Visit us on the web at:

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You will find information about forthcoming events, speakers, the origins of the group and much more.

Want to add something to the web site?

Contact our Administrator Caro Leitzell: admin@leitzell.com

Also keep up to date with developments by signing up to The Psychometrics Forum Affiliates Group on LinkedIn
Dear Reader

Our Summer Psyche seems to have evolved into something of a ‘bumper’ edition – Many thanks to all of our contributors for what I hope you will agree is an interesting and thought provoking collection of reviews and articles. Looking ahead we are currently exploring the option of making Psyche available to download via our web-site to make past editions much more widely accessible.

As well as write-ups from the most recent TPF event on Positive Psychology from TPF committee members Ann Rodrigues & Michele Williamson, we also have a welcome practitioner perspective on the use of psychometric assessment in coaching from Lynne Hindmarch. My particular thanks go out to Lynne who has become something of a regular contributor in recent editions. In addition, there are three submissions from established figures in the test publishing and assessment consulting worlds, providing some interesting insights into new products, applications and research. As editor my hope is that we will continue to see similar informative pieces from other publishing and consulting organisations, and that these will be balanced with end-user contributions and case studies. Our summer edition is nicely rounded off by a study in stability by TPF’s very own Vice Chair Hugh McCredie.
I thought that readers might be interested to hear that we have firmly entered the digital age. At a recent committee meeting we learnt that our web-site received just over 2000 visits between May 09 and May 2010. Over 6000 pages were viewed with an average of 2.5 pages viewed per visit. Perhaps not surprisingly the most popular pages were News and Events with over 1000 visits alone. As a committee we are continuing to look at how the utility of the web-site can be improved for members. One recent action has been to establish more links to other websites relevant to the field of psychometrics.

Continuing the technology theme, at the time of writing we have 642 LinkedIn TPF affiliate members from around the world. Of these 381 from the UK, 82 from the USA, 26 Netherlands, 16 UAE, 15 India, 14 Australia etc., etc. Since this affiliate group was initiated back in November 2009 there have been 45 separate discussion threads started by members. In particular, the LinkedIn group has proved to be very useful as a means of publicising our events and attendance has been gradually increasing during this period. Web-site statistics also show that it has been successful in driving nearly 250 referrals to our main Forum web-site. If you have not already done so I would encourage you to engage with our LinkedIn affiliate group site to connect with like-minded professionals – literally from around the world. In addition, please spread the word and encourage your colleagues and associates to also sign-up on-line via LinkedIn.

Please note the copy deadlines below and feel free to drop me a line with any feedback or thoughts for future features or contributions.

Enjoy…..

Notices

Forthcoming Forum Meetings:

**Wednesday 15th September 2010: 'Leadership - Transactional & Transformational'**

Presenters: Beverley Alimo Metcalfe, John Alimo Metcalfe & Adrian Atkinson

**Thursday 25th November 2010: 'New Frontiers in Psychometrics'**

Presenters: Hugh McCredie, Rob Bailey (OPP), Chris Dewberry (Birkbeck, University of London), Rob Feltham (Cubiks), and Steve Woods (Aston Business School).

Copy Deadlines:

- **Autumn Edition – 27th Aug.**
- **Winter Edition – 2nd Dec.**
Realising your Strengths with Realise 2

Ann Rodrigues – TPF Committee Member ann@acer-hr.co.uk

Our speakers were leading lights in the positive psychology and strengths-based movement. Alex Linley, founded CAPP as a not-for-profit organisation focused on the applications of strengths in organisations and schools. He is a sought-after speaker so we were delighted that he was able to address our meeting. CAPP have recently launched their own strengths assessment tool, Realise 2, and invited all attendees to complete the assessment free before the day, so we were able to experience the questionnaire and understand our results.

Why Strengths?
Alex gave us an introduction to the positive psychology movement, and the growing body of research, which demonstrates the benefits of positive emotion and focussing on our strengths for our life and work.

In looking at strengths vs weaknesses, positive psychology moves us away from what Alex refers to as the Negativity Bias in psychology and social contexts, i.e. we find it easier to focus on what’s wrong. It is clear that, in positive psychology and strengths-based work, language – how we couch things - is crucial. Alex quoted Lawrie Reznek,: “Concepts carry consequences – classifying things one way rather than another has important implications for the way we behave toward such things.” As a coach, this resonated strongly with me.

Alex defined a strength as something we love to do and do well, whilst a weakness de-energises us. The good news is that there is no evidence to show that strengths are genetic and fixed, so we can all develop them! As Robert Biswas-Diener later pointed out context is vital to deciding whether an attribute is a strength or a weakness, as also is how the individual him/herself views it.

Through an exercise Alex had us carry out in pairs, he demonstrated the difference in energy, confidence and body language displayed by people when in a strengths-mode as opposed to when discussing a weakness.
Realise 2
Realise 2 measures 60 strengths/attributes against which the individual completes ratings of energy, performance and use. The resulting attributes are classified into four groups: Unrealised Strengths, Realised Strengths, Learned Behaviours and Weaknesses, and mapped onto the following quadrant:

- **Unrealised Strengths**: Perform well, Energising, Maximise their use
- **Realised Strengths**: Perform well, Energising, Marshal their use
- **Weaknesses**: Perform poorly, De-energising, Minimise their use
- **Learned Behaviours**: Perform well, De-energising, Moderate their use

Application
Realise 2 is a development rather than a selection tool. To achieve best performance, the aim is to: Maximise Unrealised Strengths; Marshal Realised Strengths; Minimise Weaknesses; and Moderate Learned Behaviours.

The system generates a Profile Report for each individual, showing their top seven Realised and Unrealised Strengths, four Learned Behaviours and three Weaknesses. There is also a useful Development Report, for use in personal development planning.

Psychometric Properties
Realise 2 was developed on psychometric lines, with a norm group of 1047. Validity studies are underway, but test-retest changes because it is, as Alex describes, a ‘dynamic instrument’. A member of the audience pointed out that she had taken Realise 2 twice in a month and got different results.

Alex believes that strengths are individual differences and not a fixed and genetic pattern, therefore he would not expect them to correlate with say the Big 5, and the studies they have undertaken to date support this. Further information on correlations with other instruments can be found in the helpful slides provided by CAPP, which have been sent to attendees. Non-attendees can get a copy by contacting our administrator, Caro Leitzell, at admin@leitzell.com.

The morning session was rounded off by Robert Biswas-Diener for whom Unrealised Strengths and Learned Behaviours are the two areas to focuses on for personal development. For him, the value of Realise 2 is not as a diagnostic tool to measure strengths, but rather as a starting point to launch a coaching conversation. He demonstrated his approach by conducting a live mini-coaching session with a somewhat nervous “volunteer”, TPF Committee member Harpal Dhatt!
Summary
As an executive coach who uses an informal strengths-based approach, I was keen to hear about this new psychometric assessment. The quadrant of strengths is a powerful graphic coaching tool, and lends itself to a variety of uses.

Despite having a new psychometric tool – and a book The Strengths Book - to promote, Alex and Robert were refreshingly open, prepared to share information and to answer questions honestly. In short they were living examples of positive psychology!

Strengthscope, Unleash your Talents – A Listener’s Response

Michele Williamson – TPF Committee Member

The afternoon of our 28th April meeting was spent exploring another strengths-based psychometric: Strengthscope. Representing the Strengths Partnership Ltd, Paul Brewerton & James Brook discussed Strengthscope from the basis of their experience as a specialist provider of strengths-focused assessment, training and consulting in which they aim to help organisations translate people's strengths and talents into business results.

What is a strength & why focus on them?
Strengthscope uses a conception of a strength as “underlying qualities that energise us, contribute to our personal growth and lead to peak performance”, where the key distinction seems to be the emphasis on the phrase “that energises us”. Paul was keen to emphasise that a Strength is not synonymous with an ability or competence: we may be good at something but it may sap our energy. To assist the audience in understanding the distinction between what is a ‘Strength’ versus a ‘Strength in Overdrive’ versus a ‘Weakness’, we were given a deck of cards, where each card portrayed a different Strength, and were asked to assess the soon-to-be-elected Brown, Cameron and Clegg. After noisy debate in small groups we hypothesised ideas such as: Cameron seemed to show the ‘Strength at its best’ of ‘Self-confidence’, that one of Brown’s ‘Non-strengths/Weaknesses’ might be ‘Emotional Control’ and Clegg seemed to show ‘Strategic mindedness’ as a ‘Strength in Overdrive’! From this exercise we noted that spotting a Strength can be difficult because the outsider does not necessarily see whether the person is energised from behaving in a particular way. It was also noted that our Strengths may not be apparent, but may be latent like an undeveloped muscle.

Anna Barley, Dr Paul Brewerton & James Brook

Key reasons for focussing on Strengths put forward by Paul & James, rather than the more typical hunt for weaknesses or flaws or other HR conceptions, were the affinity that they believe CEO’s have for Strengths (as opposed to something like competencies); and research that begins to suggest positive emotions and strengths may have a positive impact on work outcomes, thus the pursuit of the ‘exceptional’ that drives good results in the good times could develop resilience and confidence to cope with the tough times. In sum, James & Paul suggest that the goal should be to find the right balance: “Use right strengths at right time in right way”, and that effective performance has a tipping point where “performance= strengths X skill X situational agility”. To achieve this, not only do we need to be able to
identify and address Strengths, but also ‘Strengths in Overdrive’ and ‘Non-strengths / Weaknesses’.

The Tool: Strengthscope
Strengthscope comprises a self-report computer-based questionnaire that aims to identify your “Significant Seven” Strengths drawn from a menu of 22 (at the time of the presentation, but soon to be 24 Strengths). The Strengths fall into 4 clusters: Emotional and Relational clusters, which relate to intra- versus inter-personal Strengths (respectively); and Thinking and Execution clusters which are oriented towards thinking about and delivering on tasks (respectively). The results are then subject to a 360 process in which raters rate how often they have seen you demonstrate these Strengths and whether they have observed you displaying others. The outcome of this process is a report indicating a self-rating on all of the Strengths, with the “Significant Seven” core Strengths shown in relation to the norm group and then displayed in their clusters. The frequency with which the candidate considers they demonstrate the “Significant Seven” in the work place is displayed (from ‘never’ to ‘very often’), and compared with the perception of the 360 raters.

The report can then be used as the basis of a feedback session in which some of the Strengths (perhaps those that are most or least highly rated) can be discussed in detail. Team reports can also be generated.

Psychometric Properties
The tool is specifically geared to the workplace and the technical manual is based on a norming exercise using a sample of 394 people representing the UK population. The tool has been constructed using BPS guidelines; the technical manual reports on the internal consistency and attempts to compare Strengthscope with MBTI preferences, Big 5 Personality Factors (Costa and McCrae; 1992), Theory Of Multiple Intelligences (Gardner; 1983), The Sixteen Personality Factors (Cattell; 1965), The Nature Of Integrity (Rust; 1997). Details of the results can be found in the technical manual.

Summary – A Personal Response
Trained as a psychologist, I can accept some of the tenets of the Positive Psychology movement; I see that Psychology was built from the scientific model of research and the medical model of diagnosis and treatment of pathology and that this has lead the discipline to look for weakness and dysfunction. For me, this is one of the reasons why the positive psychology movement could be an important re-calibration. So I completed both the Realise2 and Strengthscope with interest. As I completed Realise2 I began to wonder whether a self-report tool was really ‘the ticket’, after all what if I had delusions about my strengths – it is all very well me discussing what I think I do, but would others concur? And how well do I recognise whether doing something energises me or not (after all I was the person in the Realise2 session who became animated discussing my weakness and calm discussing my strength)? I can feel a ‘bugbear’ coming on: there is often an assumption of choice, that I can choose what to get involved in, and to what I can say ‘thank you, I would rather not!’ and thus my ratings regarding frequency of use of reported Strengths may not represent what I would choose to do if I had a real choice; so to what extent were my responses to the questionnaire skewed by compulsion; and how accurately can I assess the frequency with which I use Strengths (remembering things like the Recency effect)? Perhaps these issues are not that important in a strengths-based tool, but these are some of the questions for me that remain to be answered.

I was pleased that my self-opinion was not to be taken at face value – how sensible of Strengthscope to check me out! After completing my Strengthscope self-report questionnaire I chose 8 raters for the 360 element, a combination of people who know me in my different life and work roles. Interestingly, the raters seemed to imply that they had seen me use most of my strengths more often than I thought I use them; they also seemed to suggest that they
had seen me use many of the other Strengths that I had rated less highly (what does that indicate about my self-awareness?). In my one-to-one phone feedback I was invited to discuss any aspect of my report that interested me. Despite my reservations that my combination of Strengths seemed boring I was reassured that they were interesting and potentially useful in a coach operating in the corporate world; it was suggested to me that the particular combination of Strengths are my authentic self and that they contribute to my unique coaching style, and are a means to address my potential weaknesses.

I am still coming to terms with what Strengths really are and how they can inform my coaching. As we have noted the Strengthscope literature asserts that Strengths are not traits, or abilities, nor are they competencies; but they can be spotted because ‘the best signpost of a strength is when something energises or strengthens you’! ‘We are told they are something that is core to you and fairly consistently expressed across situations’; that they are ‘relatively hardwired in our teens and are difficult to develop and fundamentally change beyond this point’. This suggests that as a coach I will be limited in my attempt to develop them in my coaching clients, but I can draw attention to those that exist (either used, overused or unused) and encourage their appropriate and balanced use. Finally, I am left musing on an image of myself donning my Superwoman Strengths as I head into a coaching session armed with my superpowers of ‘Common Sense’ ‘Detail Orientation’ ‘Developing Others’ ‘Efficiency’ ‘Relationship Building’ ‘Results Focus’ and ‘Self-Improvement’: to coaching infinity and beyond!

Use of Psychometric Assessments in Coaching

Lynne Hindmarch - Business Psychologist & TPF Committee Member

Both personality and ability assessments are widely used in an occupational setting for selection, assessment and development. As coaching is a goal-oriented activity that often involves helping the client change or manage certain behaviours, personality assessments are likely to be of most interest to the coach. These can measure attributes such as conscientiousness, interpersonal style and management of pressure. Other assessments in the field of personality which coaches may use include career interest inventories (identifying, for example, analytical, artistic/creative, caring/social interests), values questionnaires (identifying values such as helping others, loyalty, independence) and those assessing motivation (identifying drivers such as status, money, praise and recognition).

It is impossible here to list all the assessments which may be used in coaching. Further sources of information are given at the end of this article. However, in the UK, the following are among a number of assessments that are widely used:

- The Myers Briggs Type Indicator (MBTI) which identifies an individual’s personality type and what that means in terms of how they interact with the world and other people.
- The Sixteen Personality Factors Questionnaire (16PF) which measures an individual's typical behavioural style.
- FIRO-B which assesses three interpersonal ‘need areas’ and explores how an individual behaves towards others and how they would like others to behave towards them.
- Schein’s Career Anchors, which explores an individual's key career motivators.

What are the benefits in using personality assessments in coaching?

The most important aspect of using a personality assessment in coaching is that the assessment used must be ‘fit for purpose’. In other words, it must benefit the client in
moving towards his or her goal. Just one assessment may be sufficient, or a number of assessments with different purposes may be used in combination. However, in using a number of assessments there may be a fine line between the additional value of a battery of assessments and ‘assessment exhaustion’ on the part of the client.

Personality assessments provide data that allows the coach to form hypotheses about the client’s typical behavioural style. It is not a final judgement on a person, but rather a springboard for discussion. The real value of an assessment lies in feeding back the results, where the coach verifies the evidence by asking questions such as: ‘How does this seem to you? How does it fit in with how you see yourself?’ The client’s answer is the best opinion on the topic. Feedback is a two-way process, enabling the client to learn more about him or herself, and also allowing the coach to gain a deeper understanding of the client and engage more fully with the client’s world.

Personality assessments are tools, and their skilful used by a coach who is also a trained psychometric practitioner can greatly enhance the coaching process in a number of ways:

- They can help to develop a deeper rapport and stronger alliance with the client, which is why it can be beneficial to use assessments fairly early on in the coaching process.
- They can speed up the diagnostic stage of coaching, raising issues which may otherwise take a number of sessions to identify.
- They can provide information on the client’s learning style, which can help the coach in working with the client.
- They can raise the client’s self-awareness by identifying strengths and development areas, and possible new areas for exploration. Increased self-awareness can help the client realise that they can act and feel differently and experience the world differently, if they choose to do so.
- They can provide baseline information on where the client is now in terms of behavioural style, and as an aid to initiate discussion on flexing their style. Discovering how a client thinks, feels and behaves in certain situations may help develop more appropriate behaviours, and aid the client in moving towards their coaching goals.
- They can be used alongside other sources of information, such as a 360 assessment, to provide additional insights into the client’s perceived work behaviour.

Last but not least, personality assessments can help the coach understand him or herself better, and the nature of the way he or she interacts with the client. The coach’s blind spots and biases may be identified, which may lead to reflection on style and behaviours and how these may be adapted if appropriate to become more effective in helping the client.

Considerations in the use of assessments

Ethical and confidentiality issues are always paramount in any coaching relationship, and it is important that the client feels confident that assessment results are kept within the boundaries of that relationship, and are not shared with the organisation.

The coach needs to be aware of issues around the balance of power. Using personality assessments can move the coach from the position of partner in the relationship to the position of expert. A skilled coach will be aware of this potential pitfall, and will emphasise the importance of sharing and jointly discussing the results.

There may be times when the use of personality assessments may not be appropriate. The client may not want to take them, and feel that they may be exposed in some way. The process must be voluntary. If a client is very anxious, or ill, this may affect the results and not give an accurate picture of how they typically behave.
Finally…
Personality assessments can be a valuable aid as part of a wider development conversation. They can help the client clarify their goals, better understand current reality, reflect on their options in terms of behavioural style, and consider their level of commitment.

Further reading and sources of information:
Passmore J (2008) *How to …use psychometrics for coaching*, People Management Magazine Online: [http://www.peoplemanagement.co.uk/pm/articles/2008/05/how-to-use-psychometrics-for-coaching.htm](http://www.peoplemanagement.co.uk/pm/articles/2008/05/how-to-use-psychometrics-for-coaching.htm)

The Type Mapping™ System
*Steve Myers and Roy Childs - Team Focus Ltd.*

What is Type Mapping?
Type Mapping charts the terrain that increases motivation and transforms performance. It is an integrated system based on one powerful model that shines a light on areas often left unmapped. This involves individuals (their preferences, identity and aspirations), situations (the context, demands and challenges) and a focus on the space in-between (interaction, behaviour and relationships). The methods involve 5 lenses which allow for enormous flexibility in terms of intervention and development.

The powerful model underpinning Type mapping is C.G. Jung’s theory of Psychological Types. This theory now provides the mechanism for hundreds of applications that go beyond existing psychometric approaches in two ways.

Firstly, it captures the spirit of Jung’s theory by focusing on how a person continues to grow and develop over their life span (i.e. recognising that one's Type can change):

> "Even though assignment to a particular type may in certain cases have lifelong validity, in other very frequent cases it is so dependent on so many external and internal factors that the diagnosis is valid only for certain periods of time"
> 
> Jung, 1957, p. 347

Secondly it acknowledges the way in which people express themselves in a variety of ways which are dependent on both short-term and long-term environmental experiences. The 5 different lenses are each embodied in a questionnaire as follows:

- Learning style (LSI™, or Learnings Styles Indicator™)
- Identity (TDI®-IS, or Type Dynamics Indicator - IS™ version)
- Aspirations (TDI-WANT™, or Type Dynamics Indicator, WANT™ version)
- Roles/behaviours (MTR-i®, or Management Team Roles-indicator™)
- Contextual demand (ITPQ™, or Ideal Team Profile Questionnaire™)
In summary, each of these questionnaires explores different space – the **inside** with the complexities of identity and aspiration which can make the identification of preference difficult; the **outside** and the situational demands and pressures that require attention; the **in-between**, which is how we adapt to the differing demands of circumstances and our sense of self.

Below is the Type Map which relates the roles and preferences together:

The roles are described using verbs (gerunds) and the preferences use the 4-letter typology so that there is less confusion between “doing and being”. Psychological Type Theory links these elements through the concept of dominant and auxiliary functions\(^1\).

Each questionnaire can be used on its own for a range of applications. For example, the Type Mapping learning styles (LSI) bear a strong resemblance to Kolb’s learning styles (suggesting, in turn, that what Kolb tapped into was psychologically deep and enduring). There are many applications of learning styles, from building self-awareness to developing training programmes, and it can even be used as a way to identify how best to introduce an individual or a group to a Type programme.

Another example is using the MTR-i which can be used to identify multiple roles – an acknowledgement that we all need to and are able to stretch outside our type. Since this can be both exhilarating and stressful, identifying the roles we play enables us to explore our ability to adapt far more easily – adaptation was one of Jung’s key concerns.

A further example is using the ITPQ which can be used to identify and understand the organisational culture, or the differing or competing demands and expectations being placed on a team or individual. All of us need to respond to circumstances such as customers, senior management, budgetary restraint and other people, but we do not always see clearly what those demands really are.

\(^1\) See Briggs Myers 1980
The real power of the Type Mapping system emerges when these instruments and concepts are used as entry points into a programme that relates two or more of the concepts together. For example, the relationship between preference (TDI-Is) and role (MTR-i) can highlight the 'stretch' that one is currently experiencing in a particular role. Using the TDI-Want can help identify whether such stretch is likely to be stressful or exhilarating. Adding in the ITPQ examines the fit between oneself and the demands on one's role.

The Type Mapping System recognises the complexity and richness of psychological type theory and provides an orientation framework to begin to understand the inner and outer landscapes. It provides a 'matrix' out of which each individual, group or organisation can begin to build their own unique and complex story, and thereby begin to understand some of the many internal and external factors with which they have to grapple.

**Case Study (TDI Is-Want version)**

Jung regarded the fitting of clients into a type classification as "nothing but a childish parlour game" (Jung, 1934, p. xiv). In fact Jung saw Type as part of a psyche in transition, and actively encouraged people to move through and beyond Type, to explore the greater Self. His primary concern was the process of "individuation [which] means becoming an 'individuum' [embracing] our innermost, last and incomparable uniqueness [or] 'self-realization'" (Jung, 1953, p. 173).

The TDI, acknowledging that people evolve complex stories concerning their sense of identity, was developed to expand people's exploration of themselves and to help them transcend whatever Type has become their habit or identity. By inviting them to express their aspiration (who I want to be) as well as their current sense of identity (the way it is) it opens up a dialogue that reveals some of the dynamic tensions that inevitably embed themselves in our psyche as we grow up and develop. It does this by recognising that preference has many sides:

- We behave in ways that help us feel comfortable given the world we inhabit on a day to day basis (i.e. preference based on the reality circumstance)
- We build a story of who we are based on the many experiences we had whilst growing up and this story includes pressures and messages from important influences in our lives (i.e. preference based on historical pressures to behave and to become)
- We experience elements of ourselves which have not yet been expressed or valued and sometimes yearn to expand and become something more (i.e. preference based on some kind of ideal image)

This was demonstrated particularly powerfully by an MBTI instrument user who always reported INTJ. In fact, answering just the TDI 'Is' version she still reported INTJ. However, when she completed the TDI 'Is-Want' version the reported type split into ENTJ and INTP. Her initial reaction was disbelief. She said "there is no way I want to be an INTP like my husband! He is hopeless." However, after several hours of emotional exploration during which she said "I now know when I became an INTJ! I was eight and my mother rejected me. I vowed I would never be humiliated like that again and have been fiercely independent ever since". Her INTJ identity had served her well but was, in fact a form of protection. The desire to 'let go' and just become 'hopeless' like her husband held both appeal and fear. Understanding her reported ENTJ was also complex. She felt a clear preference for introversion but her need to avoid dependency had externalised itself in the way she took charge in many aspects of her outer life. This was a most powerful session with many insights which would have been very hard to achieve if she had simply reported her usual INTJ.
The research with TDI demonstrates that more than 70% of people report a difference between their ‘Is’ and their ‘Want’ types which suggests that it has the potential to challenge an individual’s potentially stereotypic view of themselves. Based on Jung’s approach to type - illustrated by the quote at the beginning of this article and other places where describe the dynamic, changing nature of type - we believe he would have found this approach much more in line with his view of how the psyche evolves as part of the process of individuation.

Type Mapping can be regarded as a matrix from which one can obtain unique insights into issues that might otherwise remain hidden. It helps develop flexibility in both the practitioner and the participants. It provides alternative entry points to address the most immediate issues. And at its heart it remains true to Jung’s concept of transcendence. No-one is restricted by their type. We can all transcend and go beyond and extend our range and style – it is just that the journey can be very difficult at times.

References:
Jung, C.G. (1934), Psychological Types (Collected Works 6), (London: Routledge, 1991)
________(1953), Two Essays on Analytical Psychology (Collected Works 7), (Princeton: Bollingen Paperbacks)

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How Personality Influences Safety-Related Work Behaviour: Hogan SafeSystem

Jeremy Sutton – Three Minute Mile

3 Minute Mile sponsored the UK launch of Hogan’s SafeSystem at the Safety & Health Expo (SHE) in Birmingham last month. Entering the Health & Safety market was a new experience for us and opens up what we believe to be an exciting opportunity for the field of psychometrics. Visitors to our stand at the Expo were incredibly enthusiastic about the potential benefits associated with incorporating psychometrics into their Health & Safety strategy.

Behavioural approaches to safety in the UK came to the forefront in 2008 when ‘Step Change in Safety’ (a UK based partnership with the remit to make the UK the safest Oil & Gas Exploration & Production province in the world) published ‘Changing Minds: A Practical Guide for Behavioural Change in the Oil & Gas Industry’. They opened their report -- on how human factors play an important role in on the job safety incidents -- with the following:

“There are good reasons to target the behavioural aspects of safety, as part of an integrated approach to safety management. During the past 10 years, large improvements in safety have been achieved through improved hardware and design, and through improved safety management systems and procedures. However, the industry’s safety performance has levelled out with little significant change being achieved during the past few years. A different approach is required to encourage further improvement. This next step involves taking action to ensure that the behaviours of people at all levels within the organisation are consistent with an improving safety culture.”
Walking through the NEC last month, the impact a focus on behaviour has had on the industry was clearly evident. Stand after stand at the SHE represented organisations promoting one type of ‘behavioural safety training’ or another. The range of available interventions was vast. Sadly, there was little guidance concerning how organisations would select the most relevant behavioural safety training for their employees.

A gap in the market suggests demand for a tool which has the ability to highlight specific areas of behavioural risk. Using this information to target investment in behavioural training is likely to maximise return on investment. Implementation of such a tool might also be used to help select safer employees.

**Predicting safety using personality**

Researchers fall into different camps concerning the role personality plays in predicting workplace safety. For example, Reason (2008) concluded that there are only “…error-prone situations rather than error-prone people…” (p. 107). In contrast, one recent and extensive analysis (Christian, Bradley, Wallace & Burke, 2009) found that organisational, situational, and individual characteristics all predict safety performance.

We know that personality predicts a variety of workplace behaviours. Individuals who are high on Extraversion are likely to engage others in conversation, seek attention, and compete with co-workers. Although these characteristics prove beneficial in some work contexts, they may also lead to unsafe behaviours. Over long periods of time, regular unsafe behaviours are likely to result in safety incidents. This rational led Hogan to investigate personality correlates with safety.

**Antecedents of safety behaviour**

Hogan reviewed existing research, evidence provided by experts in personality & safety as well as examples of safe & unsafe behaviours to develop the following Safety Competency Model:

<table>
<thead>
<tr>
<th>Competency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliant</td>
<td>A tendency to follow rules. Poor performers ignore authority and company rules. Exceptional performers willingly follow rules and guidelines.</td>
</tr>
<tr>
<td>Strong</td>
<td>Ability to handle stress with confidence. Poor performers tend to panic under pressure and make mistakes. Exceptional performers are steady under pressure.</td>
</tr>
<tr>
<td>Emotionally Stable</td>
<td>Ability to handle pressure without emotional outbursts. Poor performers easily lose their temper and then make mistakes. Exceptional performers control their tempers.</td>
</tr>
<tr>
<td>Vigilant</td>
<td>Ability to stay focused when performing monotonous tasks. Poor performers are easily distracted and then make mistakes. Exceptional performers stay focused on the task at hand.</td>
</tr>
<tr>
<td>Cautious</td>
<td>A person’s tendency to avoid risk. Poor performers tend to take unnecessary risks. Exceptional performers evaluate their options before making risky decisions.</td>
</tr>
<tr>
<td>Trainable</td>
<td>A person’s tendency to respond favourably to training. Poor performers overestimate their competence and are hard to train. Exceptional performers listen to advice and like to learn.</td>
</tr>
</tbody>
</table>

**Personality predictor scales**

Research has demonstrated that combinations of personality facets are often more predictive than individual factor-level scales (e.g., Hogan & Roberts, 1996; Ones, Dilchert,
Viswesvaran, & Judge, 2007). We also know that scales are more predictive of conceptually aligned work outcomes than overall performance factors (e.g., Hogan & Holland, 2003).

As such, Hogan developed personality scales (using the Hogan Personality Inventory, or HPI) to predict each component of their Safety Competency Model. To create these scales, they (a) clearly defined each component in the model, (b) identified studies with aligned criterion ratings, (c) computed meta-analyses to examine relationships between individual personality facets & aligned criteria and (d) combined predictive facets to create personality-based scales aligned with each component of the model.

Personality-based predictor scales were validated using three methods. First, Hogan examined relationships between each predictor scale & aligned supervisory ratings (i.e., behaviours reflecting each component of the model). Second, using multiple cross-validation samples, Hogan examined relationships between each scale & supervisory ratings of overall safety performance. Finally, Hogan examined the potential impact of using safety-related personality scales to reduce safety incidents.

**Accidents and Injuries**

Datasets containing both HPI data & recorded accidents and injuries across at least three years were identified. Individuals with below average safety scores across the six components of the Safety Competency Model were nearly twice as likely (42%) to have multiple accidents and injuries as those with above average scores (22%).

![Figure 1: Accident and Injury Rates by Average Predictor Score](image)

Summary

Individual differences in personality have been shown to predict both safety related behaviours & on-the-job accidents/injuries. By identifying critical antecedents to safety behaviours & combining results across multiple personality facets, organisations can use the HPI to identify individual differences related to accidents & injuries at work.

**References:**


**Saville Consulting Wave® Professional Styles Dimensions, NEO ‘Big Five’ Equivalences and Co-validation Results**

*Dr. Rainer Kurz – Saville Consulting*

In the March 2009 edition Hugh McCredie educated us about the convergence between various Big 5 related constructs across a range of tools. For the small scale Wave study the correlation of .33 of the Professional Styles Vision section with NEO Openness unfortunately did not make it into the table (whereas MBTI Extraversion got listed with comparable ‘below-the-.45-threshold’ correlations). This prompted me to look up the correlations on a large sample (N=308) between NEO Big 5 ‘marker scales’ and the 36 Dimensions of Professional Styles on page 508 of the Professionals Styles Handbook (Saville, MacIver & Kurz, 2009), and summarise them below.

* o NEO-Openness: Conforming (-.45) correlates at the construct equivalence level, with Abstract (.40) and Inventive (.39) showing sizeable correlations as well.

* o NEO-Extraversion: Engaging (.59) and Interactive (.54) correlate above the construct equivalence level.

* o NEO-Emotional Stability: Positive (-.49), Composed (-.47) correlate above the construct equivalence level, closely followed by Change Oriented (-.44).

* o NEO-Agreeable: Accepting (.62), Convincing (-.53) and Challenging (-.51) correlate above the construct equivalence level, closely followed by Involving (.44) and Enterprising (-.42).

* o NEO-Conscientiousness: Organized (.61), Reliable (.49) and Meticulous (.49).

Wave Professional Styles covers all NEO Big 5 constructs at or above the .45 threshold level. Correlations for Extraversion and Conscientiousness are as expected. In the construction of Wave we focussed on positive constructs e.g. turning Neuroticism around into Resilience related themes. The correlations for Agreeableness reflect the findings of Saville et al (1984) whose OPQ Pentagon version – the first commercially available measure of the Big Five – featured a Vigour scale related to energy and motivation with Agreeableness at the opposite pole. The Openness pattern is interesting in that Conforming is grouped in the Professional Styles model with the Conscientiousness section, and sits on the Saville Consulting Wave Wheel (Kurz, Saville & MacIver, 2008) exactly opposite to the Creative section.

Whether the Big Five are sufficient for assessment research and practice is questionable, with the NEO itself featuring 6 facets for each of the factors. Arguably many of the facets have little relevance to the world of work, and would be expected to show low validity. Saville Consulting Wave items and constructs however have been selected to optimise the prediction of performance. Going forward the emphasis is changing to validity comparisons.

The table below shows NEO Big 5 as well as Wave Types Cluster validities for the prediction of Overall Performance as well as the three single items that constitute that criterion.
measure. NEO Openness fails to predict overall performance while Solving Problems achieves a statistically significant validity of .14. NEO Extraversion is the best Big Five predictor of overall performance followed by Conscientiousness and low Agreeableness. Of the four Wave Types Cluster Scales Delivering Results is strongest followed by Influencing People, Adapting Approached and Solving Problems. The Types Total score – an a priori specified unit weight composite of 108 competency potential facets – achieves a raw validity of .30. Validities tend to be marginally higher for predicting potential, slightly lower for the prediction of accomplishment and fairly low for expertise (the nature of which may vary widely across roles and organisations).

Table 1: NEO and Saville Consulting Wave Professional Styles Types Validities against Overall Performance (N=308).

<table>
<thead>
<tr>
<th></th>
<th>Overall Performance</th>
<th>Applying Specialist Expertise</th>
<th>Accomplishing Objectives</th>
<th>Demonstrating Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEO Neuroticism</td>
<td>-.09</td>
<td>-.13</td>
<td>-.06</td>
<td>-.04</td>
</tr>
<tr>
<td>NEO Extraversion</td>
<td>.18</td>
<td>.04</td>
<td>.16</td>
<td>.20</td>
</tr>
<tr>
<td>NEO Openness</td>
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<td>.06</td>
<td>-.04</td>
<td>.03</td>
</tr>
<tr>
<td>NEO Agreeableness</td>
<td>-.12</td>
<td>.01</td>
<td>-.06</td>
<td>-.19</td>
</tr>
<tr>
<td>NEO Conscientiousness</td>
<td>.13</td>
<td>.05</td>
<td>.14</td>
<td>.12</td>
</tr>
<tr>
<td>Wave Solving Problems</td>
<td>.14</td>
<td>.06</td>
<td>.04</td>
<td>.19</td>
</tr>
<tr>
<td>Wave Influencing People</td>
<td>.25</td>
<td>.10</td>
<td>.20</td>
<td>.28</td>
</tr>
<tr>
<td>Wave Adapting Approaches</td>
<td>.19</td>
<td>.13</td>
<td>.19</td>
<td>.12</td>
</tr>
<tr>
<td>Wave Delivering Results</td>
<td>.30</td>
<td>.12</td>
<td>.24</td>
<td>.32</td>
</tr>
<tr>
<td>Wave Types Total</td>
<td>.30</td>
<td>.13</td>
<td>.22</td>
<td>.32</td>
</tr>
</tbody>
</table>

r>=.10 significant at the 5% level (one-tailed test)
r>=.13 significant at the 1% level (one-tailed test)

References:

Do Managers Need to be Stable?
Dr. Hugh McCredie – TPF Vice-Chair

An earlier article (McCredie, 2010a) explored whether managers needed to be extraverted. This one enquires, in a similar manner, whether it is necessary that managers are emotionally stable.

What is emotional stability?
Woods and Hampson (2004) devised single item measures of the Big Five factors for research use. Their description for the emotional stability pole of the Anxiety factor was:

‘Someone who is relaxed unemotional rarely gets irritated and seldom feels blue’.

I first encountered Emotional stability as the second ‘higher order’ factor emerging from Cattell’s 16PF Form A questionnaire (1978). Its narrow-band contributors were:
- Relaxed, tranquil, composed, has low drive, unfrustrated
- Self-assured, secure, feels free of guilt, untroubled, self-satisfied
- Emotionally stable, mature, faces reality, calm

A likely polar opposite of emotional stability, Neuroticism, was the second of two factors in Eysenck’s original model of personality (1952-1991) and claimed to be biologically associated with the excitability of the brain’s limbic system (Eysenck, 1967). Similarly, Anxiety emerged as the second ‘global’ factor in the most recent 16PF edition, 16PF5, and correlated negatively \((r \approx -0.79)\) with 16PF Form A emotional stability. The stability-neuroticism/anxiety continuum features in all personality questionnaires yielding Big Five personality factor scores. There are acceptable levels of construct equivalence between NEO-PI R Anxiety scale and both 16PF5 Anxiety and OPQ32 Emotional Stability (McCredie 2009).

**What suggests that managers need to be emotionally stable?**

Robert Hogan (2007) showed how characteristics of different personality disorders can operate to ‘derail’ management careers. Furnham & Crump (2005) revealed significant positive correlations between NEO neuroticism and seven of Hogan’s eleven derailers. The strongest correlates were with the excitability and [over]-cautiousness derailers. However, they also found significant, if small, negative correlations between neuroticism (i.e. high stability) and the derailers of arrogance and the tendency to ‘dramatise’.

**Are managers emotionally stable?**

Bartram’s (1992) landmark study of UK managerial applicants reported a 16PF Form A mean emotional stability score equating to the general population 88th percentile. Overlapping Bartram’s study, my analysis of 445 senior UK industrial managers in post (McCredie 2010b) yielded an emotional stability mean from the same measure around the 73rd percentile. The modest apparent difference between the two means is explainable by the fact that the scores in my study were corrected for faking whilst Bartram’s were not. The narrowband constituents of emotional stability render it the most prone to faking of all the Big Five factors (Karson & O’Dell, p.152,1976).

Petersen et al. (2003) inferred Big Five personality scores of 17 very high profile CEOs from published qualitative sources; the mean emotional stability score was around the 65th percentile. Only one per cent of my sample and none of Petersen’s CEOs registered clearly anxious (lower decile) scores.

**Does emotional stability predict managerial performance?**

A modest-sized US meta-analysis (Hurtz and Donovan, 2000) found a small but significant link between emotional stability and managerial performance, whilst another (Barrick et al., 2001) did not. My own study found the strongest Big Five correlation \((r \approx 0.47, \text{corrected for range restriction and criterion unreliability})\) between emotional stability and colleague ratings of overall effectiveness (2010b, p.248). All of the constituent narrowband scales correlated with overall effectiveness; the strongest link (again \(r \approx 0.47\) corrected) being with self-assured. In the same study (p. 258), I also found substantial correlations between stability and colleague ratings on 10 out of 16 competencies, particularly delegation, listening, persuasiveness and leadership from the interpersonal skills cluster \((r \approx 0.42 \text{ to } r \approx 0.67\) corrected).

**Do managers need to be stable?**

Managerial roles are inherently stressful in that they exist to supervise others handling threats and opportunities. As both Eysenck and Furnham associate low stability with excitability, or sensitivity to stress, then managers with such scores may be at risk. For this reason, and in view of the evidence above, I would tend to look for candidates with unfaked
scores above the 40th percentile and as high as possible. There may be other risks at the higher extreme of emotional stability, but such have not emerged from my empirical data.

References:
McCredie, H. (2010b) *Selecting and developing better managers*.
16PF Form A (1978) Oxford: OPP.