

Saville Consulting Wave Professional Styles Handbook

PART 4: TECHNICAL

Chapter 18: Professional Styles Norms

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18.0 Professional Styles Norms

18.1 About Norms

When interpreting the results of an assessment it is often useful to know how each individual score compares to scores achieved by others. Knowing whether a score is high, low or average compared to others requires that we have a norm group. Norms allow for comparison of an individual's score on an assessment to a relevant comparison group. The use of norms ensures that, when comparing the scores of different individuals, you can be sure you are comparing like with like.

There are various standard scales that could be used to assess individuals on aptitude and behavioral styles assessments. Often different scales are used for aptitude and behavioral assessments. To allow for a common simple language on both behavioral style and aptitude tests, 'Sten' scores are available. 'Sten' stands for 'Standard to ten' and Stens provide a score which ranges from 1 to 10 with 5 and 6 straddling the average (mean) score. While this provides a simple scale for users, it is also useful to understand how these scores relate to percentiles in the normal distribution. See Figure 18.1. below.

Figure 18.1 Stens 1 - 10 and their relation to percentiles in the normal distribution

1 - Extremely Low	- performed better than only 1% of comparison group
2 - Very Low	- performed better than only 5% of comparison group
3 - Low	- performed better than only 10% of comparison group
4 - Fairly Low	- performed better than only 25% of comparison group
5 - Average	- performed better than only 40% of comparison group
6 - Average	- performed better than 60% of comparison group
7 - Fairly High	- performed better than 75% of comparison group
8 - High	- performed better than 90% of comparison group
9 - Very High	- performed better than 95% of comparison group
10 - Extremely High	- performed better than 99% of comparison group

For simplicity for users these figures are rounded to give whole number percentiles (positive integers) where possible as a multiple of 5 or 10 which are near the centre of each Sten score. This avoids creating the perception of over accuracy in the score particularly as stens are bands of scores which are subject to a degree of error.

Calculating Sten Scores

When using Wave Professional Styles the user does not need to calculate Sten scores manually as the Oasys online assessment system does this. However, for those who are interested or would like a reminder, the formulas for calculating Sten scores are presented for reference below.

Sten scores are calculated from a person's raw scores on an aptitude or behavioral styles assessment.

To work out a person's Sten score, you first need to calculate the Z-score. A Z-score represents how far away a person's score is from the group mean in standard deviation units. The formula to calculate a person's Z-score is as follows:

$$\text{Z-score} = \frac{\text{Individual's raw score} - \text{Mean of the group}}{\text{Standard Deviation}}$$

$$\text{Z-score} = \frac{X - \bar{X}}{\text{SD}}$$

From this, you can work out a person's Sten score. The formula for calculating Sten scores is given below:

$$\text{Sten score} = (\text{Z-score} \times 2) + 5.5$$

A Sten score gives a rounded representation of a person's score against a benchmark comparison group. One sten score covers half of a standard deviation from the bottom of the score to the top of the Sten score.

SEm - Standard Error of the Mean

Standard Error of the Mean (SE_{mean}) is a measure of how accurate a representation your sample mean is of the 'true' population mean. The larger your sample size, the more accurate it is at representing the true population mean. Table 18.1 demonstrates how SE_{mean} is related to sample size.

There is always a quest within psychometric assessment to have the largest possible numbers for the analysis and interpretation of data. While this is essential for reliability and validity analysis, when considering Standard Error of the Mean, it can be seen that this is not always so necessary. As can be seen in Table 18.1, after a sample size of around 500, the impact of increasing sample size upon Standard Error of the Mean only serves to make an already small error even smaller.

So although in general the larger sample size the better, in terms of normative data collection, collecting very large samples numbers is often less important than other considerations. The most important consideration in collecting normative data in practice when samples get bigger is often how representative the sample is of the population.

Table 18.1 Standard error of the Mean at different sample sizes

Sample Size	SE _{mean} (stens)
50	.29
100	.20
250	.13
500	.09
1,000	.06
10,000	.02

A note on the importance of normative information and validity

If a test has a wide range of different norm groups with thousands of people in each but has no evidence of validity, then norms in and of themselves are of no value for the purpose of predicting job performance or potential.

Available Norm Groups

Saville Consulting’s development program is producing versions of Wave Styles in over 25 languages. Please contact your local Saville Consulting office for further information.

18.2 Professional Styles Standardization Norm Group Description

Norm Group Name: Professionals (2005)

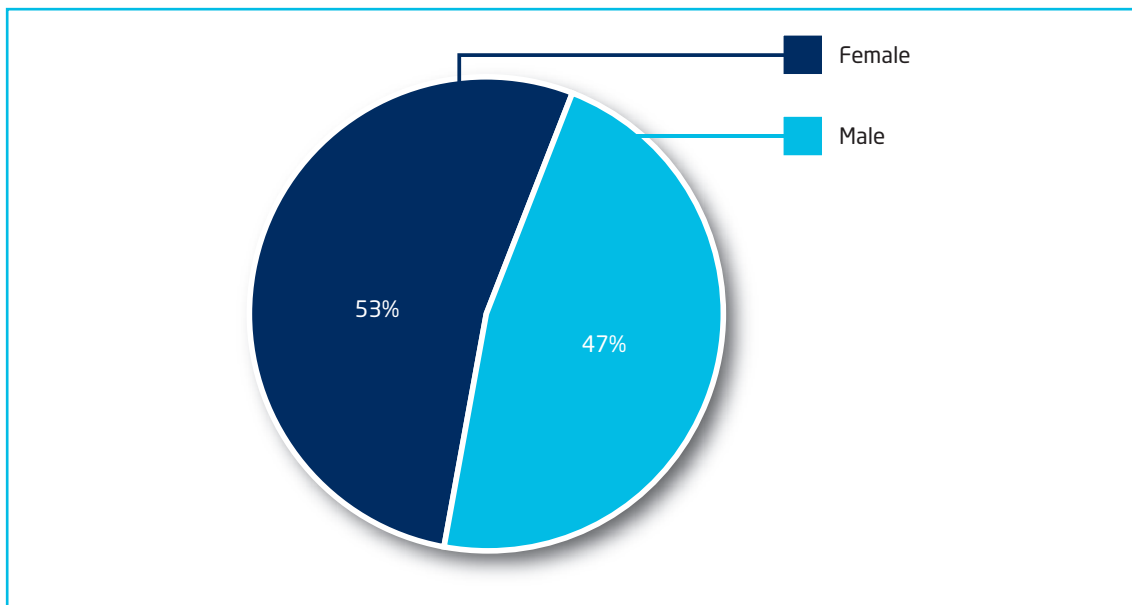
This sample consisted of 1,153 participants, approximately 96% of whom were currently employed in a range of job functions across a wide range of industry sectors. Of these, approximately 75% worked in the following industry sectors: banking, financial services, oil/gas & utilities, hospitality, recruitment, and insurance. The remaining 25% worked in other industry sectors including consulting services, manufacturing & production, healthcare, engineering, education & training and HR.

The breakdown of the standardization sample is provided below (with response rates for each biographical section given in the foot notes):

Gender¹

53% of the sample were female and 47% were male.

Figure 18.2 Gender breakdown for Standardization sample (N=1,153)



Age²

The age of the group ranged from 17 to 65 years, with a mean age of 36 years.

Cultural Background³

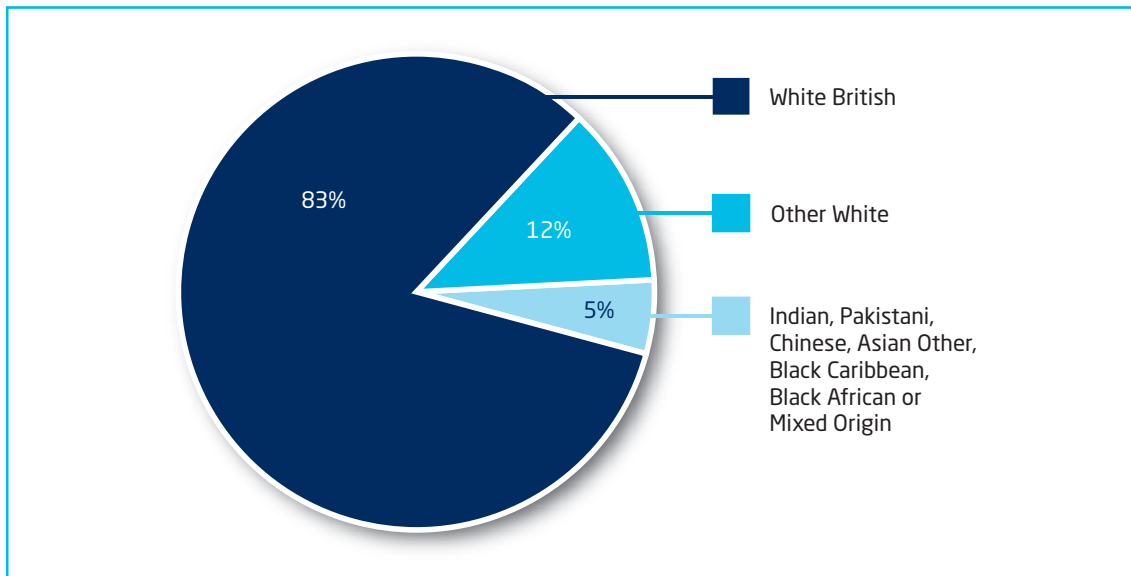
83% of the sample described themselves as white British, 12% as other white backgrounds (including Irish, European, American, Canadian, New Zealander and white

¹ Based on 100% sample response

² Based on 94% sample response

Caribbean) with the remaining 5% of the sample describing themselves as either Indian, Pakistani, Chinese, Asian Other, Black Caribbean, Black African, or as mixed origin (e.g., White and Black Caribbean). 98% of the group described their understanding of written English either 'as a first language speaker' or 'fluently'⁴.

Figure 18.3 Cultural background breakdown for Standardization sample (N=1,153)



Education (highest UK qualification)⁵

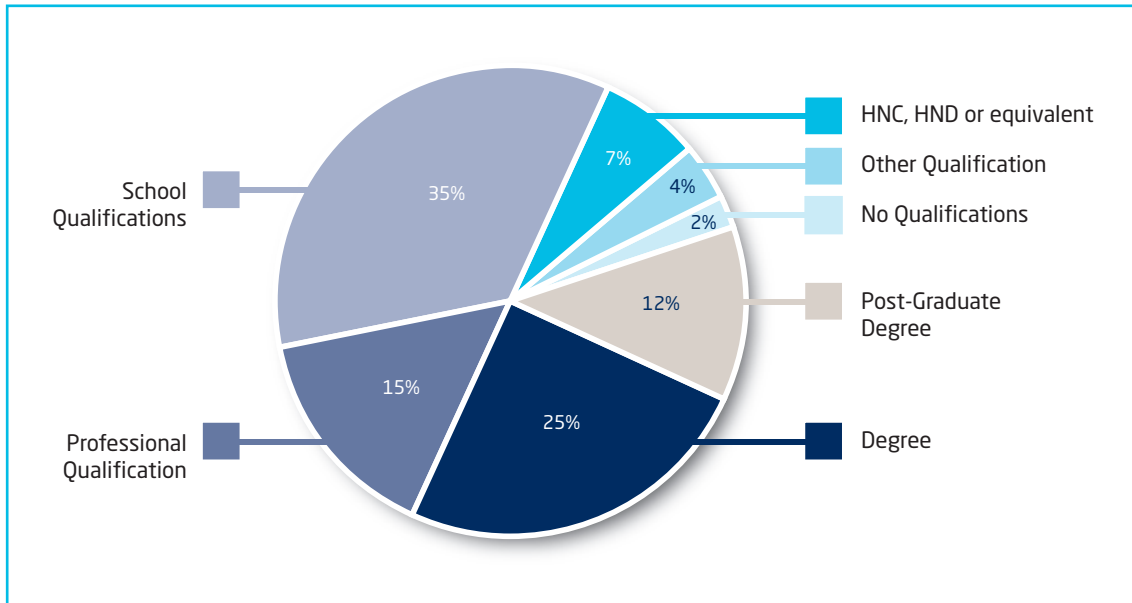
12% of the group had a postgraduate degree as their highest qualification, 25% of the group had a degree, 15% had a professional qualification (e.g. Chartership), 35% had school level qualifications (including A Level, GCSE or equivalent), 7% had an HNC, HND or equivalent, with 4% having 'other' qualifications (e.g. NVQ) with the remaining 2% of the group having no formal qualifications.

³ Based on 90% sample response

⁴ Based on 88% sample response.

⁵ Based on 86% sample response.

Figure 18.4 Education level (highest UK qualification) of Standardization sample (N=1,153)



⁴ Based on 88% sample response

⁵ Based on 86% sample response

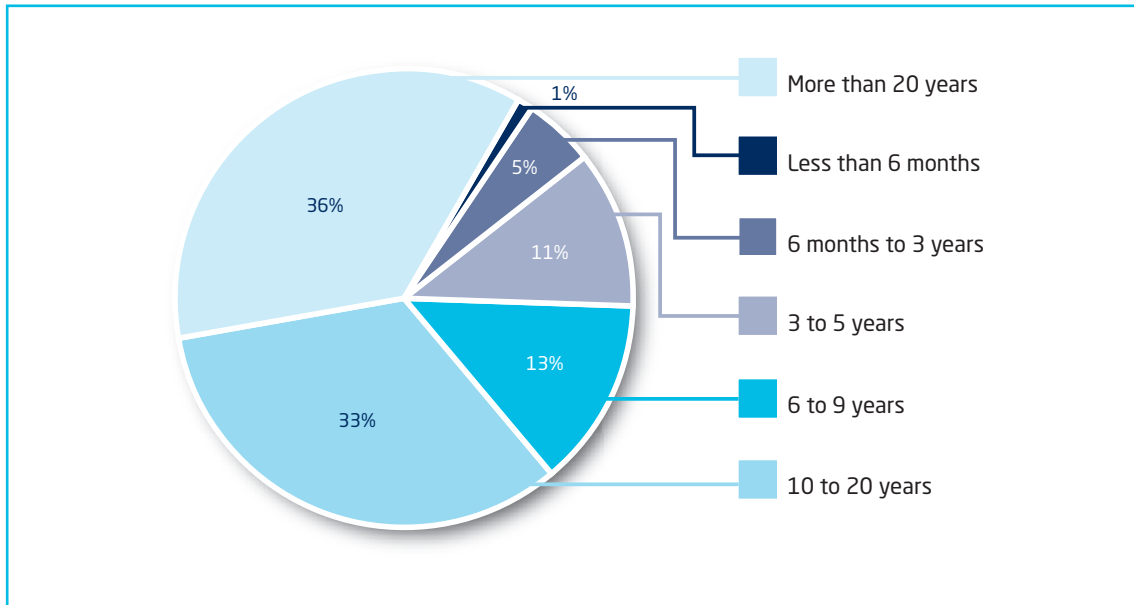
Work Function⁶

The participants worked in a range of job functions and areas. 77% of the group worked in the following functions/areas: HR, Customer Service, Accounts and Finance, Sales and Administration. The remaining 23% worked in a range of other functions/areas including Engineering, IT, Marketing, Executive, Office Management, Production, R&D and Catering.

Work Experience⁷

36% of the group had more than 20 years' work experience, 33% had between 10 and 20 years, 13% between 6 and 9 years, 11% between 3 and 5 years, 5% between 6 months' and 3 years and 1% had less than 6 months work experience.

Figure 18.5 Work experience level of Standardization sample (N=1,153)



⁶ Based on 86% sample response

⁷ Based on 94% sample response

18.3 Stratification of the Saville Consulting Wave Professional Styles (IA) Norms

On Different Norms

Population Norms

Population norms are usually stratified to be representative of an entire country's population in terms of age, gender, social class, ethnicity, geographical location etc. Saville Consulting have not attempted - and have no plans to attempt - a population norm for Saville Consulting Wave. The authors' previous experience of conducting population norm standardizations of the OPQCM5.2 and the OPQ32n indicated that these norms were relatively rarely used and were unrepresentative of the samples they were being applied to in selection and development. Not only were these norms unrepresentative in terms of key biographical variables of the operational contexts in which the assessment are used, such as educational and job level, but, perhaps more importantly, those participants completing the assessments did so with very different motivations behind their responses. The motivations and therefore the responses of candidates applying for a job or individuals completing an assessment for developmental purposes tend to be very different to those of individuals randomly sampled for a population norm. This means that population norms tend to be unrepresentative of candidates applying for a job or individuals completing assessments as part of a developmental process.

Client Norms

Client norms are at the opposing end of the norm spectrum to population norms in terms of their representativeness. They are collected for a particular client for a particular purpose. A company may seek, for example, their own norm consisting of all of last year's graduate recruitment candidates. These norms are only likely to be unrepresentative where the group is changing significantly over time. A disadvantage is that it does not compare candidates to an external benchmark of other Graduates in other companies.

User Norms

User norms are based on operational use and are largely stratified to provide users of an assessment the opportunity to choose a large representative group which has high face validity to the users of the assessment, e.g. UK Graduates.

Saville Consulting work towards stratifying our user norms into:

- Senior Managers & Executives
- Professionals & Managers
- Mixed Occupational
- Graduates
- Individual Contributors

Norms are published of three types:

- National Norms
- Regional (worldwide) Norms
- International Norms

International Norms are available for occasions where it is less appropriate or not possible to apply a comparison group from an individual country. Saville Consulting do not suggest that international norms are generally used in preference to national norms. Where a group is international, users may want to reflect on the composition of these norms (information provided in the Appendices) to decide on whether they are appropriate. There is in fact a great deal of similarity between the scores based on International norms and UK and US norms.

In practice, with Professional Styles, the highest number of completions tends to be for the Professional and Managerial level and, as a result, when we are standardizing a questionnaire in a new language and/or country, this is one of the first norms that is typically produced.

Saville Consulting user norms were collected from the Oasys system and are comprised of job applicants and candidates for other assessment purposes such as individual development, talent management or team building. A small minority will have been for research and validation purposes (<5%). Where there are large numbers of completions within one organization, country or region, overbalance was prevented by limiting the number of such completions in norm groups to 30%.

Saville Consulting International Norms 2009

Norm data was collected in occupational use, except where clients had requested to not be included. All responses and associated demographical information of individuals who completed Wave Professional Styles (IA) were retrieved, which amounted to N=62,285 completions. After removing those completed for system testing purposes, only responses with corresponding biodata¹ were considered for the norm groups. The dataset was then split by culture. Based on completion numbers per cultural group, the data was divided into four separate datasets, namely UK (N=33,730), US (N=4,271), International (N=13,333) and Australia (N=474). 'International' refers to all non-UK/-US data in addition to 20% of randomly selected cases of the UK and US data respectively.

¹ After observing low completion levels for biodata the user interface was updated to better encourage candidates to complete this section, although it is still not mandatory.

Subsequently, the US, UK and International cultural groups were further broken down by levels of management responsibility to achieve the following four norm group levels per culture:

- **Senior Managers & Executives** - Includes data from individuals describing their management level as Board, Executive or Senior Manager
- **Professionals & Managers** - Includes data from individuals describing their management level as Manager, Team Leader, Professional/Specialist, Management Trainee, Board, Executive or Senior Manager
- **Mixed Occupational Group** - Includes data from individuals with any level of management responsibility with the exception of students
- **Graduates** - Includes data from individuals who indicated that they have a first/undergraduate or postgraduate degree as their highest qualification

The Australian dataset, which was not sufficiently large to be split further into subgroups, was characterised as 'Professionals & Managers', based on the information given by individuals with regards to their management levels.

Saville Consulting Individual Contributor Norms 2011

The purpose of these norms was to represent data from individuals without management responsibility. Their creation and stratification followed a similar process compared to the International Norms 2009 explained above. Norm data and associated demographical information was gathered in occupational use (except where clients had requested to not be included), amounting to N=109,290 completions. Upon removal of system testing completions, only responses with corresponding biodata were retained for the norm groups. The dataset was then split by culture. Based on completion numbers per cultural group, the data was divided into three separate datasets, namely UK (N=3,190), US (N=323) and International (N=2,202). As with the International Norms 2009, 'International' refers to all non-UK/-US data in addition to 20% of randomly selected cases of UK and US data respectively. Since this set of norms was meant to represent a non-managerial population, only cases in which participants had described themselves as professional or non-professional individual contributors or those that had indicated not having any management responsibility were considered. Furthermore, as a further safeguard to ensure the norms would consist of non-managerial data only, participants who had described their job titles as 'director', 'manager', 'leader' or 'executive' were also subsequently excluded.

Saville Consulting International Sales Norm 2011

The target group of the Sales norm was individuals working in a non-managerial, sales-related job role. Therefore, the data was taken from the dataset used to create the Individual Contributor Norms. System testing completions and individuals who did not provide information on management responsibility had already been removed. The dataset (N=6407) contained only individuals who described themselves as professional or non-professional individual contributors or those that had indicated not having any management responsibility. 'Current Job Title' was then used to categorise individuals into groups including 'Sales' (other groups, such as 'Administration' and 'Customer Service', were used to create separate norms for the Strengths instruments). In this step, those who did not provide a job title or whose job title implied management responsibilities (e.g. 'director') were excluded to ensure that the final sample contained no individuals who stated themselves as team leaders or managers at any level. Caution was taken into separating sales-related roles from financial services as the target for this norm is specific to sales rather than any commercial job roles. Subsequently, only job titles indicating that they were sales-related were included in the norm, resulting in 311 individuals.

Norm group descriptions were compiled based on the information obtained by candidates concerning the demographical variables of gender, age, education (highest qualification), cultural/ethnic background, work experience and industry sector. For full descriptions of all norms, refer to the Appendices in this handbook.

While there are population norms that are representative of the specific population, Saville Consulting recommends the use of operational user norms chosen according to workplace function/level due to the importance of them having the same motivational context. Bespoke 'special user' norms can be created for individual clients on request. For more information regarding bespoke norms, please contact Saville Consulting.

18.4 Professional Styles Standardization Norm Tables

Table 18.2 Professional Styles Standardization Group Norm Table, Invited Access (IA). (N=1,153)

Dimension	IA Mean	IA SD
Analytical	62.87	9.78
Factual	65.89	8.86
Rational	53.82	13.09
Learning Oriented	62.43	11.93
Practically Minded	67.38	9.68
Insightful	65.42	8.73
Inventive	52.83	13.41
Abstract	58.21	11.41
Strategic	56.13	11.20
Interactive	53.75	13.63
Engaging	67.11	10.88
Self-promoting	45.80	12.32
Convincing	55.80	10.31
Articulate	57.59	12.25
Challenging	51.39	11.72
Purposeful	54.60	10.96
Directing	58.81	12.86
Empowering	59.44	12.67
Self-assured	59.70	11.06
Composed	53.40	13.50
Resolving	58.65	11.90
Positive	65.93	10.92
Change Oriented	61.75	11.34
Receptive	60.20	9.76
Attentive	65.43	11.08
Involving	65.55	9.10
Accepting	63.60	12.01
Reliable	64.95	13.41
Meticulous	64.48	13.69
Conforming	53.48	14.52
Organized	64.94	11.40
Principled	71.84	9.66
Activity Oriented	65.35	10.63
Dynamic	57.83	10.53
Enterprising	53.24	15.15
Striving	61.82	10.50

Table 18.3 Professional Styles Standardization Group Norm Table, Supervised Access (SA). (N=1,153)

Dimension	SA Mean	SA SD
Analytical	62.82	9.95
Factual	64.93	9.56
Rational	52.80	13.55
Learning Oriented	64.42	10.99
Practically Minded	67.57	9.49
Insightful	66.00	8.87
Inventive	52.36	13.32
Abstract	55.69	12.04
Strategic	53.61	12.08
Interactive	52.31	12.50
Engaging	67.07	11.49
Self-promoting	43.85	12.34
Convincing	51.20	10.63
Articulate	56.56	11.89
Challenging	49.96	12.09
Purposeful	54.91	11.03
Directing	56.22	12.65
Empowering	59.31	13.17
Self-assured	61.62	12.28
Composed	52.16	14.09
Resolving	55.50	13.05
Positive	64.91	10.17
Change Oriented	61.49	11.59
Receptive	58.63	9.50
Attentive	63.77	11.68
Involving	63.02	9.51
Accepting	65.51	10.84
Reliable	66.00	12.47
Meticulous	64.65	13.04
Conforming	54.12	14.65
Organized	65.44	11.43
Principled	74.38	9.77
Activity Oriented	64.47	11.07
Dynamic	57.09	10.92
Enterprising	52.80	15.00
Striving	62.10	10.63

Reference: Appendix B

18.5 Professional Styles Regional Norm Tables

Table 18.4 Professional Styles UK Senior Managers & Executives Group Norm Table, Invited Access (IA). (N=4,276)

Dimension	IA Mean	IA SD
Analytical	67.06	8.31
Factual	66.12	8.27
Rational	54.16	11.83
Learning Oriented	63.42	9.68
Practically Minded	65.13	9.47
Insightful	70.50	7.71
Inventive	61.10	12.15
Abstract	59.29	10.43
Strategic	68.46	10.70
Interactive	53.07	11.53
Engaging	63.96	9.60
Self-promoting	41.65	10.22
Convincing	59.72	9.19
Articulate	63.51	9.73
Challenging	50.94	9.92
Purposeful	60.66	9.52
Directing	69.13	9.30
Empowering	70.56	10.15
Self-assured	61.52	9.18
Composed	57.80	11.53
Resolving	59.34	9.98
Positive	66.56	9.95
Change Oriented	69.21	10.00
Receptive	61.92	9.17
Attentive	64.15	10.27
Involving	66.50	9.34
Accepting	61.47	10.48
Reliable	64.82	11.71
Meticulous	62.48	12.45
Conforming	44.49	12.74
Organized	67.72	10.30
Principled	74.92	8.48
Activity Oriented	66.25	9.08
Dynamic	66.28	9.19
Enterprising	59.24	13.31
Striving	69.67	9.07

Reference: Appendix D

Table 18.5 Professional Styles UK Professionals & Managers Group Norm Table, Invited Access (IA). (N=9,884)

Dimension	IA Mean	IA SD
Analytical	67.07	8.35
Factual	66.59	8.26
Rational	55.11	12.18
Learning Oriented	64.13	9.87
Practically Minded	66.45	9.42
Insightful	69.65	7.75
Inventive	59.88	12.25
Abstract	59.69	10.43
Strategic	66.11	11.02
Interactive	53.01	11.62
Engaging	64.32	9.82
Self-promoting	41.94	10.40
Convincing	58.84	9.40
Articulate	62.96	10.08
Challenging	50.81	10.06
Purposeful	59.19	9.92
Directing	67.58	10.28
Empowering	68.39	10.86
Self-assured	61.79	9.32
Composed	56.68	11.48
Resolving	59.08	10.56
Positive	66.27	9.92
Change Oriented	67.63	10.11
Receptive	62.36	9.38
Attentive	64.13	10.45
Involving	66.84	9.42
Accepting	62.01	10.52
Reliable	66.20	11.78
Meticulous	64.07	12.28
Conforming	47.48	13.47
Organized	68.59	10.30
Principled	74.73	8.61
Activity Oriented	65.80	9.50
Dynamic	64.63	9.38
Enterprising	57.63	13.78
Striving	68.74	9.37

Reference: Appendix E

Table 18.6 Professional Styles UK Mixed Occupational Group Norm Table, Invited Access (IA). (N=10,953)

Dimension	IA Mean	IA SD
Analytical	67.05	8.38
Factual	66.71	8.24
Rational	55.27	12.22
Learning Oriented	64.49	9.90
Practically Minded	66.81	9.43
Insightful	69.40	7.81
Inventive	59.58	12.27
Abstract	59.83	10.41
Strategic	65.67	11.05
Interactive	53.21	11.70
Engaging	64.60	9.90
Self-promoting	41.97	10.40
Convincing	58.56	9.47
Articulate	62.83	10.15
Challenging	50.68	10.16
Purposeful	58.75	10.03
Directing	66.95	10.61
Empowering	67.83	11.05
Self-assured	62.07	9.36
Composed	56.50	11.49
Resolving	59.18	10.63
Positive	66.30	9.89
Change Oriented	67.38	10.12
Receptive	62.54	9.36
Attentive	64.30	10.47
Involving	67.00	9.42
Accepting	62.24	10.49
Reliable	66.66	11.75
Meticulous	64.49	12.23
Conforming	48.32	13.60
Organized	68.83	10.24
Principled	74.81	8.57
Activity Oriented	65.90	9.61
Dynamic	64.24	9.50
Enterprising	57.36	13.88
Striving	68.71	9.45

Table 18.7 Professional Styles UK Graduates Group Norm Table, Invited Access (IA). (N=4,021)

Dimension	IA Mean	IA SD
Analytical	67.66	8.54
Factual	67.54	8.31
Rational	55.91	12.40
Learning Oriented	66.70	9.48
Practically Minded	67.10	9.43
Insightful	68.80	7.98
Inventive	58.89	12.47
Abstract	61.18	10.60
Strategic	64.92	10.90
Interactive	54.06	12.02
Engaging	65.87	10.15
Self-promoting	43.71	10.80
Convincing	57.95	9.78
Articulate	63.14	10.31
Challenging	51.88	10.78
Purposeful	57.72	10.33
Directing	65.54	11.14
Empowering	65.31	11.32
Self-assured	62.89	9.55
Composed	55.31	11.62
Resolving	58.46	10.67
Positive	65.61	10.09
Change Oriented	66.41	10.21
Receptive	64.33	9.21
Attentive	64.24	10.86
Involving	66.52	9.72
Accepting	62.16	10.48
Reliable	66.43	11.87
Meticulous	65.21	12.19
Conforming	49.37	13.61
Organized	68.76	10.56
Principled	73.41	9.07
Activity Oriented	66.17	9.86
Dynamic	63.71	9.64
Enterprising	57.54	14.11
Striving	69.44	9.44

Reference: Appendix G

Table 18.8 Professional Styles UK Individual Contributors Norm Group Table, Invited Access (IA). (N=3,190')

Dimension	Mean	SD
Analytical	67.25	8.89
Factual	67.83	8.32
Rational	57.20	12.67
Learning Oriented	67.36	9.59
Practically Minded	69.80	9.16
Insightful	67.65	7.84
Inventive	56.46	11.76
Abstract	60.98	10.25
Strategic	60.94	10.45
Interactive	53.90	11.96
Engaging	67.72	10.28
Self-promoting	41.98	10.30
Convincing	55.20	9.98
Articulate	61.91	10.81
Challenging	48.53	10.64
Purposeful	54.77	9.95
Directing	60.67	11.81
Empowering	62.08	11.38
Self-assured	63.18	9.36
Composed	55.29	11.62
Resolving	59.71	11.11
Positive	66.21	9.88
Change Oriented	65.59	9.96
Receptive	63.64	9.45
Attentive	65.57	10.44
Involving	68.40	9.07
Accepting	64.46	10.02
Reliable	70.08	11.02
Meticulous	67.71	11.32
Conforming	54.61	13.20
Organized	69.76	9.71
Principled	74.97	8.42
Activity Oriented	66.58	10.03
Dynamic	60.59	9.52
Enterprising	54.88	14.19
Striving	68.24	9.81

Table 18.9 Professional Styles US Senior Managers & Executives Group Norm Table, Invited Access (IA). (N=597)

Dimension	IA Mean	IA SD
Analytical	68.79	8.17
Factual	67.46	8.74
Rational	55.65	11.57
Learning Oriented	66.14	9.79
Practically Minded	66.96	8.68
Insightful	70.76	7.36
Inventive	59.75	10.81
Abstract	61.72	10.51
Strategic	68.48	9.88
Interactive	52.07	11.53
Engaging	63.80	9.91
Self-promoting	41.78	10.98
Convincing	57.67	9.65
Articulate	64.80	10.02
Challenging	51.13	10.83
Purposeful	61.19	9.89
Directing	68.93	9.48
Empowering	67.09	11.00
Self-assured	64.47	8.78
Composed	57.45	11.47
Resolving	57.83	10.83
Positive	65.79	9.63
Change Oriented	67.71	9.99
Receptive	61.40	8.96
Attentive	63.16	11.26
Involving	65.09	10.41
Accepting	62.74	11.17
Reliable	64.94	11.82
Meticulous	63.40	12.63
Conforming	46.79	12.88
Organized	66.65	10.88
Principled	78.69	7.24
Activity Oriented	66.39	9.81
Dynamic	66.63	9.15
Enterprising	62.24	13.48
Striving	72.73	8.66

Reference: Appendix H

Table 18.10 Professional Styles US Professionals & Managers Group Norm Table, Invited Access (IA). (N=1,849)

Dimension	IA Mean	IA SD
Analytical	68.54	8.36
Factual	67.01	8.54
Rational	56.21	11.61
Learning Oriented	66.66	9.99
Practically Minded	68.05	8.36
Insightful	69.96	7.53
Inventive	57.97	11.30
Abstract	60.96	10.29
Strategic	66.20	10.13
Interactive	52.83	11.85
Engaging	64.91	10.27
Self-promoting	41.69	10.95
Convincing	56.48	9.67
Articulate	64.38	10.35
Challenging	49.35	10.96
Purposeful	59.27	9.95
Directing	67.53	10.02
Empowering	66.14	10.93
Self-assured	64.92	8.57
Composed	56.42	11.75
Resolving	57.61	10.60
Positive	66.10	9.50
Change Oriented	66.51	10.30
Receptive	62.51	9.23
Attentive	63.72	10.67
Involving	65.92	9.90
Accepting	64.28	10.33
Reliable	66.29	11.77
Meticulous	64.86	11.94
Conforming	49.90	13.13
Organized	67.63	10.44
Principled	78.34	7.36
Activity Oriented	66.30	9.95
Dynamic	64.94	9.71
Enterprising	60.30	14.13
Striving	71.95	8.66

Table 18.11 Professional Styles US Mixed Occupational Group Norm Table, Invited Access (IA). (N=2,143)

Dimension	IA Mean	IA SD
Analytical	68.28	8.44
Factual	66.86	8.57
Rational	55.90	11.63
Learning Oriented	66.66	10.00
Practically Minded	68.15	8.37
Insightful	69.59	7.69
Inventive	57.46	11.48
Abstract	60.64	10.48
Strategic	65.74	10.22
Interactive	53.14	11.99
Engaging	65.52	10.47
Self-promoting	41.94	11.29
Convincing	56.40	9.75
Articulate	64.46	10.54
Challenging	48.90	11.12
Purposeful	58.71	10.09
Directing	66.88	10.44
Empowering	65.54	11.23
Self-assured	65.20	8.71
Composed	56.02	11.80
Resolving	57.47	10.77
Positive	66.26	9.65
Change Oriented	65.91	10.51
Receptive	62.69	9.32
Attentive	64.01	10.65
Involving	65.75	9.93
Accepting	64.40	10.22
Reliable	66.58	11.78
Meticulous	65.13	11.86
Conforming	50.62	13.31
Organized	67.74	10.45
Principled	78.29	7.55
Activity Oriented	66.25	10.05
Dynamic	64.51	9.85
Enterprising	60.49	14.69
Striving	71.93	8.83

Reference: Appendix J

Table 18.12 Professional Styles US Graduates Group Norm Table, Invited Access (IA). (N=685)

Dimension	IA Mean	IA SD
Analytical	67.92	8.81
Factual	66.80	8.54
Rational	55.88	12.28
Learning Oriented	66.94	10.35
Practically Minded	68.55	8.26
Insightful	69.53	8.08
Inventive	57.06	12.15
Abstract	60.66	10.9
Strategic	64.55	10.45
Interactive	53.84	12.77
Engaging	65.97	10.63
Self-promoting	44.06	12.16
Convincing	56.20	9.88
Articulate	63.70	10.04
Challenging	50.82	11.48
Purposeful	58.14	10.21
Directing	66.09	10.78
Empowering	63.01	11.18
Self-assured	65.09	9.28
Composed	54.99	11.97
Resolving	56.94	10.76
Positive	65.22	10.08
Change Oriented	65.66	10.67
Receptive	64.80	9.32
Attentive	63.74	11.1
Involving	65.55	9.50
Accepting	63.81	10.16
Reliable	65.53	12.05
Meticulous	64.70	11.78
Conforming	51.10	13.95
Organized	66.49	11.08
Principled	76.72	8.00
Activity Oriented	66.20	10.12
Dynamic	63.79	9.95
Enterprising	59.89	14.58
Striving	72.04	8.65

Table 18.13 Professional Styles US Individual Contributors Norm Group Table, Invited Access (IA).(N=323)

Dimension	Mean	SD
Analytical	67.35	8.96
Factual	66.92	8.59
Rational	55.56	11.73
Learning Oriented	67.05	9.76
Practically Minded	70.04	8.41
Insightful	67.78	8.04
Inventive	54.18	11.79
Abstract	59.21	11.16
Strategic	62.17	10.53
Interactive	54.16	12.64
Engaging	68.99	10.88
Self-promoting	42.04	12.09
Convincing	54.25	10.62
Articulate	63.27	11.83
Challenging	46.69	11.39
Purposeful	54.86	10.12
Directing	61.96	12.15
Empowering	62.58	12.20
Self-assured	65.85	9.28
Composed	53.62	11.63
Resolving	57.53	11.41
Positive	66.67	10.35
Change Oriented	63.61	10.55
Receptive	64.15	9.63
Attentive	65.59	10.81
Involving	66.25	9.32
Accepting	65.63	9.88
Reliable	69.85	12.18
Meticulous	68.47	11.67
Conforming	56.24	13.12
Organized	70.51	10.45
Principled	78.13	8.71
Activity Oriented	67.33	10.56
Dynamic	61.15	9.41
Enterprising	57.74	16.93
Striving	71.91	9.72

Reference: Appendix R

Table 18.14 Professional Styles International Senior Managers & Executives Group Norm Table, Invited Access (IA). (N=953)

Dimension	IA Mean	IA SD
Analytical	67.84	8.45
Factual	66.97	8.29
Rational	56.24	12.13
Learning Oriented	65.63	9.93
Practically Minded	66.59	9.02
Insightful	71.36	7.97
Inventive	60.93	11.87
Abstract	60.65	10.61
Strategic	67.95	10.32
Interactive	53.50	11.50
Engaging	63.73	9.84
Self-promoting	42.61	10.92
Convincing	60.64	9.67
Articulate	63.79	9.57
Challenging	53.72	11.21
Purposeful	62.77	9.86
Directing	69.27	9.96
Empowering	68.19	10.74
Self-assured	65.02	9.20
Composed	57.89	11.10
Resolving	57.49	10.61
Positive	66.34	9.24
Change Oriented	68.09	9.76
Receptive	61.01	9.03
Attentive	63.25	11.01
Involving	64.65	9.98
Accepting	61.49	10.59
Reliable	65.71	11.76
Meticulous	63.33	12.33
Conforming	46.83	13.25
Organized	67.10	11.14
Principled	77.39	8.08
Activity Oriented	66.19	9.82
Dynamic	67.54	9.23
Enterprising	62.54	12.95
Striving	71.58	8.69

Table 18.15 Professional Styles International Professionals & Managers Group Norm Table, Invited Access (IA). (N=2,600)

Dimension	SA Mean	SA SD
Analytical	68.12	8.30
Factual	67.17	8.17
Rational	57.79	12.43
Learning Oriented	66.48	9.76
Practically Minded	67.60	8.69
Insightful	70.34	7.68
Inventive	59.30	11.81
Abstract	60.51	10.23
Strategic	65.48	10.46
Interactive	53.77	11.73
Engaging	63.93	9.99
Self-promoting	42.75	10.73
Convincing	59.90	9.85
Articulate	63.33	10.03
Challenging	53.85	11.32
Purposeful	61.15	10.32
Directing	67.86	10.52
Empowering	66.62	10.88
Self-assured	65.06	9.27
Composed	57.02	11.38
Resolving	56.90	10.61
Positive	66.03	9.62
Change Oriented	66.89	10.15
Receptive	62.30	9.26
Attentive	63.54	10.70
Involving	65.93	9.71
Accepting	62.58	10.40
Reliable	67.23	11.62
Meticulous	64.97	11.78
Conforming	50.67	13.63
Organized	68.48	10.44
Principled	77.46	7.73
Activity Oriented	65.71	10.20
Dynamic	65.76	9.59
Enterprising	59.99	14.06
Striving	70.90	8.99

Reference: Appendix M

Table 18.16 Professional Styles International Mixed Occupational Group Norm Table, Invited Access (IA). (N=3,095)

Dimension	IA Mean	IA SD
Analytical	68.00	8.31
Factual	67.18	8.13
Rational	58.06	12.42
Learning Oriented	66.98	9.77
Practically Minded	68.14	8.71
Insightful	69.64	7.93
Inventive	58.92	11.95
Abstract	60.51	10.21
Strategic	64.78	10.69
Interactive	54.07	11.87
Engaging	64.38	10.03
Self-promoting	42.99	11.06
Convincing	59.49	10.00
Articulate	62.95	10.29
Challenging	53.41	11.42
Purposeful	60.19	10.47
Directing	66.55	11.37
Empowering	65.69	11.08
Self-assured	65.29	9.49
Composed	56.74	11.42
Resolving	56.73	10.82
Positive	66.03	9.61
Change Oriented	66.44	10.21
Receptive	62.81	9.32
Attentive	63.78	10.51
Involving	66.07	9.63
Accepting	62.93	10.30
Reliable	68.11	11.67
Meticulous	65.54	11.55
Conforming	52.32	13.86
Organized	68.98	10.32
Principled	77.26	7.88
Activity Oriented	65.63	10.23
Dynamic	64.95	9.71
Enterprising	59.61	14.17
Striving	70.77	9.13

Table 18.17 Professional Styles International Graduates Group Norm Table, Invited Access (IA). (N=1,423)

Dimension	IA Mean	IA SD
Analytical	68.04	8.45
Factual	67.46	7.93
Rational	58.01	13.04
Learning Oriented	68.29	9.71
Practically Minded	68.62	8.83
Insightful	69.02	7.95
Inventive	58.70	12.08
Abstract	60.87	10.20
Strategic	64.39	10.51
Interactive	56.14	12.14
Engaging	65.65	10.45
Self-promoting	44.32	11.64
Convincing	59.88	10.05
Articulate	64.08	10.26
Challenging	53.97	11.27
Purposeful	59.77	10.12
Directing	66.87	10.88
Empowering	65.14	11.15
Self-assured	65.81	9.83
Composed	56.04	11.60
Resolving	56.65	10.79
Positive	65.97	9.85
Change Oriented	66.27	10.04
Receptive	64.77	9.25
Attentive	64.36	10.68
Involving	66.54	9.69
Accepting	62.94	9.88
Reliable	68.00	11.97
Meticulous	65.57	11.76
Conforming	53.23	13.90
Organized	69.20	10.46
Principled	76.66	8.18
Activity Oriented	66.01	10.06
Dynamic	64.64	9.68
Enterprising	59.95	14.27
Striving	71.20	9.18

Reference: Appendix O

Table 18.18 Professional Styles International Individual Contributors Norm Group Table, Invited Access (IA). (N=2,202')

Dimension	SA Mean	SA SD
Analytical	68.00	8.50
Factual	67.66	7.95
Rational	58.13	12.90
Learning Oriented	68.10	9.20
Practically Minded	69.54	8.82
Insightful	68.26	7.81
Inventive	55.75	11.76
Abstract	60.22	10.40
Strategic	60.44	10.65
Interactive	55.93	12.15
Engaging	66.07	10.40
Self-promoting	43.56	11.17
Convincing	57.00	10.18
Articulate	62.32	10.95
Challenging	53.38	11.87
Purposeful	56.29	10.44
Directing	59.20	12.91
Empowering	62.05	11.36
Self-assured	65.31	9.78
Composed	55.21	12.08
Resolving	56.63	11.36
Positive	66.66	9.68
Change Oriented	65.16	10.20
Receptive	64.56	9.28
Attentive	65.38	10.49
Involving	67.03	9.34
Accepting	64.74	9.61
Reliable	70.67	11.26
Meticulous	67.56	11.57
Conforming	57.16	13.57
Organized	70.03	10.07
Principled	76.43	8.14
Activity Oriented	65.89	10.49
Dynamic	62.71	9.89
Enterprising	55.84	14.93
Striving	68.70	10.16

Table 18.19 Professional Styles Australian Professionals & Managers Group Norm Table, Invited Access (IA). (N=474)

Dimension	IA Mean	IA SD
Analytical	67.41	8.28
Factual	69.53	7.72
Rational	54.08	11.87
Learning Oriented	66.62	9.33
Practically Minded	69.15	8.32
Insightful	68.17	8.86
Inventive	55.24	11.63
Abstract	61.60	9.74
Strategic	64.44	10.07
Interactive	53.03	11.08
Engaging	64.32	9.44
Self-promoting	40.18	10.36
Convincing	55.17	9.42
Articulate	62.84	9.38
Challenging	49.11	10.84
Purposeful	57.19	10.57
Directing	66.43	10.71
Empowering	65.33	10.73
Self-assured	62.06	8.65
Composed	55.07	11.26
Resolving	60.69	10.93
Positive	64.76	9.28
Change Oriented	65.05	9.63
Receptive	62.63	8.79
Attentive	66.19	10.36
Involving	69.18	9.88
Accepting	64.87	9.97
Reliable	67.28	11.88
Meticulous	67.26	11.91
Conforming	54.35	12.06
Organized	69.93	10.53
Principled	77.43	7.52
Activity Oriented	66.20	10.23
Dynamic	60.47	10.13
Enterprising	52.91	13.53
Striving	65.69	9.73

Reference: Appendix P

18.6 Further Reference Material

Further information can be found in the Fairness chapter and appendices of this handbook.