

reliability & validity

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## get in touch

This document is a summary of the statistical findings which support the internal validity and reliability of the Lumina Spark Model. For more information on the research please contact Julie Ensor or Stewart Desson

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# the background

## Big Five base

At the heart of the Lumina Spark system is an innovative psychometric model based on the Big Five research paradigm which emerged in the 1980s and 1990s with Costa and McCrae leading the field (1992). Costa and McCrae worked in academia, whereas Lumina Spark has been designed to integrate best practice identified in a range of Big Five and Jungian models for application in industry. In particular, Lumina Spark has set out to use the latest empirical Big5 research as its foundation while maintaining a link to the Jungian approach.

## Jungian Lens

The Lumina Spark system also makes practical use of many of the profound ideas developed by Carl Gustav Jung. Lumina Spark enables practitioners to use a Jungian lens to utilise concepts such as individuation, projection, the shadow, psychological type and the integration of opposite qualities within us.

## The Lumina Online System

The application of this model is made possible through Lumina's pioneering online technology. Working in over ten languages, this technology enables the speedy customisation of Lumina Spark's psychometric analysis. Each individual who completes a Lumina Spark questionnaire receives a detailed report which is made available online so that they have easy access to their own personalised portrait.

## Practical Application

To support the practical application of the model, the Lumina Spark system also puts into the hands of the practitioner state of the art workshop designs, workbooks, coaching frameworks, e-learning and action learning concepts. These resources have helped build Lumina Spark's reputation as a system that drives practical application and delivers results.

## Business Psychology In Action

Lumina Spark's innovative design was conceived of by Stewart Desson, a humanistic psychologist working at the University of Westminster's Business Psychology Centre. The design embraces the core values of humanistic psychology – a fundamentally optimistic belief in the potential of all human beings to learn and grow. Stewart is the Director of Research as well as the CEO and founder of Lumina Learning.

## the system

### Dimensions

Lumina Spark is based on trait theory and measures 24 traits on a continuum. Each trait independently measures the level to which each individual uses opposite, competing and (sometimes) seemingly contradictory aspects of their personality, e.g. it measures the way an individual may use introversion and extraversion.

For use with clients, the traits are described as ‘Your 24 Qualities’. Each quality is split into three personas:

- how you function naturally
- your everyday behaviour and
- how you sometimes overextend yourself.

The model has simplicity and depth. It can be used:

- at a high level, using 4 memorable colours to describe clusters of Qualities
- at an 8 Aspect level
- at a detailed full 24 Quality level.

### The Big Idea

The Lumina Spark questionnaire does not ‘force the choice’. Unlike many psychometric models that aim to identify a person’s ‘type’ by asking them to choose between statements, Lumina Spark measures the individual’s traits on a continuum with a Likert scale.

The Lumina Spark model is based on trait assumptions, and is founded on an empirical Five-Factor Model paradigm. In this way, individuals differ in the quantity of a quality they possess. Conversely, with a typing assumption, individuals are deemed to ‘have’ or ‘not have’ a quality. Typing models normally make use of dichotomous measurement techniques, and do not normally assess the intensity of a quality.

The Lumina Spark approach takes this ‘big idea’ further than just ‘trait, not type’. Although many other Big Five models also use a Likert scale, they typically still only measure one end of a polarity. For example, Extraversion may be measured directly and an absence of Extraversion is often assumed to be Introversion. In contrast, with Lumina Spark, a person may claim qualities at both ends of a polarity. When working in organisations to help people develop, being able to develop and integrate both ends of a polarity is of great benefit.

### The Lumina Spark Mandala and Colourful Splash

The mandala works as Lumina Spark's key visual aid. In the inner ring are the eight Aspects. Each Aspect consists of three Qualities, shown on the outer ring. Each quality is measured by six questions in the questionnaire. Two questions measure each persona in every quality.

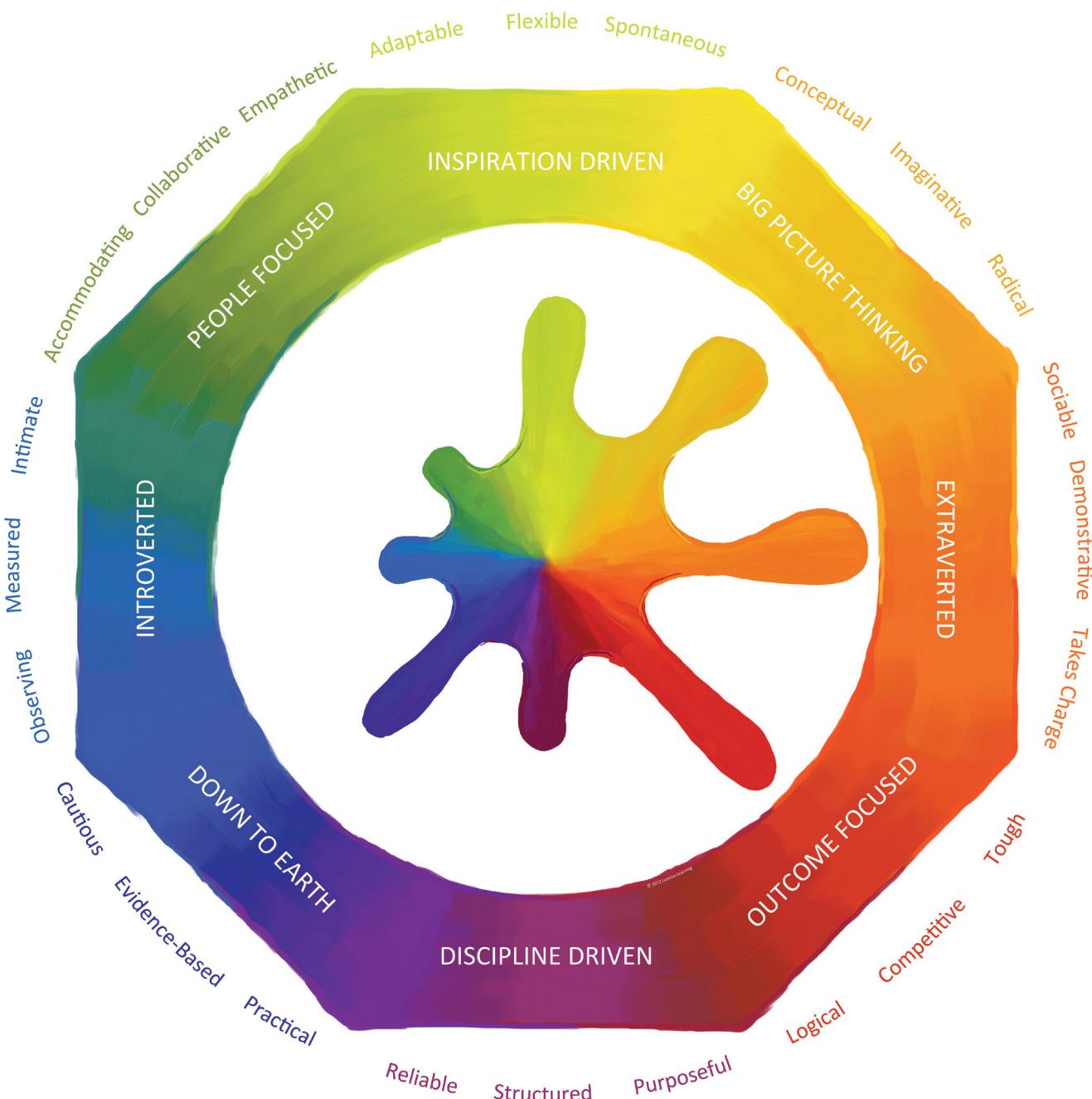


figure 1

### The Lumina Spark Mandala

The mandala is designed to show how Aspects of personality relate to one another. The closer together two Aspects or Qualities are on the mandala, the more related they are. Aspects and Qualities on the other side of the mandala are polar opposites. For example, people who are high on Big Picture Thinking are also more likely to be Extraverted and Inspiration Driven, but unlikely to score highly on Down to Earth.

# validity & reliability

## Sample

After data cleaning to remove test users and retakes, 9628 cases (4710 male and 4918 female) were analysed. For the purpose of examining linguistic differences, the sample was divided into 5 major language groups: English (6210), Dutch (1523), German (477), Japanese (857), French Canadian (372). For some of the analyses, data is presented for several subgroups: English UK (3906), English USA (1103), English Canadian (1043), English South Africa (158), Dutch (1523), German (477), Japanese (857), French Canadian (372), and Slovak (189).

## Internal Consistency Reliabilities – 8 Aspects

The Cronbach Alpha reliability coefficients were assessed for each Aspect. The coefficients are consistently high across the five major language samples.

table 1

Cronbach Alpha Coefficients for the 8 Aspect Scales by Language

	Global	English	Dutch	French	German	Japanese
People Focused	.79	.80	.78	.78	.82	.76
Inspiration Driven	.76	.77	.81	.69	.77	.68
Big Picture Thinking	.81	.81	.81	.76	.81	.81
Extraverted	.85	.85	.86	.86	.84	.87
Outcome Focused	.82	.83	.80	.83	.82	.79
Discipline Driven	.74	.75	.77	.75	.80	.65
Down to Earth	.81	.82	.78	.83	.79	.80
Introverted	.82	.82	.81	.83	.83	.78

# factor analysis - 8 aspects

## Construct Validity - Factor Analysis

The 8 Spark Aspects were entered into a Principal Components Analysis followed by Varimax rotation. Four factors were specified based on the hypothesised model structure.

As can be seen, the four factor structure is clearly evident, with each Aspect loading strongly onto its associated factor, that is, opposite Aspects clustering under one factor. This provides sound factorial validity for the model structure.

table 2

Factor Analysis at 8 Aspect Level

	DD/ID	IN/EX	OF/PF	BPT/DTE
<b>Discipline Driven</b>	.95			
<b>Inspiration Driven</b>	-.87			
<b>Introverted</b>		.96		
<b>Extraverted</b>		-.87		
<b>People Focused</b>			.90	
<b>Outcome Focused</b>			.88	
<b>Big Picture Thinking</b>				.94
<b>Down to Earth</b>				-.71

**Note.** A Principal Components analysis with Varimax rotation was used. N = 2,158. Loadings  $\geq \pm .40$  are shown. IN/EX = Introverted / Extraverted; ID/DD = Inspiration Driven / Discipline Driven; OF/PF = Outcome Focused / People Focused; DTE/BPT = Down to Earth / Big-Picture Thinking.

# factor analysis - 24 qualities

## Factor analysis of the 24 qualities

The 24 Spark qualities were entered into a Principal Components Analysis followed by Varimax rotation. Four factors were specified based on the hypothesised model structure.

As can be seen, the four factor structure is clearly evident, with each Quality loading strongly onto its associated factor e.g. all the Introverted and Extraverted qualities cluster under one factor. This provides sound factorial validity for the model structure.

table 3

Factor Analysis at 24 Quality Level

	IN/EX	DD/ID	BPT/DTE	OF/PF
Observing	.91			
Measured	.88			
Sociable	-.83			
Demonstrative	-.80			
Intimate	.70			-.40
Takes Charge	-.52		.40	.47
Purposeful		.87		
Flexible		-.85		
Reliable		.80		
Structured		.80		
Spontaneous		-.79		
Adaptable		-.78		
Imaginative			.85	
Conceptual			.84	
Radical			.77	
Practical			-.75	
Evidence-Based			-.63	
Cautious	.41		-.62	
Empathetic				-.94
Tough				.79
Logical				.78
Accommodating				-.73
Collaborative				-.71
Competitive				.56

**Note.** A Principal Components analysis with Varimax rotation was used. N = 2,158. Loadings  $\geq \pm .40$  are shown. IN/EX = Introverted / Extraverted; ID/DD = Inspiration Driven / Discipline Driven; OF/PF = Outcome Focused / People Focused; DTE/BPT= Down to Earth / Big-Picture Thinking.

# factor analysis - hot reactor & cool reactor

table 4

## The fifth factor - hot reactor & cool reactor

Table 4 shows the factor structure of the model when the 'fifth' factor of Hot and Cool Reactor is added. As can be seen the result is a clear 5 factor structure with all the Qualities loading strongly onto their associated factor.

### The Five Factors

	Factor 1 <b>Neuroticism</b> HR/CR	Factor 2 <b>Extraversion</b> IN/EX	Factor 3 <b>Conscient- iousness</b> DD/ID	Factor 4 <b>Agreeable- ness</b> PF/DF	Factor 5 <b>Open to Experience</b> BPT/DTE
Reactive	.90				
Impassioned	.88				
Concerned	.85				
Resilient	-.84				
Even-Tempered	-.71				
Self-Effacing	.70				
Optimism	-.70				
Self-Belief	-.58				
Observing		.89			
Measured		.89			
Sociable		-.82			
Demonstrative		-.81			
Intimate		.65			
Takes Charge		-.48		-.45	.41
Purposeful			.88		
Flexible			-.83		
Structured			.82		
Reliable			.82		
Spontaneous			-.76		
Adaptable			-.74		
Empathetic				.84	
Tough				-.78	
Accommodating				.75	
Logical				-.74	
Collaborative				.74	
Competitive				-.54	
Conceptual					.85
Imaginative					.84
Radical					.76
Practical					-.66
Evidence-Based			.42		-.57
Cautious			.41		-.52

**Note.** A Principal Components analysis with Varimax rotation was used. N=2,158. Loadings  $\geq \pm .40$  are shown. IN/EX = Introverted/Extraverted; ID/DD = Inspiration Driven / Discipline Driven; OF/PF = Outcome Focused / People Focused; DTE/BPT = Down to Earth / Big-Picture Thinking; HR = Hot Reactor; CR = Cool Reactor.

## aspect inter-correlations

### Aspect Inter-Correlations

The Lumina Spark model hypothesises that personality differences can be modelled on a mandala

- with adjacent Aspects being positively correlated
- with inverse correlations between opposite Aspects

The relationship between adjacent and opposite Aspects has informed the structure of the Lumina Spark Mandala. For example, Extraverted correlates positively with Outcome Focused to the left and Big Picture Thinking to the right, and negatively with Introverted from the opposite side of the circle. Table 5 shows how the Aspects correlate with each other.

There are however two low correlations between People Focused and Inspiration Driven as well as between Outcome Focused and Discipline Driven. This appears to reflect the Alpha and Beta higher order constructs of personality as proposed by Digman (1997). That is, there is a greater tendency for those high in Extraverted to also be Big Picture Thinking, Inspiration Driven and Outcome Focused. Similarly, Down to Earth, Discipline Driven, Introverted and People Focused often go together.

table 5

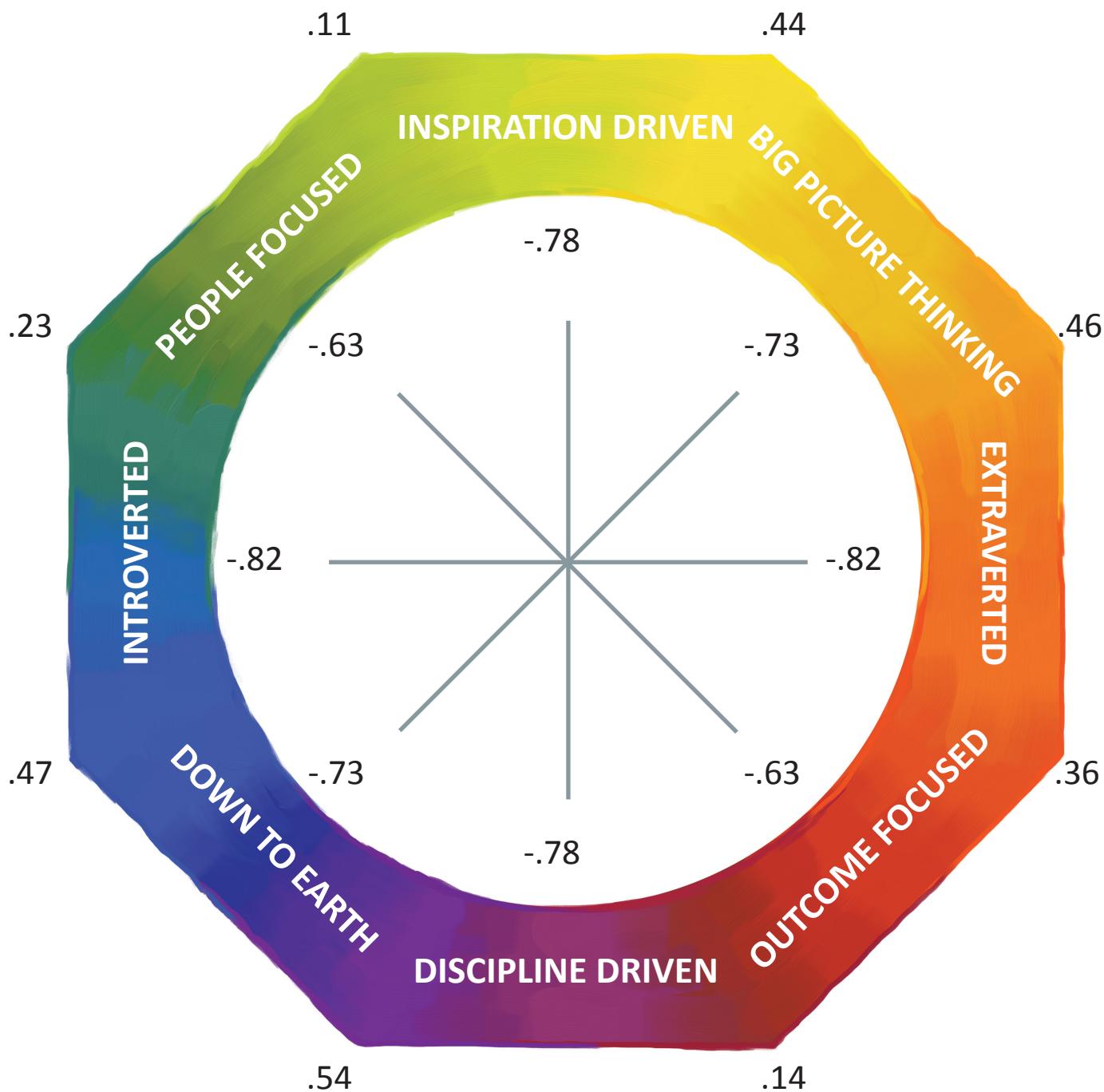
Aspect Inter-Correlations N= 2,078

	People Focused	Outcome Focused	Big Picture Thinking	Down to Earth	Inspiration Driven	Discipline Driven	Extraverted	Introverted
People Focused	1	-.63	-.10	.09	.11	.00	-.15	.23
Outcome Focused	-.63	1	.28	.02	-.02	.14	.36	-.19
Big Picture Thinking	-.10	.28	1	-.73	.44	-.30	.46	-.26
Down to Earth	.09	.02	-.73	1	-.42	.54	-.44	.47
Inspiration Driven	.11	-.02	.44	-.42	1	-.78	.24	-.10
Discipline Driven	.00	.14	-.30	.54	-.78	1	-.15	.20
Extraverted	-.15	.36	.46	-.44	.24	-.15	1	-.82
Introverted	.23	-.19	-.26	.47	-.10	.20	-.82	1

## figure 2

### Aspect Inter-Correlations

There are two low correlations at two of the 'seams' of the mandala- between People Focused and Inspiration Driven as well as between Outcome Focused and Discipline Driven. This appears to reflect the presence of two superordinate factors of personality often referred to as 'Alpha' and 'Beta' (Digman, 1997).



# quality – aspect correlations

table 6

The table below shows how the Qualities correlate with the Aspects across English language groups (N=2,078). Correlations of Qualities with the Aspect they belong to are shown in dark grey boxes. They should also have an inverse correlation with their opposite Qualities, which are shown in light grey.

## Quality and Aspect Correlations in the English Language Sample

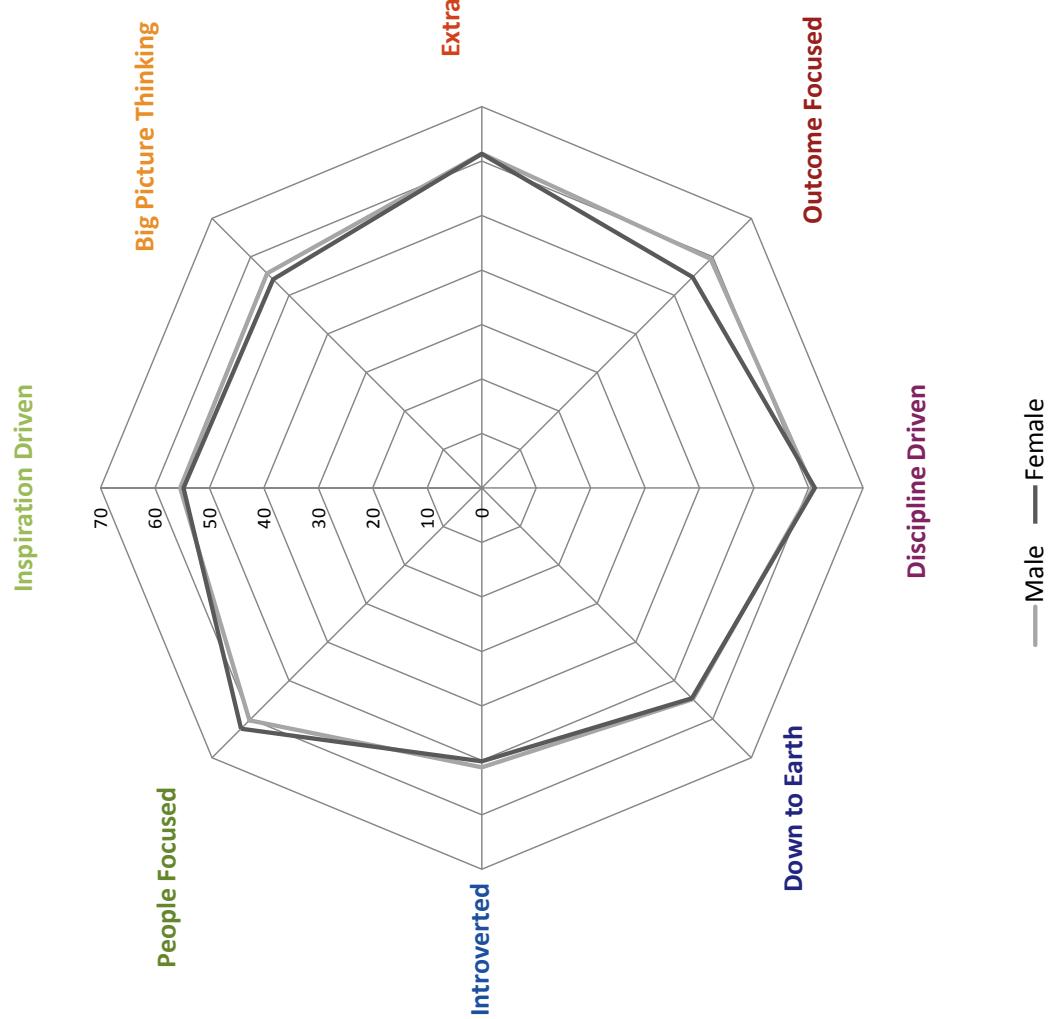
We can see that each set of Qualities correlates highly with its related Aspects and, as expected, demonstrate relatively strong negative correlations with the opposite set of Qualities.

	People Focused	Out-come Focused	Big Picture Thinking	Down to Earth	Inspiration Driven	Discipline Driven	Extra-verted	Introverted
Accommodating	.80	-.59	-.29	.29	-.01	.07	-.41	.45
Collaborative	.85	-.42	.05	-.03	.16	-.02	.05	.05
Empathetic	.89	-.57	-.01	-.04	.14	-.04	-.01	.07
Tough	-.62	.81	.36	-.11	.06	.05	.40	-.27
Competitive	-.39	.82	.23	-.08	.02	.05	.42	-.28
Logical	-.55	.76	.09	.27	-.13	.25	.00	.14
Conceptual	-.04	.23	.81	-.51	.25	-.15	.22	-.05
Imaginative	-.02	.17	.92	-.70	.42	-.28	.46	-.28
Radical	-.19	.33	.92	-.70	.47	-.33	.52	-.33
Practical	.03	.06	-.64	.84	-.28	.41	-.24	.27
Evidence-Based	-.06	.16	-.60	.85	-.42	.51	-.39	.40
Cautious	.19	-.08	-.67	.92	-.40	.49	-.48	.51
Adaptable	.22	-.15	.24	-.19	.84	-.61	.02	.09
Flexible	.07	-.01	.44	-.45	.92	-.77	.22	-.11
Spontaneous	.06	.06	.46	-.44	.93	-.70	.33	-.18
Purposeful	-.06	.17	-.23	.44	-.74	.91	-.07	.10
Structured	.01	.13	-.28	.53	-.66	.88	-.20	.27
Reliable	.09	.05	-.29	.46	-.64	.86	-.13	.17
Sociable	.06	.09	.24	-.31	.25	-.18	.83	-.71
Demonstrative	-.06	.22	.42	-.42	.25	-.16	.89	-.73
Takes Charge	-.33	.54	.48	-.37	.12	-.05	.79	-.61
Observing	.16	-.12	-.21	.42	-.12	.20	-.77	.93
Measured	.03	.05	-.19	.44	-.16	.25	-.67	.86
Intimate	.37	-.39	-.27	.39	.00	.10	-.70	.84

## gender differences at the aspect level

Responses of males and females were compared at the Aspect level. Answering 'neutral' to every question in an Aspect would give a raw score of 54, so scores above or below this point indicate a preference towards agreeing or disagreeing. The diagrams below are derived from the means of men and women across all major language groups.

**Inspiration Driven**



**table 7**  
**Gender Differences on the 8 Aspect Scales  
of the Global Sample**

	Men	Women
People Focused	60.33	62.50 *
Inspiration Driven	55.38	54.74 *
Big Picture Thinking	55.72	54.15 *
Extraverted	61.39	61.32
Outcome Focused	59.45	54.73 *
Discipline Driven	60.82	61.16
Down to Earth	54.81	54.59
Introverted	51.26	50.18 *

**figure 3**  
**Aspect Means for the 8 Aspect Scales  
by Gender**

A comparison of the means, reveals significant differences for 5 of the 8 dimensions. Women have higher scores on People Focused while men score significantly higher on Inspiration Driven, Big Picture Thinking, Outcome Focused and Introverted. Note: \* significant differences at  $p > .001$

**table 8**

Language Differences for the 8 Aspect Scales of the Global Sample

	Dutch	South African	UK	USA	Can (en)	Can (fr)	German	Japanese
<b>People Focused</b>	<b>58.92</b>	60.66	<b>61.82</b>	<b>62.31</b>	<b>63.20</b>	60.19	60.65	<b>62.35</b>
<b>Inpiration Driven</b>	54.42	<b>55.31</b>	<b>54.78</b>	<b>55.37</b>	55.97	<b>53.57</b>	54.05	<b>57.04</b>
<b>Big Picture Thinking</b>	54.35	<b>56.95</b>	55.31	<b>55.79</b>	55.39	<b>53.23</b>	53.82	<b>53.82</b>
<b>Extraverted</b>	<b>62.97</b>	62.58	61.51	61.73	61.83	60.68	58.55	<b>58.28</b>
<b>Outcome Focused</b>	56.80	<b>59.50</b>	<b>57.29</b>	<b>57.73</b>	56.55	<b>57.07</b>	<b>54.53</b>	<b>56.48</b>
<b>Discipline Driven</b>	<b>58.47</b>	<b>63.18</b>	61.69	<b>61.69</b>	61.63	<b>61.35</b>	<b>62.02</b>	<b>59.08</b>
<b>Down to Earth</b>	<b>53.51</b>	<b>55.73</b>	<b>54.40</b>	<b>55.56</b>	55.57	<b>56.38</b>	<b>55.87</b>	<b>54.05</b>
<b>Introverted</b>	48.29	<b>50.93</b>	<b>50.74</b>	<b>51.35</b>	<b>51.51</b>	50.46	<b>51.18</b>	<b>52.47</b>

In this table we see those differences up close.

The top score in each Aspect is highlighted in green, the bottom score is highlighted in red.

The highest and lowest scores for each language are shown in Black.

# language differences at the aspect level

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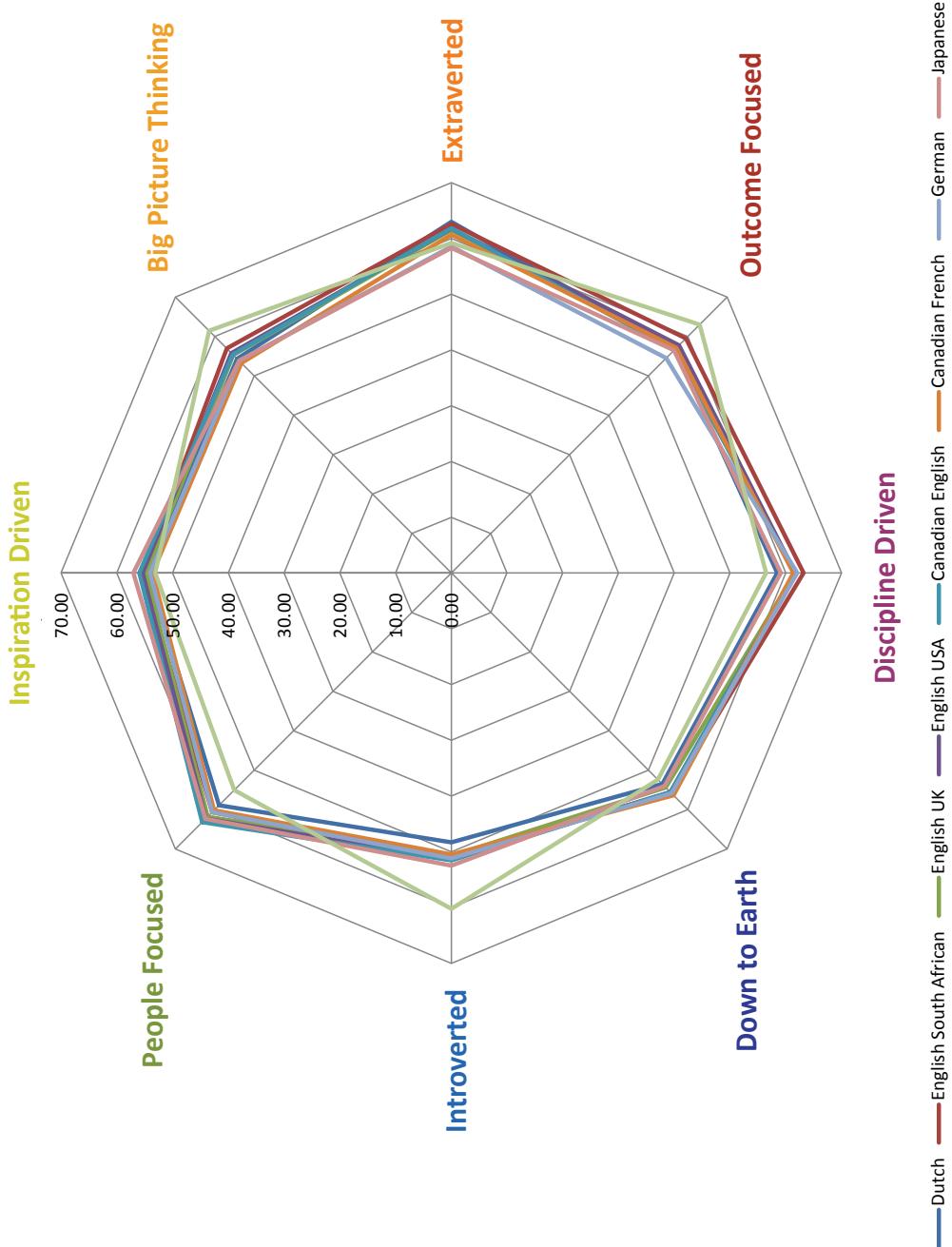


figure 4

**Language Differences on the 8 Aspect Scales**  
As with gender, absolute differences between language groups are minimal. We can see that Dutch respondents claim the least Introversion, German respondents the least Outcome Focused, English Canadian the most People Focused and Japanese the most Inspiration Driven.

Dutch — English South African — English UK — English USA — Canadian English — Canadian French — German — Japanese — English Canada — Slovak

# gender differences at the quality level

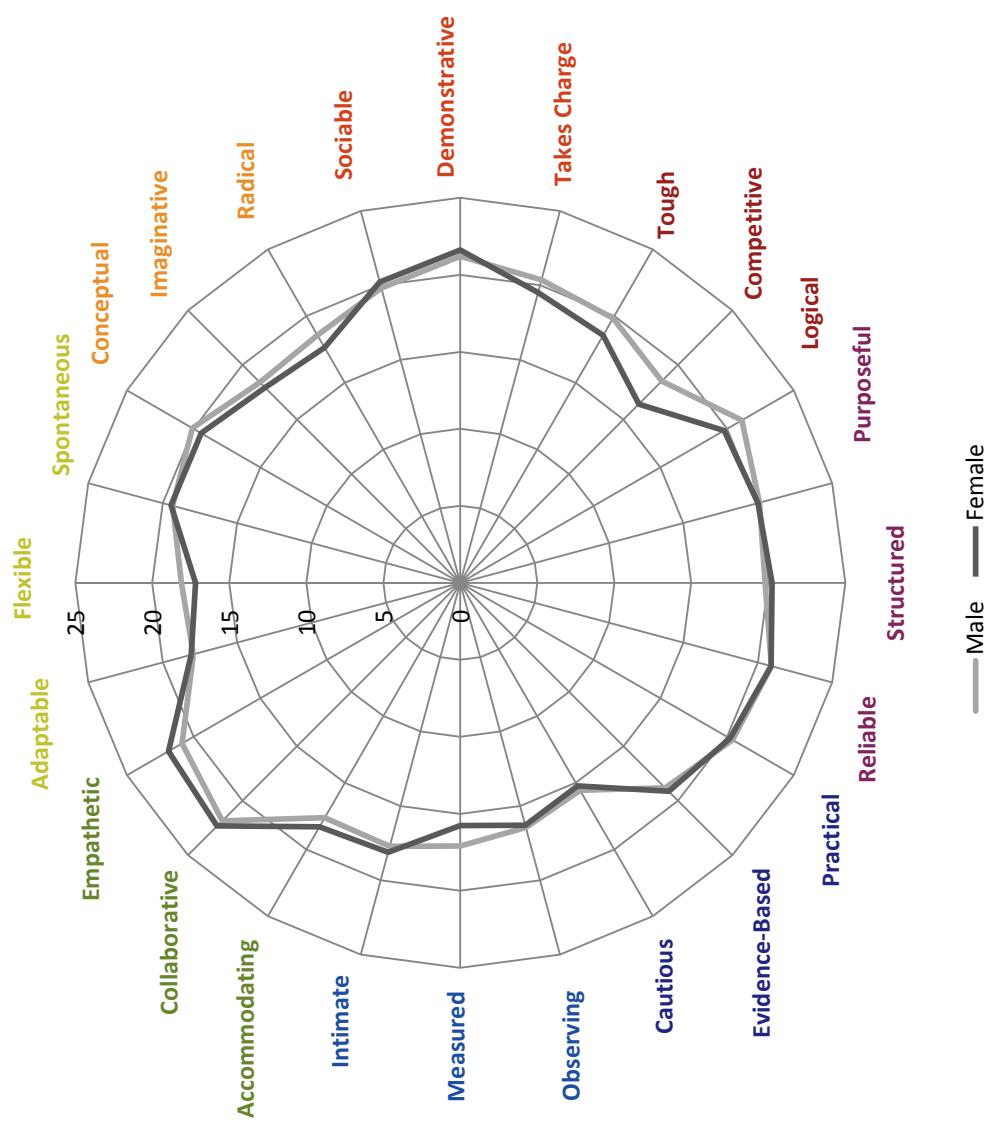


figure 5

## Gender Differences on the 24 Quality Scales

By looking at the quality level we can see that men report being more Logical, Tough and Competitive than women, and women report being more Empathetic than men. Men also tend to be more Measured. Although, a T-test revealed sig. differences (marked with \*), overall, the similarities are far more noteworthy than the differences.

**table 9**

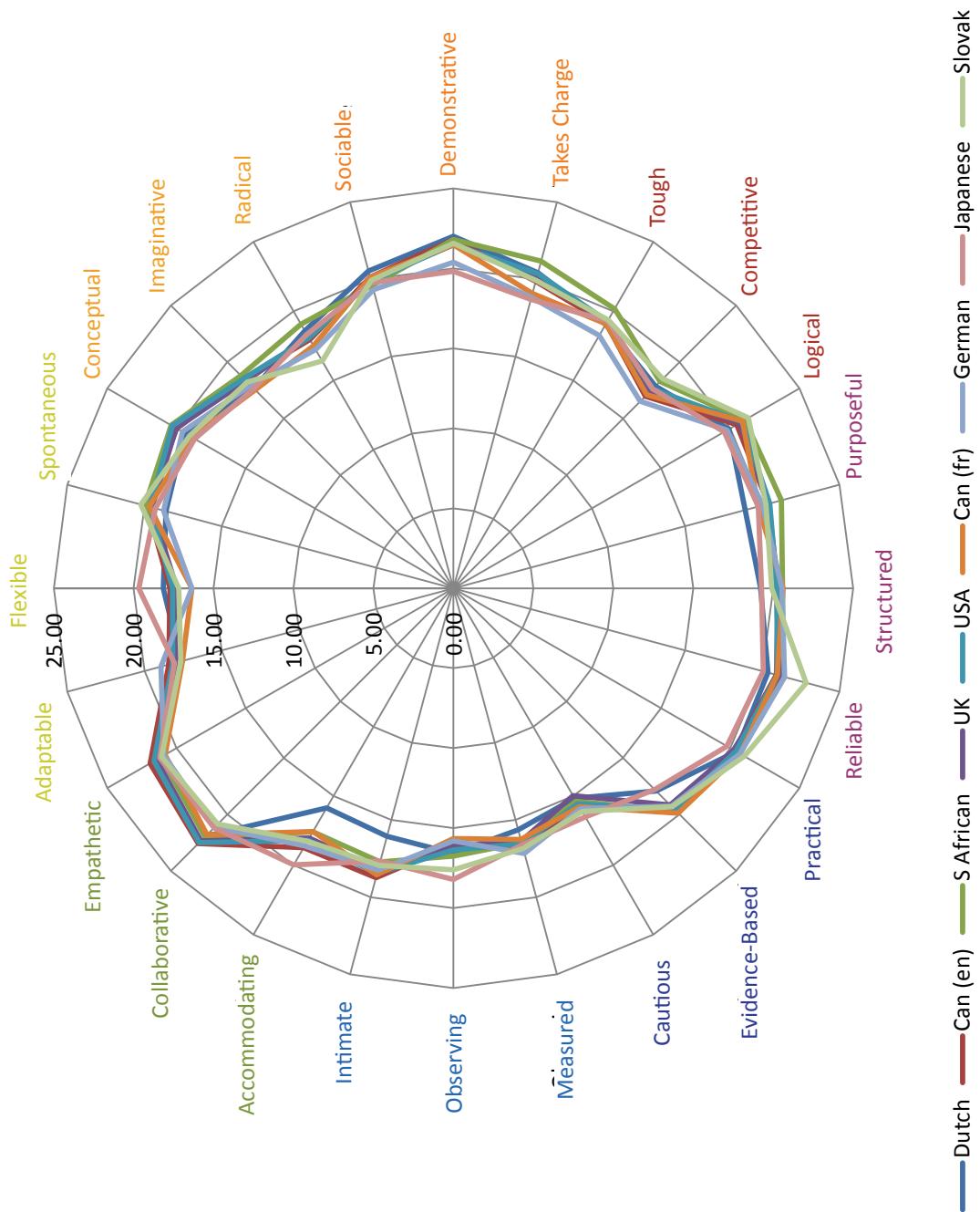
Gender Differences for the 24 Qualities Scales of the Global Sample

	<b>Men</b>	<b>Women</b>		<b>Men</b>	<b>Women</b>
Accommodating	17.62	<b>18.29</b>	*	Tough	<b>19.83</b>
Collaborative	21.86	<b>22.33</b>	*	Competitive	<b>18.51</b>
Empathetic	20.85	<b>21.87</b>	*	Logical	<b>21.10</b>
Adaptable	17.94	<b>18.10</b>	*	Purposeful	<b>20.11</b>
Flexible	<b>18.10</b>	17.20	*	Structured	19.79
Spontaneous	19.34	<b>19.44</b>	*	Reliable	<b>20.92</b>
Conceptual	<b>20.09</b>	19.43	*	Practical	<b>20.41</b>
Imaginative	<b>18.41</b>	17.93	*	Evidence-Based	18.83
Radical	<b>18.55</b>	17.64	*	Cautious	<b>15.57</b>
Sociable	19.82	<b>20.21</b>	*	Observing	<b>16.45</b>
Demonstrative	21.20	<b>21.60</b>	*	Measured	<b>17.10</b>
Takes Charge	<b>20.37</b>	19.51	*	Intimate	17.71
					<b>18.11</b>

## language differences at the quality level

Looking at language differences at the quality level, we also find an overall similar pattern.

figure 6  
Quality Means by Language



**table 10**

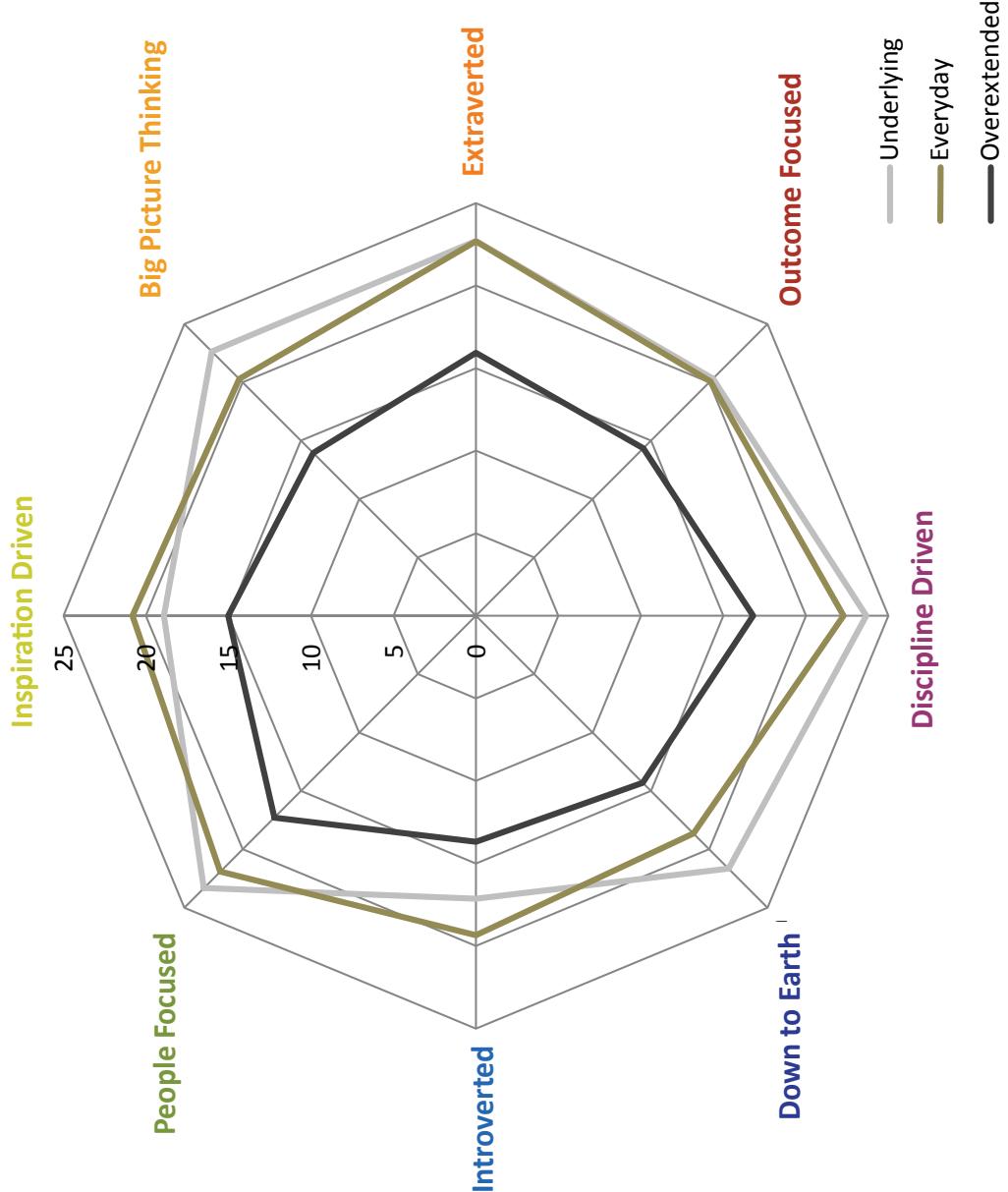
Language Differences for the 24 Quality Scales of the Global Sample

	Dutch	Can (en)	S African	UK	USA	Can (fr)	German	Japanese
Accommodating	<b>15.86</b>	18.73	17.58	18.04	18.20	17.57	18.61	<b>19.96</b>
Collaborative	21.94	<b>22.57</b>	<b>21.97</b>	<b>22.34</b>	<b>22.49</b>	<b>21.79</b>	<b>21.14</b>	21.18
Empathetic	21.11	<b>21.91</b>	21.11	21.43	21.63	<b>20.83</b>	20.91	<b>21.21</b>
Adaptable	17.65	18.42	18.07	17.95	18.18	<b>17.53</b>	<b>18.94</b>	18.06
Flexible	18.15	17.73	17.27	17.30	17.57	<b>16.35</b>	16.36	<b>19.68</b>
Spontaneous	<b>18.61</b>	19.83	<b>19.97</b>	19.52	19.63	19.69	18.76	19.30
Conceptual	19.40	19.98	<b>20.39</b>	20.03	20.30	18.88	19.57	<b>18.69</b>
Imaginative	17.66	18.51	<b>18.80</b>	18.33	18.55	<b>17.53</b>	17.94	17.65
Radical	18.58	17.95	<b>19.07</b>	18.09	18.08	17.51	<b>17.23</b>	18.33
Sociable	<b>20.53</b>	20.14	19.60	19.96	19.88	20.14	<b>19.33</b>	19.78
Demonstrative	<b>22.01</b>	21.81	21.80	21.48	21.49	21.47	20.38	<b>19.81</b>
Takes Charge	20.42	19.88	<b>21.18</b>	20.07	20.37	19.07	18.84	<b>18.69</b>
Tough	19.04	19.11	<b>20.17</b>	19.27	19.27	19.08	<b>18.24</b>	19.29
Competitive	17.87	16.97	<b>18.28</b>	17.35	17.61	17.10	<b>16.53</b>	17.63
Logical	19.89	20.47	<b>21.05</b>	20.67	20.84	20.89	19.76	<b>19.56</b>
Purposeful	<b>18.89</b>	20.38	<b>21.23</b>	20.36	20.48	19.74	20.03	19.74
Structured	<b>19.22</b>	20.33	20.59	20.21	20.24	<b>20.63</b>	20.55	19.27
Reliable	20.36	20.91	21.36	21.11	20.96	20.98	<b>21.45</b>	<b>20.07</b>
Practical	20.42	20.29	20.58	20.24	20.40	<b>20.72</b>	20.70	<b>19.75</b>
Evidenc-Based	17.93	19.62	19.77	19.17	19.59	<b>19.88</b>	19.27	<b>17.80</b>
Cautious	<b>15.17</b>	<b>15.66</b>	<b>15.38</b>	<b>14.98</b>	<b>15.56</b>	15.78	15.90	<b>16.51</b>
Observing	<b>15.64</b>	16.74	16.47	16.37	16.54	16.26	<b>17.16</b>	16.61
Measured	16.59	16.04	16.74	16.14	16.36	<b>15.66</b>	<b>15.79</b>	<b>18.21</b>
Intimate	<b>16.06</b>	<b>18.73</b>	17.72	18.23	18.45	18.55	18.24	17.66

In this table we see those differences up close. The top score in each Quality is highlighted in green, the bottom score is highlighted in red. The highest and lowest scores for each language are shown in Bold.

# persona differences at the aspect level

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# gender differences in the personas at the aspect level

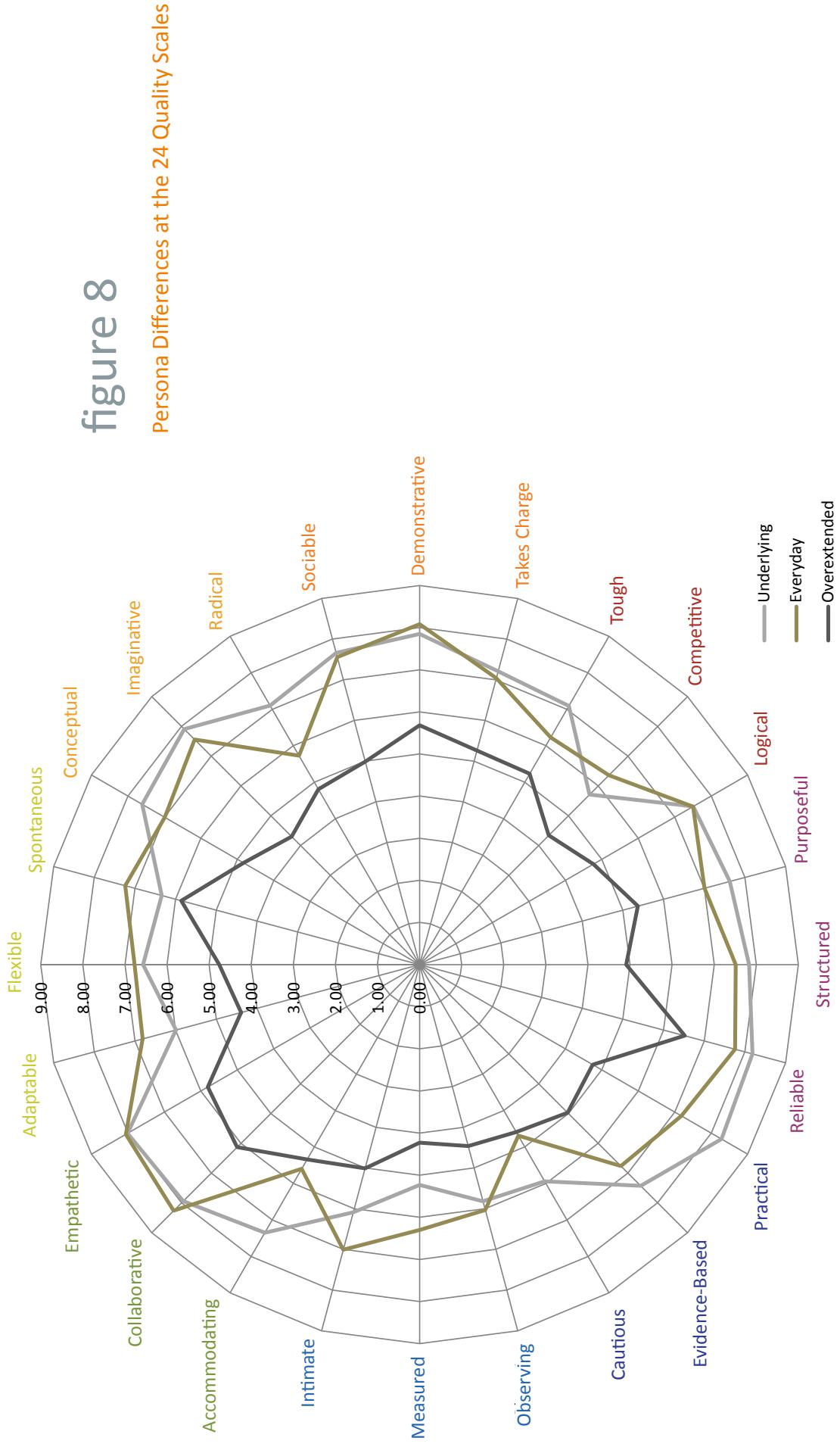
**Underlying      Everyday      Overextended**

	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
<b>People Focused</b>	22.39	<b>23.31</b>	21.11	<b>21.91</b>	16.83	<b>17.28</b>
<b>Inspiration Driven</b>	<b>18.98</b>	18.91	<b>20.85</b>	20.82	<b>15.55</b>	15.01
<b>Big Picture Thinking</b>	23.27	<b>22.63</b>	<b>21.42</b>	20.28	<b>14.37</b>	13.95
<b>Extraverted</b>	<b>22.86</b>	22.71	22.12	<b>22.68</b>	<b>16.40</b>	15.93
<b>Outcome Focused</b>	<b>21.56</b>	20.31	<b>21.70</b>	20.09	<b>16.18</b>	14.34
<b>Discipline Driven</b>	23.08	<b>23.65</b>	22.09	<b>22.28</b>	<b>16.96</b>	16.80
<b>Down to Earth</b>	21.52	<b>21.65</b>	<b>18.76</b>	18.64	<b>14.53</b>	14.30
<b>Introverted</b>	<b>17.15</b>	17.14	<b>19.96</b>	19.34	<b>14.14</b>	13.69

**table 11**

**Gender Differences for the 8 Aspect Scales  
of the Global Sample**  
It was hypothesised that Overextended behaviour occurs less frequently than the Underlying/Everyday and lower raw scores were expected for the overextended scales. This expected pattern is reflected in the above data.

# persona differences at the quality level

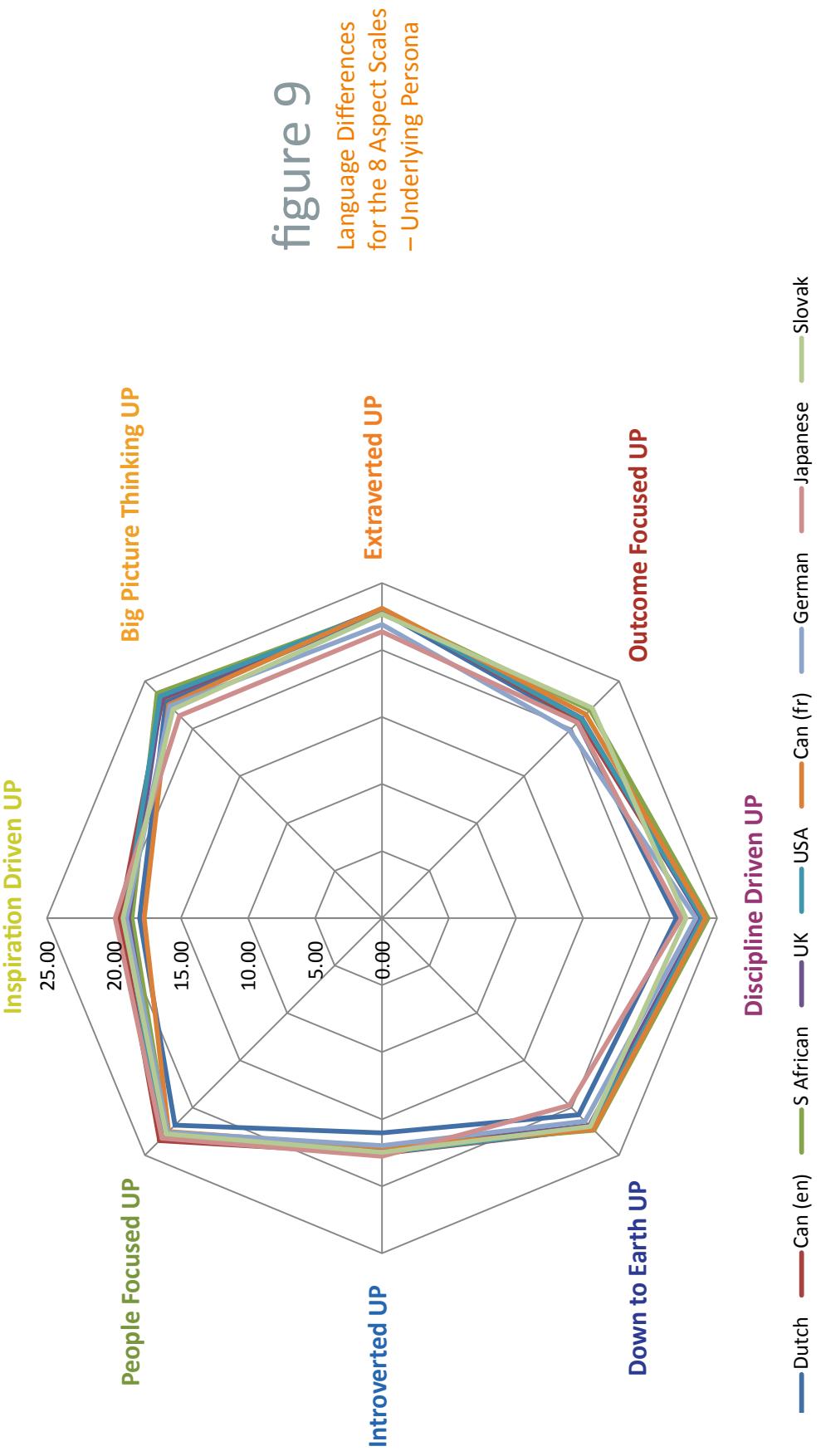


**table 12**

## Gender Differences for the 24 Quality Scales of the Global Sample

	Underlying		Everyday		Overextended	
	Male	Female	Male	Female	Male	Female
Accommodating	6.92	<b>7.35</b>	5.48	<b>5.60</b>	5.23	<b>5.34</b>
Collaborative	7.85	<b>7.94</b>	8.03	<b>8.26</b>	5.98	<b>6.13</b>
Empathetic	7.63	<b>8.01</b>	7.60	<b>8.06</b>	5.62	<b>5.81</b>
Adaptable	<b>6.21</b>	5.99	<b>7.04</b>	6.81	<b>4.86</b>	4.39
Flexible	6.31	<b>6.57</b>	<b>6.85</b>	6.77	<b>4.78</b>	4.76
Spontaneous	<b>6.47</b>	6.34	6.96	<b>7.24</b>	<b>5.91</b>	5.86
Conceptual	<b>7.84</b>	7.61	<b>7.40</b>	6.99	<b>4.85</b>	4.83
Imaginative	<b>8.15</b>	7.91	<b>7.72</b>	7.56	<b>4.54</b>	4.30
Radical	<b>7.28</b>	7.10	<b>6.29</b>	5.73	<b>4.98</b>	4.81
Sociable	7.43	<b>7.66</b>	7.36	<b>7.56</b>	<b>5.03</b>	4.99
Demonstrative	<b>7.89</b>	7.85	7.52	<b>8.08</b>	<b>5.79</b>	5.68
Takes Charge	<b>7.54</b>	7.21	<b>7.25</b>	7.04	<b>5.58</b>	5.26
Tough	<b>7.45</b>	7.09	<b>6.79</b>	6.23	<b>5.59</b>	5.23
Competitive	<b>6.24</b>	5.71	7.11	6.36	<b>5.16</b>	4.34
Logical	<b>7.87</b>	7.51	<b>7.80</b>	7.50	<b>5.44</b>	4.77
Purposeful	7.51	<b>7.63</b>	<b>7.07</b>	7.01	<b>5.53</b>	5.37
Structured	7.63	<b>7.83</b>	7.24	<b>7.51</b>	<b>4.92</b>	4.91
Reliable	7.94	<b>8.19</b>	<b>7.78</b>	7.76	6.52	<b>6.52</b>
Practical	<b>8.31</b>	8.28	<b>7.29</b>	7.18	<b>4.81</b>	4.75
Evidence-Based	7.25	<b>7.43</b>	6.61	<b>6.76</b>	<b>4.97</b>	4.97
Cautious	<b>5.96</b>	5.94	<b>4.87</b>	4.69	<b>4.74</b>	4.59
Observing	5.69	<b>5.82</b>	<b>6.19</b>	6.03	<b>4.57</b>	4.46
Measured	<b>5.57</b>	5.23	<b>6.82</b>	6.30	<b>4.71</b>	4.23
Intimate	5.89	<b>6.09</b>	6.96	<b>7.01</b>	4.86	<b>5.01</b>

# language differences in the underlying persona at the aspect Level



**table 13**

Language Differences for the 8 Aspect Scales – Underlying Persona

	Dutch	Can (en)	S African	UK	USA	Can (fr)	German	Japanese
<b>People Focused UP</b>	<b>21.84</b>	<b>23.47</b>	22.67	23.02	23.13	22.51	22.60	<b>23.21</b>
<b>Inspiration Driven UP</b>	18.08	19.59	18.66	18.91	19.22	<b>17.74</b>	19.07	<b>19.91</b>
<b>Big Picture Thinking UP</b>	22.79	23.17	<b>23.72</b>	23.27	23.41	22.52	22.38	<b>21.37</b>
<b>Extraverted UP</b>	<b>22.86</b>	23.07	22.96	23.00	23.00	<b>23.12</b>	21.91	<b>21.37</b>
<b>Outcome Focused UP</b>	20.63	20.85	<b>21.96</b>	21.07	21.05	21.49	<b>19.78</b>	<b>20.62</b>
<b>Discipline Driven UP</b>	<b>21.95</b>	<b>23.87</b>	24.32	<b>23.79</b>	<b>23.90</b>	<b>24.13</b>	<b>23.41</b>	22.33
<b>Down to Earth UP</b>	20.75	22.25	<b>22.37</b>	21.88	22.17	22.31	21.42	<b>19.75</b>
<b>Introverted UP</b>	<b>16.02</b>	<b>17.57</b>	17.15	<b>17.24</b>	<b>17.53</b>	17.10	<b>16.97</b>	<b>17.77</b>

In this table we see those differences up close.  
The top score in each Aspect is highlighted in green, the bottom score is highlighted in red.  
The highest and lowest scores for each language are shown in Black.

# language differences in the everyday persona at the aspect level

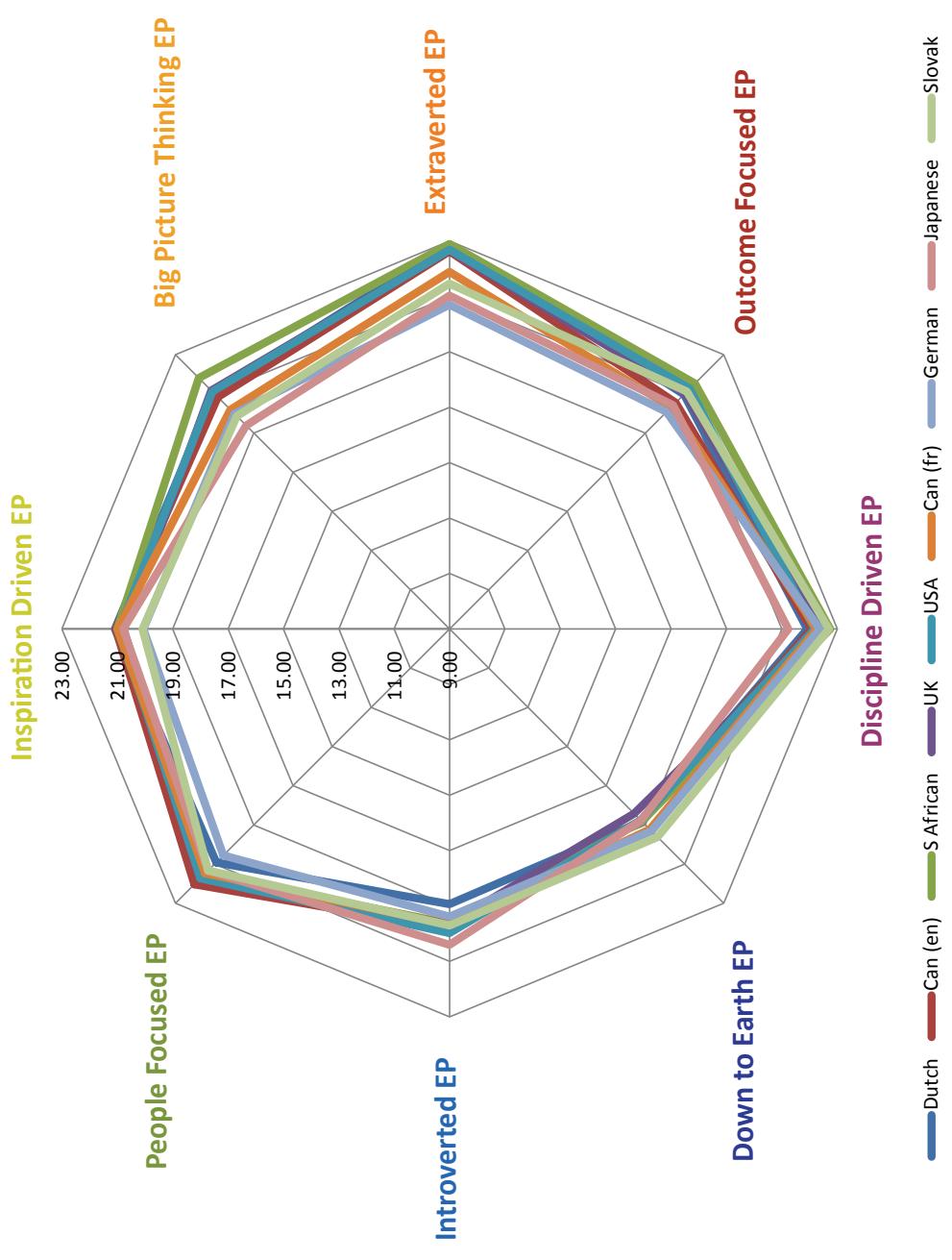


figure 10

Language Differences  
for the 8 Aspect Scales  
– Everyday Persona

**table 14**

Language Differences for the 8 Aspect Scales – Everyday Persona

	Dutch	Can (en)	S African	UK	USA	Can (fr)	German	Japanese
<b>People Focused EP</b>	20.91	<b>22.03</b>	21.53	21.74	21.72	21.48	<b>20.56</b>	<b>21.34</b>
<b>Inspiration Driven EP</b>	<b>21.08</b>	21.06	21.00	20.78	20.92	20.98	<b>20.06</b>	20.78
<b>Big Picture Thinking EP</b>	21.05	<b>20.84</b>	<b>21.81</b>	21.17	21.11	20.19	19.99	<b>19.38</b>
<b>Extraverted EP</b>	<b>22.87</b>	<b>22.63</b>	<b>22.89</b>	<b>22.67</b>	<b>22.69</b>	21.88	<b>20.70</b>	21.03
<b>Outcome Focused EP</b>	20.97	20.55	<b>21.53</b>	21.03	21.27	20.32	<b>20.08</b>	20.42
<b>Discipline Driven EP</b>	21.92	<b>22.08</b>	<b>22.74</b>	22.46	22.18	<b>22.26</b>	22.37	<b>21.23</b>
<b>Down to Earth EP</b>	<b>18.83</b>	<b>18.77</b>	<b>18.82</b>	<b>18.42</b>	<b>18.76</b>	19.23	<b>19.31</b>	<b>18.78</b>
<b>Introverted EP</b>	<b>18.94</b>	19.81	19.63	19.64	19.98	19.67	19.38	<b>20.40</b>

In this table we see those differences up close.  
The top score in each Aspect is highlighted in green, the bottom score is highlighted in red.  
The highest and lowest scores for each language are shown in Black.

# language differences in the overextended persona at the aspect level

Inspiration Driven OP

People Focused OP

Big Picture Thinking OP

Introverted OP

Extraverted OP

Down to Earth OP

Outcome Focused OP

Discipline Driven OP

figure 11

Language Differences  
for the 8 Aspect Scales  
– Overextended Persona

Dutch — S African — UK — USA — Can (en) — Can (fr) — German — Japanese — Slovak

**table 15**

Language Differences for the 8 Aspect scales – Overextended Persona

	Dutch	S African	UK	USA	Can (en)	Can (fr)	German	Japanese
<b>People Focused OP</b>	<b>16.17</b>	16.47	<b>17.07</b>	<b>17.45</b>	<b>17.71</b>	16.20	17.49	<b>17.80</b>
<b>Inspiration Driven OP</b>	15.26	15.65	15.10	15.22	15.33	<b>14.85</b>	14.92	<b>16.35</b>
<b>Big Picture Thinking OP</b>	13.78	14.62	14.07	14.35	14.46	<b>13.14</b>	<b>14.08</b>	<b>15.13</b>
<b>Extraverted OP</b>	<b>17.24</b>	16.73	15.84	16.04	16.13	<b>15.68</b>	15.94	15.88
<b>Outcome Focused OP</b>	15.20	<b>16.01</b>	15.19	15.42	15.15	15.26	<b>14.68</b>	15.44
<b>Discipline Driven OP</b>	<b>16.30</b>	<b>17.43</b>	16.85	17.10	17.16	<b>16.57</b>	<b>17.67</b>	17.11
<b>Down to Earth OP</b>	<b>13.94</b>	<b>14.54</b>	14.10	14.62	14.56	<b>14.84</b>	15.14	<b>15.52</b>
<b>Introverted OP</b>	<b>13.33</b>	<b>14.15</b>	<b>13.85</b>	<b>13.85</b>	<b>14.12</b>	13.69	<b>14.83</b>	<b>14.30</b>

In this table we see those differences up close.  
The top score in each Aspect is highlighted in green, the bottom score is highlighted in red.  
The highest and lowest scores for each language are shown in Black.

# the lumina spark scoring method

## Comparison with The Birkman Method® - One Measure Displayed on a Non-Judgmental Bi-Directional Scale

The Birkman Method® is a highly validated and proven system, that has been used here for illustrative purposes.

The Birkman Method's® display of traits is typical of many Big Five and other trait-based psychometrics. An example from a Birkman profile is shown below.

## YOUR PERSONAL STRENGTHS AND NEEDS SOCIAL RELATIONSHIPS (NEED FOR ACCEPTANCE)

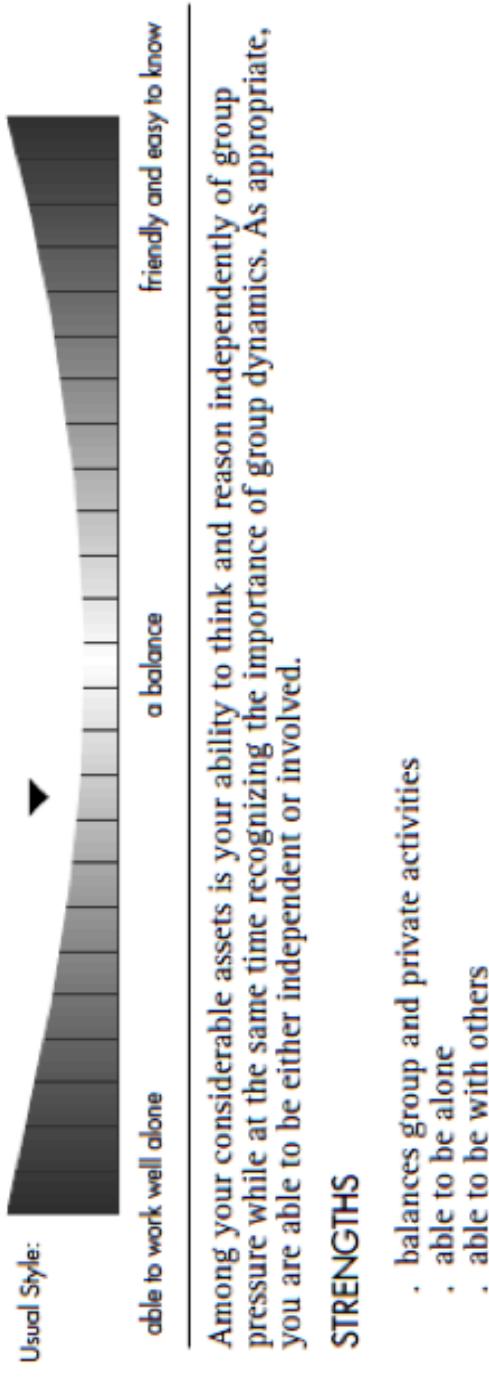


figure 12

Example of 'Need from The Birkman Method® Measurement'

Among your considerable assets is your ability to think and reason independently of group pressure while at the same time recognizing the importance of group dynamics. As appropriate, you are able to be either independent or involved.

### STRENGTHS

- balances group and private activities
- able to be alone
- able to be with others

# the model

Two Non-Judgmental Measures Displayed Back to Back

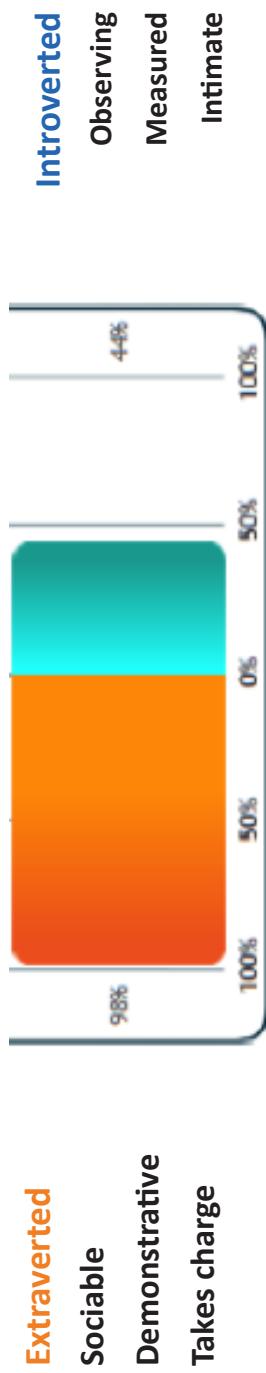


figure 13

## Independent Scoring of Opposite Scales

The “both / and” approach of Lumina Spark helps learners appreciate:

- they can be different in different contexts
- it can be very positive for one's development to “embrace the paradox” within, and have high scores at both ends of this polarity.

## appendix |

### **Mapping Lumina Spark to Other Models**

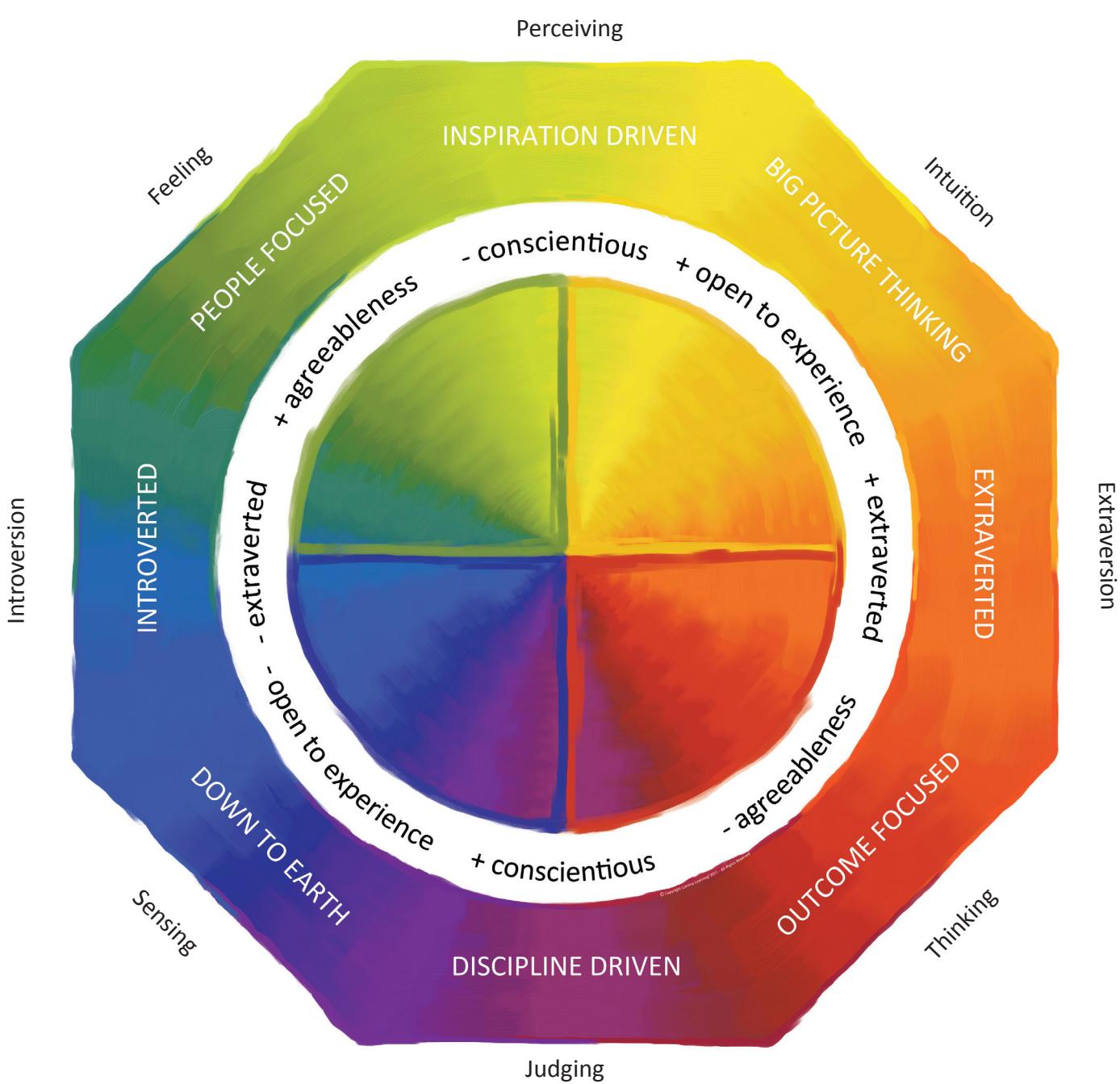
OCEAN Big Five Mnemonic , The Birkman Method ® , Jungian Models And Lumina Spark

<b>Big Five - OCEAN</b> 5 measures	<b>The Birkman Method®</b>	Jungian - 4 measures	Lumina Spark - 10 measures 8 used on mandala
<u>Open to Experience</u> O+ to O-	<b>Change Orientation</b>	Intuition OR Sensing N or S	<b>Big Picture Thinking (O+) vs Down-to-Earth (O-)</b> - Radical vs Cautious - Imaginative vs Evidence Based - Conceptual vs Practical
<u>Conscientious</u> C+ to C-	<b>Process Orientation</b>	Judging OR Perceiving J or P	<b>Discipline Driven (C+) vs Inspiration Driven (C-)</b> - Reliable vs Spontaneous - Structured vs Flexible - Purposeful vs Adaptable

<p><b>Extraversion</b> <u>E+ to E-</u></p> <p><b>Social Orientation</b></p> <ul style="list-style-type: none"> <li>- Esteem – Direct to Indirect</li> <li>- Acceptance – Independent to Gregarious</li> </ul>	<p><b>Introversion OR Extraversion I or E</b></p> <p><b>Extraversion (E+) vs Introversion (E-)</b></p> <ul style="list-style-type: none"> <li>- Takes charge vs Observing</li> <li>- Expressive vs Measured</li> <li>- Sociable vs Intimate</li> </ul>	<p><b>Control Orientation</b></p> <p><b>Advantage – Distributed to Localised Authority – Distributed to Localised</b></p> <p><b>Feeling OR Thinking F or T</b></p> <p><b>People Focussed (A+) vs Outcome Focused (A-)</b></p> <ul style="list-style-type: none"> <li>- Collaborative vs Competitive</li> <li>- Empathetic vs Logical</li> <li>- Accommodating vs Tough</li> </ul> <p><b>Emotive Orientation</b></p> <p><b>Empathy – Indifferent to Sensitive Thought – Decisive to Thorough Activity – Managed to Energetic</b></p> <p><b>Neuroticism</b> <u>N+ to N-</u></p> <p><b>Typically not measured</b></p> <p><b>Hot Reactor (N+) vs Cool Reactor(N-)</b></p> <ul style="list-style-type: none"> <li>- Volatile vs Calm in crisis</li> <li>- Worrying vs No worries</li> <li>- Pessimistic vs Optimistic</li> </ul>
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## appendix II

OCEAN, Jungian terminology and Lumina Spark  
on One Mandala



[luminalearning.com](http://luminalearning.com)

## Notes:



[luminalearning.com](http://luminalearning.com)



ignites highly interactive and profound experiences in which learners explore how their personality changes in three situations being underlying, everyday and overextended. This diverse awareness of self and others aids a team to regain composure when overextended and leads to enhanced relationships, communication and results.



equips leaders with the full awareness of their leadership style consisting of strategies they are choosing often, strategies they are omitting, overextensions and their unique journey to composure. Strengths are leveraged while weaknesses and overextensions are mitigated.



is a pragmatic and powerful tool for sales professionals and sales leaders. Speed reading, building rapport, motivating and inspiring others is handled masterfully along with the six stages of a sales cycle. Each participant understands which stages they focus on and which they exclude along with the effect of overextensions on their sales results. Sales professionals leave with a balanced action plan.



can be described as the ability or capacity to perceive, assess and manage the emotions of one's self and of others. It can directly influence how a person reacts to stressful situations as well as interpersonal relations. This portrait brings the awareness of strengths, challenges, overextensions and how to be emotionally agile.



provides positive language and impactful visuals to highlight the traits and behaviours within a team. Patterns emerge in the team mandalas that reveal under-utilized team strengths, development opportunities, blind spots and areas that are not being covered by the team. This enables each player to identify the part they need to play to create a high performing team.



defines health as the ability of the individual or organization to manage and deal with challenges in a resilient fashion whether these are emotional, social, contextual or physical. At the organizational level an anonymous and confidential report is presented with recommendations for a healthier and more vital workplace.



brings clarity and agreement on the critical qualities needed for a particular role. Our portraits evaluate your short listed candidates against the critical qualities to assess fit and provide specific interview questions for candidates and previous employers. This portrait is then used for the professional development of your new hire.



analyzes and identifies current culture at the organizational level and compares to the ideal culture. The gap is then strategized with a focus on the innate strengths within the existing culture and directed toward the ideal culture. Strategies are developed for the organization and the individuals to ensure that each member is fully engaging their strengths toward the ideal culture.



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