also how they go about their daily lives – with texts on social networks, on-line bank accounts, i-phone parking charges, shopping, doctor's appointments and so on. Initial screening in the next decade will become i-pad/phone controlled and computer-graded and sorted. Test items will be designed to fit on to an i-phone screen. A new test will be needed for each applicant and cognitive tests will require second and subsequent chance norms. Test and personal detail security will be safeguarded with sophisticated hacker countermeasures against hostile infiltration. If governments continue to out-source recruitment, recruits may turn up at recruit camp without ever having met a serving recruit sergeant. Identification protocols will have to be designed and implemented to ensure that the i-pod user is the person who arrives at the gate. Agencies will be expected to provide suitable recruits and payment could, and

perhaps should, depend on applicant survival during the near random effects on applicants of 24/7 command treatment during recruit training.

Changing nature of warfare

The nature of warfare is changing due to weapon sophistication, role diversity and the skills necessary for carrying out duties effectively. Replacements for personnel in the three traditional service arms are not equally interchangeable. Sophisticated appraisal of aptitudes and requirements seems essential. Duty of care for serving personnel families and dependents has been a major outcome of excursions and deployments in the Middle and Near East. How accurately to assess the extent of physical and mental injury and the degree of intervention needed has become a major debating point, not helped by epidemiological agencies that reject the use of motivational assessments. Internal security and safeguards against leaks and defections have to find ways of observing personnel to assess degrees of risk.

What interested parties might consider

Any initiative would demand significant involvement by workforce personnel. To help achieve a smooth and successful implementation, the following options should be considered.

- Realization that selling tests to closed circuit military contexts is a long haul following the establishment of personal links.
- A shorter route is to offer a service for revision and renewal of existing measures to equip them for popular technology.
- Identify and link with key personnel in military psychology units in growing economies.
- Define culturally syntonetic test requirements and training needs.
- Use IMTA outreach as a means of introducing get-togethers with personnel at IMTA and IAMPS and organizing NATO Advanced Study Institutes or Training Courses to make an impact.

All of this may be preaching to the converted, but political defensibility is no defence against the perennial effects on recruitment of technical deficiencies and administrative anachronisms. Much of military testing today has had to contend with their legacy – unsustainable attrition at all career stages.

* IOS Press in Amsterdam, a publishing house with extensive experience in the NATO science series: <http://mad.ly/138a74>.

Tales from the frontier

from the Psychometrics Forum Event
New Frontiers Event –
27th November 2013

Hugh McCredie – TPF Vice-Chair



Dr. Hugh McCredie

As in reviews of previous years' New Frontiers in Psychometrics seminars, I have responded to the challenge of trying to find a link to some or all of the Big Five personality factors in last November's presentations. I enjoy this challenge and I hope that it enables readers of different psychometric backgrounds to obtain an appreciation of this annual event.

Our opening speaker was **Dr Barry Cripps** who spoke to us about the latest revision to ECCOS (Eysenck, Cripps, Cook Occupational Scales) which is the lineal descendent of the Eysenck Personality Questionnaire (EPQ). The latter derived from the analysis of, mainly, clinical data which yielded first two broad factors, Extraversion (E) and Neuroticism (N) and later a third factor Psychoticism (P). Barry and his colleagues wanted to find less threatening labels to enable the instrument to be used in occupational and non-clinical contexts and to include other scales which have predictive validity but which did not threaten the integrity of Eysenck's original P-E-N model. The ECCOS scales relate to the PEN and Big Five models as follows:

P-E-N	ECCOS	Relationship	Big Five approximations
Psychoticism	TOUGHMINDED	Similar	A-; C-*
Extraversion	EXTRAVERSION	Similar	E
Neuroticism	FLUIDITY	Similar	N
	RISK	Impulsiveness plus	E+; N+*
		Venturesomeness	E+; N-*
	EMPATHY	Low toughminded*	A+*

Entries marked (*) are my own hypotheses, not explicitly suggested by Dr Cripps.

Danny Hinton of Aston Business School reported extant research revealing that Extraversion (E+) and Neuroticism (N-) had minor effects on general mental ability (g) test performance whilst Openness (O+) had a larger ($r=0.33$) effect. Danny's own co-authored research revealed an even stronger effect. His conclusion was that high fluid g (gf) facilitated success in creative/intellectual tasks that in turn stimulated interest in this domain (as reflected in O+) and encouraged the development of crystallised g (gc). Danny's second paper was a very interesting study of inter-racial performance on mental ability tests. A searching analysis revealed that the main source of difference was variations in social status giving rise to

differences in test familiarity leading to reduced speed and accuracy. It was shown how such differences could be reduced by increasing test familiarity.

Integrity is essentially about honesty and, *a priori*, this might be expected to associate with Conscientiousness (C) and/or Agreeableness (A) from the Big Five.

Regrettably, self-report measures are notoriously fable, so are unlikely to yield dependable estimates of the quality. **Louisa Tate** of Cubiks demonstrated how she and her colleagues are trying to measure integrity overtly by the presentation of a series of moral dilemmas and then coding multiple choice responses against Kohlberg's (1969) taxonomy of Moral Development. The instrument developed has been named the Moral Reasoning Questionnaire. Early validation efforts have established that the questionnaire is much less prone to faking than typical self-report measures and that it yields significant differences with the additional Humility – Honesty (H) scale of the HEXACO model of personality. Louisa is currently attempting 'gold-standard', criterion-referenced validation against the actual moral behaviour of participants in an experimental situation.

The theme of morality was continued in the fourth contribution, on Authentic Leadership (AL), based on **Fiona Beddoes-Jones'** PhD research. In Fiona's unavoidable last minute absence, the presentation was delivered, with great aplomb, by her colleague at Cognitive Fitness Consultancy, **Julia Miller**. Fiona's definition of authentic leadership is "Doing the 'right thing' because it is the right thing to do, even when no one is looking and regardless of the personal cost".

Julia told us that Novicevic et al. (2006) had identified four components of AL. Two of these were 'psychological': Self-awareness and Self-regulation and two were 'philosophical': Ethical Virtue and Ethical Actions. Fiona had carried out a 100-item self report pilot study with 140 business leaders which produced *three* higher order factors. The two psychological factors were supported, but the third factor (labelled Ethics) was a combination of integrity, honour, courage, honesty, transparency and fairness. A further analysis with RAF personnel and a 360 degree instrument supported the model and its construct validity was supported against the AL model of Walumbwa et al. (2008). Although neither Fiona nor Julia mentioned any

connection with the Big Five, others have suggested an association of low N with self-regulation.

The final presentation was by **Stephen Woods**, of Aston Business School on The Big Five and Occupational Speciality. He demonstrated how broad vocational choice, as indicated by Holland's RIASEC scales, was influenced by personality; via childhood and adolescent vocational interests (but even more so by gender!). In particular, Big Five C correlates with Holland's Conventional scale, E with Enterprise and O with Investigative and Artistic. Thus, most entrants to the medical profession have high O/Investigative scores.

However, once into the broad vocation, subsequent specialism is influenced by other factors/interests. For example, high A and E (predicating Social interest) would be typical of general practitioners whilst low N (predicating a Realistic interest) would characterise surgeons. Steve is now working on a Dynamic Developmental Model of personality and work involving the interactivity of the two over time. He pointed out that whilst ability (can do) was the key factor influencing performance early in the occupancy of a role, personality (will do) became progressively more important over time.

I would like to take the opportunity to thank all of our speakers on the day and note that once again, it has been possible to demonstrate the wide range of convenience of the Big Five model of personality across a number of diverse psychological phenomena.

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Entrepreneurship and gender – ‘We’re not so different, you and I’

Emadad Khan - Three Minute Mile



Emadad Khan

In this short piece I would like to summarize some recent research into the characteristics of entrepreneurs identified in the academic literature. Particular consideration will be given to gender differences related to entrepreneurial intentions, leading to the conclusion that there is gender-type stereotype in our society that favours men over women when it comes to entrepreneurship. Research outlining the application of the HDS instrument to assess entrepreneurial characteristics is also summarised.

Gupta et al. (2005) carried out research that explored perceptions of entrepreneurship and in particular when it came to gender stereotypes. They collected data from 451 business school students from the USA, Turkey and India and found the following:

- Entrepreneurs were seen to have predominantly ‘masculine’ characteristics.
- There were no differences between men and women as regards entrepreneurial intentions.
- Both genders see a strong relationship between males and entrepreneurship.
- Females see a stronger relationship between females and entrepreneurship than do men.
- The way someone perceives him/her-self (masculine or feminine) affects entrepreneurial intentions.

Tomas Chamorro-Premuzic (VP of Research and Innovation at Hogan Assessment Systems, Professor of Business Psychology at UCL and Associate to Harvard’s Entrepreneurial Finance Lab.) states that characteristics deemed as feminine such as patience, conscientiousness and risk-aversion actually help women who do pursue their own ventures (<http://blogs.hbr.org/2014/03/the-unnatural-selection-of-male-entrepreneurs/>). However, because of gender biases (as demonstrated by Gupta et.al, 2005) it would seem that there is an unnatural selection bias towards men, “rewarding male entrepreneurs despite their flaws, and sometimes because of them.” Despite the competence many women show, stereotypes unfortunately still hold them back and the overconfidence that many male entrepreneurs exhibit still means that they have the upper hand.

Foster and Edge (2014, Hogan Research Division) recently published a white paper which looked at entrepreneurial personality. In particular, they explored the Dark Side characteristics of entrepreneurs – behaviours under stress, pressure, boredom or complacency. The reason they wanted to look into this was because of the risk and uncertainty involved when it comes to entrepreneurship.

The Hogan Development Survey (HDS) is a measure of what Hogan calls the ‘Dark Side’ of personality. Under normal conditions, the scales on this survey can be beneficial to everyday functioning. However, when these strengths are overused, or if the individual is stressed, under pressure, bored or becomes complacent, the negative implications of the scales may manifest themselves. There are a total of 11 scales in the HDS and these scales can be clustered to form broad themes of behaviours. Excitable, Sceptical, Cautious, Reserved and Leisurely are clustered to form a theme whereby the individual, under pressure, tends to move away from a situation (through volatile acts of passion to aloofness). Bold, Mischievous, Colourful and Imaginative are clustered to form a theme whereby the individual, under pressure, tends to move against a situation (through self-promotion, manipulation or eccentricity). Finally, Diligent and Dutiful form a theme whereby the individual, under pressure, tends to move towards a situation (through perfectionistic behaviours and/or dependency on the approval of seniors).

Foster and Edge gathered HDS data from 256 entrepreneurs from 97 companies in the USA who were in the early stages of building a company between February 2012 to August 2013 (this included ventures with 2 more or more partners). It was found that the entrepreneurs scored much higher in the “Moving Away” and “Moving Against” clusters in the HDS. The behavioural implication is that these individuals may come across as being very passionate about their ideas, but apparently unconcerned with the feelings of others. In particular, they scored highest in the following 3 scales: Leisurely (good at maintaining relationships, but focussed on their own agenda and goals); Mischievous (charming and exciting, but willing to break rules and convention) and Imaginative (being able to think in creative ways, but potentially unusual and unpredictable). The findings of this study are very much aligned with the image of a driven and energetic

self-starter with a need for achievement, a need for autonomy, a high level of self-efficacy, a strong internal locus of control and a propensity for taking risks - characteristics often associated with entrepreneurs (Vecchio, 2003). They also found very similar results across age groups, gender and the primary role of the individual in the company.

It appears these behaviours are very consistent within most American entrepreneurs at least. Given that the Bold scale is associated with extreme confidence I was personally surprised to see that it did not score higher. However, 2 of the other “moving against” scales did come out on top.

If we take into account the idea that an entrepreneur is a leader, implicit leadership theory would explain some of the stereotypes that may be present. In a leaderless group, someone who comes across as narcissistic will come out as the leader. Why? It would seem that we choose leaders based on characteristics that match our stereotype of a prototypical leader (cited in Grijalva, 2014). Such preconceptions are of the socially dominant, extraverted individual with high perceived self-esteem, social skills and charisma. These kind of aggressively driven behaviours do not coincide with feminine characteristics as mentioned above.

Such narcissistic tendencies may predict leadership emergence, but it does not guarantee leadership effectiveness. Grijalva et al. (2014) actually found evidence supporting the curvilinear relationship between narcissism and leadership effectiveness, suggesting that there really is an optimal level of narcissism.

In summary, the above evidence would seem to suggest:

- There is a gender-type stereotype in our society that favours men over women when it comes to entrepreneurship.
- Despite women demonstrating (on the whole) desirable traits that would aid success as an entrepreneur, men still have the upper hand and are more successful at starting up a venture.
- There is little difference in derailing behaviours in men and women.
- Viewed through the lens of implicit leadership theory these findings suggest that our collective preconception of leadership could be what is holding the female population back from pursuing more entrepreneurial ventures.

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Dr Nigel Guenole, Goldsmiths,
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How mainstream personality testing can benefit from developments in clinical assessment reflected in DSM V

11.45 **The influence of personality on people's
choice of organisations.**

Prof Dave Bartram, CEB/SHL
Talent Management

The extent to which people self-select organisations as potential employers and how organizations make decisions about which people to employ.

12.45 **Lunch**

14.15 **Perfectionism, perseverative cognition, and
acceptance-based therapy**

Dr. Paul Flaxman, City University

Recent models of psychological health applied in the workplace

Tea/Coffee will be taken when convenient

15.15 **The Universal Leader:**

Tom Hopton, Saville Consulting

Validating the New 3P Model of Leadership

16.00 **Close**