



Extended version

Personality Assessment White Paper

In partnership with Psycholate



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Overview

NEO questionnaires have five dimensions (1) Agreeableness, (2) Conscientiousness, (3) Extraversion, (4) Neuroticism, and (5) Openness-to-experience. NEO questionnaires such as the Johnson NEO-PI-R (JNEO-PI-R), have six facets for each dimension. These facets, measure different aspects of their respective dimensions. Tables 1-5 show the questions used in the IPIP JNEO-PI-R and the revised questions used for the Workable Personality Assessment (WPA). These tables help to discuss the rationale for the changes between the IPIP JNEO-PI-R and WPA. Until now, we performed three revisions of the WPA. The purpose is to increase reliability. We also want to assure that each facet is unidimensional, verify the general structure of WPA for the particular population WPA is deployed, and aim for relevance and briefness.

In tables 1-5, we include the status of each question. Items marked as active are currently used for data collection and scoring. Trial items are used to collect data, but the responses for these items are not scored. Data on these items will allow us to evaluate their reliability, examine the response distributions, and determine if they can be used for scoring. Finally, tables 1-5 include the removed items, which were previously used either as trial or active items. Subsequent analyses showed that they have low reliability or discrimination, so they are no longer used for data collection or scoring. These items are signified with the letter r.

One issue we identified in the second version of the questionnaire, was that for some questions, participants provided extreme responses. The questions are answered on a scale from 1 to 5, and in extreme responses, the majority of participants predominantly respond either 1 or 5, so the responses display low variability. This presented us with the problem of discriminability. In these cases, if all participants provide the same answers, it's difficult to differentiate one participant from another. In these cases, the wording of the questions was changed to address the issue. Table 7 shows the response frequencies of active items, indicating that we have acceptable variability at the moment.

Regarding the removed dimensions, the IPIP project provides data for the IPIP JNEO-PI-R. With this data, it's possible to provide correlations between facets and determine proxies for measuring the removed facets. Nonetheless, the removed facets were judged to be irrelevant for the purposes of WPA. Table 6 shows the correlations for the IPIP JNEO-PI-R facets. Below we will describe each facet separately and then we will make a brief discussion on validity.

Personality Glossary

It was decided that some of the IPIP Big Five scales would have to be renamed as part of our effort to offer job relevant non-discriminatory labels to the scales. In some cases, the new items we introduced were not in accordance with the original name of the scale, so we opted for a more fitting one.

Factor	Facet_Key	IPIP Scale	HighScore Name	LowScore Name
Agreeableness	A1	Trust	Trusting	Suspicious
	A2	Morality	Moral	Opportunistic
	A3	Altruism	Caring	Self-interested
	A4	Cooperation	Compromising	Confrontational
	A5	Modesty	Modest	Flamboyant
	A6	Sympathy		
Conscientiousness	C1	Self-efficacy	Self-efficient	Self-doubting
	C2	Orderliness	Orderly	Chaos-tolerant
	C3	Dutifulness	Reliable	Unpredictable
	C4	Achievement-striving	Achievement-striving	Work-shy
	C5	Self-discipline	Self-disciplined	Indulgent
	C6	Cautiousness	Cautious	Immoderate

Factor	Facet_Key	IPIP Scale	HighScore Name	LowScore Name
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Extraversion

E1	Friendliness	Friendly	Distant
E2	Gregariousness		
E3	Assertiveness	Assertive	Undetermined
E4	Activity level	Industrious	Slow paced
E5	Excitement-seeking		
E6	Cheerfulness	Optimist	Pessimist

Neuroticism

N1	Anxiety	Calm	Worried
N2	Anger	Even-tempered	Irritable
N3	Depression		
N4	Self-consciousness	Socially confident	Shy
N5	Immoderation		
N6	Vulnerability	Relaxed	Stressed

Openness To Experience

O1	Imagination	Imaginative	Realistic
O2	Artistic interests		
O3	Emotionality	Empathetic	Apathetic
O4	Adventurousness	Creative / Innovative	Conventional
O5	Intellect	Theoretical	Practical
O6	Liberalism		



Agreeableness

People displaying agreeableness usually trust people and have a high regard for others. They tend to be humble, avoid confrontations, and display sympathy and empathy. They are also considered cooperative, helpful and easygoing. Agreeableness has 6 facets: trust, morality, altruism, cooperation, modesty, and sympathy.

A1 Trust

High scores in trust indicate someone who believes in human goodness and good intentions. They feel that others are trustworthy and basically moral, and believe that at the end of the day, everything will be fine. In the last statement there is a sense of optimism as well.

Trust has notable correlations with friendliness E1 and cheerfulness E6 $r=.36$, $p<0.001$, in both cases. Moderate negative correlations with trust are observed with anger N2, and depression N3 $r=-.31$ $r=-.33$, $p<0.001$, respectively. Correlations suggest that someone who displays trust, also tends to be friendly, cheerful and calm, and not depressed.

Trusting people may be useful in professions where most dealings and interactions occur in good terms and others are not expected to cheat or lie. There are cases where this does not occur. For an investigator of any type, for instance, trust could be an impediment in his work.

A2 Morality

High scores in morality indicate someone who sticks to the rules, respects others, and is truthful. The opposite of morality in this context, would be someone who takes advantage of others, cheats, lies, and cuts corners to achieve objectives.

Morality has moderate correlations with cooperation A4, dutifulness C3, altruism A3 and excitement seeking E5, $r=.48$, $r=.44$, $r=.33$, $r=-.30$, $p<0.001$. This means that people scoring high on morality also tend to be cooperative, dutiful, altruistic, and do not display excitement-seeking behavior.

It's hard to imagine any profession or any aspect of social life where moral people would not be desirable. However, one can imagine cases where respect to the rules may be non desirable. In cases, for instance, where rules have to be changed in order to achieve a desirable goal, or current rules are counterproductive. However, it seems that a non-moral person will change rules in non-ethical terms.

A3 Altruism

High scores in altruism indicate someone who places the interests of others over their own personal interests. An altruistic person is aware and anticipates the needs of others, feels an urge to help, and tries to make people feel welcome and comfortable. They pay attention to the feelings of those around them, and place them in high regard.

Moderate correlations with altruism are observed with sympathy A6, emotionality O3, morality A2, and cheerfulness E6. $r=.46$, $r=.33$, $r=-.33$ $r=.30$, $p<0.001$. This means that people scoring high on altruism tend to display sympathy, emotionality, morality, and cheerfulness.

There are several professions and services where helping others is relevant, one can imagine social workers or health workers. However, in some professions altruism may be an impediment. For instance, consider an altruistic tax inspector who is sympathetic to those under investigation.

A4 Cooperation

High scores on cooperation generally indicate someone who is easy to work with. Cooperative people avoid confrontations, they are kind to others and generally peaceful. They don't hold grudges, fight, or contradict or yell at others.

Notable correlations with cooperation are observed with anger N2, morality A2, dutifulness C3, and cautiousness C6 $r=-.49$, $r=.48$, $r=.38$, $r=.31$, $p<0.001$. This means that highly cooperative people also tend to be calm, moral, dutiful and cautious.

Cooperation seems to be desirable in cases where people have to work as a team, stick to the rules, and in lines of work where voicing objections may be counterproductive. However, a low score in cooperation may be irrelevant in lines of work where people generally work alone.

A5 Modesty

High scores on modesty indicate a non-narcissistic person who doesn't like being the center of attention or talking about themselves. They don't believe the world revolves around them, they don't boast about their virtues, or have an overinflated opinion about themselves. High scores on modesty might indicate someone with low self esteem, but despite this, modesty may still be desirable in some lines of work.

Moderate correlations with modesty are observed with assertiveness E3 $r=-.40$, $p<0.001$. The rest of the correlations between modesty A5 and the rest of the facets are all below .3. The correlation with assertiveness suggests that modest people are usually not assertive.

Some modest people may be shy, although this isn't an issue in most cases, especially where people have to be cooperative and follow rules. There are cases where shyness may be considered an impediment, for instance, where people are required to address an audience, or disseminate their work. In these cases, a very high modesty score may be problematic.

A6 Sympathy

High scores on sympathy indicate someone who can feel for others, may suffer from others' sorrows, who values cooperation over competition, and generally displays sympathetic characteristics.

Moderate correlations with sympathy are observed with altruism A3, artistic interests O2, and emotionality O3, $r=.46$, $r=.41$, $r=.40$, $p<0.001$. This means that people scoring high in sympathy also tend to score high in altruism, artistic interests, and emotionality.

Like altruism, one can imagine that sympathy can provide meaning and help people be productive in professions where they are required to help others. It seems that these people would not be happy, or perhaps counterproductive, in professions where their job is to punish others. A judge for instance. Sympathy was removed from the questionnaire, but a good proxy for sympathy is altruism A3, since, as mentioned, it has a moderate to high correlation with sympathy A6.

Questionnaire		Domain	Key	Label	Question	Disabled	Status
IPIP	●	Agreeableness	A1	Trust	I believe that others have good intentions		
IPIP	●	Agreeableness	A1	Trust	I distrust people		
IPIP	●	Agreeableness	A1	Trust	I trust others		
IPIP	●	Agreeableness	A1	Trust	I trust what people say		
WPA	●	Agreeableness	A1	Trusting	I believe that others have good intentions	F	active
WPA	●	Agreeableness	A1	Trusting	I distrust people	F	active
WPA	●	Agreeableness	A1	Trusting	I trust others	F	active
WPA	●	Agreeableness	A1	Trusting	I trust what people say	F	active
IPIP	●	Agreeableness	A2	Morality	I cheat to get ahead		
IPIP	●	Agreeableness	A2	Morality	I obstruct others plans		
IPIP	●	Agreeableness	A2	Morality	I take advantage of others		
IPIP	●	Agreeableness	A2	Morality	I use others for my own ends		
WPA		Agreeableness	A2	Moral	I feel ashamed to talk about my virtues	F	trial
WPA		Agreeableness	A2	Moral	I make an effort to appear concerned for others	F	trial
WPA	●	Agreeableness	A2	Moral	I may sometimes cheat to get ahead	F	active
WPA	●	Agreeableness	A2	Moral	I obstruct other people's plans	F	active
WPA	●	Agreeableness	A2	Moral	I take advantage of others	F	active
WPA	●	Agreeableness	A2	Moral	I use others for my own ends	F	active
WPA		Agreeableness	A2	Moral	I will praise someone to my advantage	F	trial

● No changes were made

● Minor changes that slightly change the meaning were made

● Minor changes that do not change the meaning at all were made

WPA: Workable Personality Assessment

Questionnaire		Domain	Key	Label	Question	Disabled	Status
IPIP	●	Agreeableness	A3	Altruism	I am concerned about others		
IPIP	●	Agreeableness	A3	Altruism	I am indifferent to the feelings of others		
IPIP	●	Agreeableness	A3	Altruism	I love to help others		
IPIP	●	Agreeableness	A3	Altruism	I take no time for others		
WPA		Agreeableness	A3	Caring	I enjoy doing things for other people	F	trial
WPA	●	Agreeableness	A3	Caring	I love helping others	F	active
WPA	●	Agreeableness	A3	Caring	I take no time for others	F	active
WPA	●	Agreeableness	A3	Caring	I'm concerned about others	F	active
WPA	●	Agreeableness	A3	Caring	I'm indifferent to the feelings of others	F	active
IPIP		Agreeableness	A4	Cooperation	I get back at others		
IPIP		Agreeableness	A4	Cooperation	I insult people		
IPIP		Agreeableness	A4	Cooperation	I love a good fight		
IPIP		Agreeableness	A4	Cooperation	I yell at people		
WPA		Agreeableness	A4	Peaceful	I always say what I think	T	trial
WPA		Agreeableness	A4	Peaceful	I avoid confrontations	T	r
WPA		Agreeableness	A4	Peacefull	I contradict others	T	r
WPA		Agreeableness	A4	Peaceful	I counter others' arguments	T	trial
WPA		Agreeableness	A4	Peaceful	I enjoy challenging other people's beliefs and opinions.	T	trial
WPA		Agreeableness	A4	Peaceful	I enjoy expressing unpopular opinions	T	trial
WPA		Agreeableness	A4	Peaceful	I have a sharp tongue	T	r

● No changes were made

● Minor changes that slightly change the meaning were made

● Minor changes that do not change the meaning at all were made

WPA: Workable Personality Assessment

Questionnaire	Domain	Key	Label	Question	Disabled	Status
WPA	Agreeableness	A4	Peaceful	I let others know what I really think	T	trial
WPA	Agreeableness	A4	Peaceful	I speak my mind truthfully	T	trial
WPA	Agreeableness	A4	Peaceful	I'm easy to satisfy	T	r
WPA	Agreeableness	A4	Peaceful	I'm not afraid to criticize constructively	T	trial
WPA	Agreeableness	A4	Peaceful	I'm the only one in the room who can spot faulty reasoning	T	trial
WPA	Agreeableness	A4	Peaceful	People are always wrong	T	trial
IPIP	Agreeableness	A5	Modesty	I believe that i am better than others		
IPIP	Agreeableness	A5	Modesty	I boast about my virtues		
IPIP	Agreeableness	A5	Modesty	I have a high opinion of myself		
IPIP	Agreeableness	A5	Modesty	I think highly of myself		
WPA	Agreeableness	A5	Modest	I believe that I am better than others	F	active
WPA	Agreeableness	A5	Modest	I boast about my virtues	F	active
WPA	Agreeableness	A5	Modest	I have a high opinion of myself	F	active
WPA	Agreeableness	A5	Modest	I think highly of myself	F	active
IPIP	Agreeableness	A6	Sympathy	I am not interested in other people's problems		
IPIP	Agreeableness	A6	Sympathy	I feel sympathy for those who are worse off than myself		
IPIP	Agreeableness	A6	Sympathy	I sympathize with the homeless		
IPIP	Agreeableness	A6	Sympathy	I try not to think about the needy		

● No changes were made

● Minor changes that slightly change the meaning were made

● Minor changes that do not change the meaning at all were made

WPA: Workable Personality Assessment

Conclusion

We currently collect data to evaluate which items can be used for scoring peacefulness. For the dimension of agreeableness, trust A1 and modesty A5 consistently provided good reliability values in all versions of the questionnaire and were left unchanged.

For morality A2, in the first versions of the questionnaire, we made some minor changes in two questions. However, alpha reliability values were not increased significantly and we have now introduced three trial items to evaluate. For altruism A3, statistics indicated that if we dropped any item alpha would decrease, and therefore we included a trial item.



Conscientiousness

People displaying conscientiousness are generally efficient, well organized, reliable and punctual in their obligations. They are orderly, disciplined, and motivated to achieve. Conscientiousness has 6 facets: self-efficacy, orderliness, dutifulness, achievement striving, self-discipline, and cautiousness.

C1 Self-efficacy

High scores on self-efficacy indicate someone who gets things done in a smooth and efficient way. They tend to excel in their tasks, find solutions to problems, and make good judgements on what has to be done and how it can be completed.

High and moderate correlations with self-efficacy are observed with self-discipline C5, achievement striving C4, assertiveness E3, vulnerability N6, and activity level E4 $r=.59$, $r=.51$, $r=.46$, $r=-.44$, $r=.36$, $p<0.001$ respectively. This means that people scoring high on self-efficacy, also tend to score high on self-discipline, achievement striving, assertiveness and activity level, and low on vulnerability. It's difficult to imagine a profession where a high level of self-efficacy may not be desirable.

However, in lines of work with strict rules, that do not allow initiative or suggestions for improvement, a high scorer on self-efficacy may feel unhappy and will certainly look to find work allowing more opportunities for excellence. People scoring moderately, or perhaps even low on self-efficacy on the other hand, may be desirable in lines of work with strict management.

C2 Orderliness

High scores in orderliness indicate someone who likes to keep things tidy. Tidy people tend to know where to find things and arrange items in a logical order. Although excessive tidiness may be indicative of an anxiety disorder, it may also be desirable. However, people excessively preoccupied with orderliness may sometimes get angry with untidiness.

Moderate correlations with orderliness are displayed with self-discipline C5, $r=.38$, $p<0.001$. The rest of the correlations are below the absolute value of 0.27. It's intuitive to expect that someone must have self-discipline to enforce orderliness.

Orderliness may be desirable in several situations. For a librarian who has to keep track of books and put them in the right place, orderliness could be an asset. However, in lines of work where it's not a requirement to keep track of things, put them in the right order, or keep them tidy, or where tidiness is never actually achieved, orderliness would be irrelevant or even undesirable for those who may get angry with disorder.

C3 Dutifulness

High scores in dutifulness indicate someone who is truthful, keeps promises, does not break rules and respects deadlines. We would generally expect them to be reliable with the tasks at hand and to take responsibility for the work assigned to them.

Moderate correlations with dutifulness are observed with trust A2, cooperation A4, and cautiousness C6 $r=.44$, $r=.38$, $r=.36$, $p<0.001$. The rest of the correlations are below the absolute value of 0.29. In general, a dutiful person tends to trust others, be cooperative and cautious.

It's difficult to think of any line of work where dutifulness is not advantageous, since most lines of work require people to perform what is requested of them.

C4 Achievement striving

High scores in achievement striving suggest someone who sets high standards for themselves and their work. These people in general turn plans into action, strive for quality, are highly motivated for excellence, and work hard for these purposes.

Notable correlations with achievement striving are observed with self efficacy C1, self-discipline C5, activity level E4 and assertiveness E3, $r=.51$, $r=.45$, $r=.33$, $r=.32$, $p<0.001$. Intuitively one may expect that someone scoring high in achievement has to be efficient, disciplined, energetic and perhaps even assertive to achieve the goals at hand.

Achievement striving, like self-efficacy, is advantageous in lines of work where people are allowed to take initiative and make improvements. On the contrary, it could be counterproductive in cases where people are not allowed to incentivise or in lines of work where achievement is not visible and recognized.

C5 Self-discipline

High scores in self-discipline suggest someone who gets things right away, and doesn't waste time or postpone the work at hand. They don't need a push to get things started and are not easily distracted from the work at hand.

High and moderate correlations with self-discipline are observed with self-efficacy C1, achievement striving C4, activity level E4, vulnerability N6, assertiveness E3, and depression N3, $r=.59$, $r=.45$, $r=.39$, $r=-.39$, $r=.38$, $r=-.36$, $p<0.001$. In general, self-discipline seems to have a negative relation with depression and vulnerability, meaning that self-disciplined people tend to score low on depression or vulnerability. On the other hand, self-disciplined people tend to be efficient, strive for achievement, have high activity levels and be assertive.

Self-discipline would be advantageous in cases where people have to take initiative. In lines of work where people are under strict management and supervision, moderate scores on self-discipline may be irrelevant or even undesirable.

C6 Cautiousness

High scores in cautiousness indicate someone who is cautious in both planning and actions. This person thinks things through, and does not rush into action. They tend to plan their actions and try to predict several outcomes in order to avoid mistakes. They may not just be careful in their actions, but they may also pay attention to the act of planning. In other words, they do not make last minute plans. Since they spend time in planning, they may also tend to stick to the plan.

Notable correlations of cautiousness with other scales include dutifulness C3, excitement seeking E5, immoderation N5, and cooperation A4, $r=.36$, $r=-.34$, $r=-.33$, $r=.31$, $p<0.001$. These correlations suggest that someone who is cautious scores low on excitement seeking and immoderation. They also tend to be dutiful and cooperative.

Cautiousness seems to be highly relevant in lines of work where people are required to make a plan of action and make predictions for possible outcomes. One would expect that a good systems analyst has to be very cautious in predicting all possible problems in all solutions for a system design that will be later used in production. On the other hand, in lines of work where people have to act fast, and no planning is required, cautiousness may be either irrelevant or non desirable.

Questionnaire	Domain	Key	Label	Question	Disabled	Status
IPIP	Conscientiousness	C1	Self-efficacy	I complete tasks successfully		trial
IPIP	● Conscientiousness	C1	Self-efficacy	I excel in what i do		trial
IPIP	● Conscientiousness	C1	Self-efficacy	I handle tasks smoothly		
IPIP	● Conscientiousness	C1	Self-efficacy	I know how to get things done		
WPA	Conscientiousness	C1	Self-efficacy	I almost always complete tasks successfully	F	active
WPA	● Conscientiousness	C1	Self-efficacy	I excel in what I do	F	active
IPIP	● Conscientiousness	C1	Self-efficacy	I handle tasks smoothly	F	active
IPIP	● Conscientiousness	C1	Self-efficacy	I know how to get things done	F	active
IPIP	Conscientiousness	C2	Orderliness	I leave a mess in my room		
IPIP	● Conscientiousness	C2	Orderliness	I leave my belongings around		
IPIP	● Conscientiousness	C2	Orderliness	I like to tidy up		
IPIP	● Conscientiousness	C2	Orderliness	I often forget to put things back in their proper place		
WPA	Conscientiousness	C2	Orderly	Disorder makes me anxious	T	trial
WPA	Conscientiousness	C2	Orderly	I am not bothered by disorder	T	r
WPA	● Conscientiousness	C2	Orderly	I leave my belongings around	T	r
WPA	● Conscientiousness	C2	Orderly	I like to tidy up	T	r
WPA	● Conscientiousness	C2	Orderly	I often forget to put things back in their proper place	T	r
WPA	Conscientiousness	C2	Orderly	I want every detail to be taken care of	T	trial
WPA	Conscientiousness	C2	Orderly	I want everything to be “just right”	T	trial
WPA	Conscientiousness	C2	Orderly	I will relax only when everything adds up perfectly	T	trial
WPA	Conscientiousness	C2	Orderly	I won’t move to the next task, unless everything is perfect	T	trial

● No changes were made

WPA: Workable Personality Assessment

Questionnaire	Domain	Key	Label	Question	Disabled	Status	
IPIP	Conscientiousness	C3	Dutifulness	I break my promises			
IPIP	Conscientiousness	C3	Dutifulness	I break rules			
IPIP	Conscientiousness	C3	Dutifulness	I keep my promises			
IPIP	Conscientiousness	C3	Dutifulness	I tell the truth			
WPA	Conscientiousness	C3	Dutifulness	I always keep my promises	F	active	
WPA	Conscientiousness	C3	Dutifulness	I may break some promises	F	active	
WPA	Conscientiousness	C3	Dutifulness	I respect rules	F	active	
WPA	Conscientiousness	C3	Dutifulness	I tell the truth no matter the consequences	F	active	
IPIP	●	Conscientiousness	C4	Achievement-striving	I do just enough work to get by		
IPIP	●	Conscientiousness	C4	Achievement-striving	I do more than what s expected of me		
IPIP	●	Conscientiousness	C4	Achievement-striving	I put little time and effort into my work		
IPIP	●	Conscientiousness	C4	Achievement-striving	I work hard		
WPA	●	Conscientiousness	C4	Achievement-striving	I do just enough work to get by	F	active
WPA	●	Conscientiousness	C4	Achievement-striving	I do more than what's expected of me	F	active
WPA		Conscientiousness	C4	Achievement-striving	I do things before I'm told	F	trial
WPA	●	Conscientiousness	C4	Achievement-striving	I put little time and effort into my work	F	active
WPA	●	Conscientiousness	C4	Achievement-striving	I work hard	F	active
IPIP	Conscientiousness	C5	Self-discipline	I am always prepared			
IPIP	Conscientiousness	C5	Self-discipline	I carry out my plans			
IPIP	Conscientiousness	C5	Self-discipline	I have difficulty starting tasks			
IPIP	Conscientiousness	C5	Self-discipline	I waste my time			

● No changes were made

WPA: Workable Personality Assessment

Questionnaire		Domain	Key	Label	Question	Disabled	Status
WPA	●	Conscientiousness	C5	Self-disciplined	I am always prepared	F	active
WPA	●	Conscientiousness	C5	Self-disciplined	I carry out my plans	F	active
WPA	●	Conscientiousness	C5	Self-disciplined	I have difficulty starting tasks	F	active
WPA	●	Conscientiousness	C5	Self-disciplined	I waste my time	F	active
IPIP	●	Conscientiousness	C6	Cautiousness	I act without thinking		
IPIP		Conscientiousness	C6	Cautiousness	I jump into things without thinking		
IPIP	●	Conscientiousness	C6	Cautiousness	I make rash decisions		
IPIP	●	Conscientiousness	C6	Cautiousness	I rush into things		
WPA		Conscientiousness	C6	Cautious	I act without thinking	T	r
WPA		Conscientiousness	C6	Cautious	I avoid mistakes	T	r
WPA		Conscientiousness	C6	Cautious	I don't do anything unless I have all the facts	T	trial
WPA		Conscientiousness	C6	Cautious	I don't know why I do some of the things I do	T	r
WPA		Conscientiousness	C6	Cautious	I follow the initial plan no matter what	T	trial
WPA		Conscientiousness	C6	Cautious	I overthink before I speak	T	trial
WPA		Conscientiousness	C6	Cautious	I overthink my choices	T	trial
WPA		Conscientiousness	C6	Cautious	I rarely trust my intuition	T	trial
WPA	●	Conscientiousness	C6	Cautious	I rush into things	T	r
WPA		Conscientiousness	C6	Cautious	I spend too much time weighting the pros and the cons	T	trial

● No changes were made

WPA: Workable Personality Assessment

Conclusion

Orderliness C2 and cautiousness C6 are currently not used for scoring, although we collect data to enable scoring in the future. For the dimension of conscientiousness, we found that one item in self-efficacy C1 could be changed to improve alpha. In this item, participants tended to provide extreme responses and therefore we changed the wording to facilitate more normally distributed responses. Self-efficacy C1 as it is now, provides good alpha values. Self-discipline C5 also provides good alpha values. For dutifulness C3 however, we changed the wording in all questions to examine if we can increase alpha values. For achievement striving C4, we had to change one question and we are currently collecting data to evaluate this change.



Extraversion

A person displaying extroversion is generally sociable, feels confident, enjoys social situations, and finds it easy to influence others. They tend to be active, busy, attracted to thrills, excitements and stimulation, and are generally joyful. Extraversion has six facets: friendliness, gregariousness, assertiveness, activity level, excitement seeking and cheerfulness.

E1 Friendliness

High scores in friendliness indicate someone who is generally pleasant, who socializes easily, and is comfortable with others. They don't feel intimidated in social situations among strangers, and they are interested in participating in social activities. In general, they can cheer others up and be friendly.

Notable correlations for friendliness are observed with gregariousness E2, self-consciousness N4, cheerfulness E6, depression N3 and trust A1, $r = .55$, $r = -.54$, $r = .48$, $r = -.39$, $r = .36$, $p < 0.001$. These correlations suggest that friendly people tend to score low on depression and feel comfortable in social situations. These correlations also indicate that they tend to be gregarious, cheerful and trust others.

There are several situations where friendliness may be considered desirable. A friendly bartender can make you go to the same bar twice. Journalists, for instance, often need to make new acquaintances in order to stay informed. However, there are professions where social acquaintances are not relevant. For instance, for someone working in a back office, or in roles where maintaining some distance in relationships is demanded.

E2 Gregariousness

High scores in gregariousness indicate someone who actively seeks social interactions, social activities and social events. They are passionate about meeting people.

High and moderate correlations for gregariousness are observed with friendliness E1, and self-consciousness N4, $r = .55$, $r = -.42$. The rest of the correlations are below the absolute value of .29. In general, people scoring high on gregariousness tend to be friendly and socially confident.

Just like friendliness, gregariousness may be advantageous in some situations, for instance, a salesman working on the street who has to attract strangers. But like friendliness, gregariousness may be undesirable in cases where social interactions may be unwanted or counterproductive. Gregariousness E2 is removed from the questionnaire, but since it's highly correlated with friendliness E1, this instead can be used as a good proxy for measuring gregariousness.

E3 Assertiveness

High scores on assertiveness indicate someone who wants to take charge. They generally feel they have to influence others and lead. It may be assumed that they have at least some success in taking charge and this may work as a positive reinforcement for assertiveness.

Moderate correlations for assertiveness are observed with self-efficacy C1, self-conscientiousness N4, modesty A5, self-discipline C5, activity level E4, vulnerability N6 and achievement striving C4, $r=.46$, $r=-.41$, $r=-.40$, $r=.38$, $r=.34$, $r=-.33$, $r=.32$, $p<0.001$. In general, assertiveness tends to have a negative relation with self-conscientiousness N4, vulnerability N6 and modesty A5. This suggests that assertive people are socially confident, not modest, and can control their anxiety levels. Also, they tend to be efficient, disciplined, and strive for achievement.

Highly assertive people could be problematic in a line of work where they have to be managed. On the other hand, a manager has to be assertive in order to guide a team towards a common goal.

E4 Activity level

Activity level refers to how active someone is, but not necessarily in social situations. Activity level in the Big Five questionnaires, refers to how many things someone wants or is able to do. High scores in activity level would suggest someone who enjoys doing a lot of things, and generally likes working and getting things done. They usually report that they react quickly, are always on the go, and that they don't have leisure time.

Notable correlations for activity level are observed with self-discipline C5, self efficacy C1, assertiveness E3, and achievement striving C4, $r=.39$, $r=.36$, $r=.34$, $r=.33$, $p<0.001$. These results are not counterintuitive. It's expected for the self-disciplined, efficient, assertive, and achievement striving, to have high activity levels.

Perhaps people scoring high on activity level are desirable in a line of work with multiple duties. However, in repetitive jobs where one has to do the same task again and again, or in jobs where there is a lot of waiting, people scoring high on activity level may not perform as well.

E5 Excitement seeking

High scores in excitement seeking indicate a person who seeks adventure, who may act wild and crazy, loves action, seeks danger, and likes new experiences.

Moderate correlations for excitement seeking are observed with cautiousness C6, morality A2, cooperation A4, and adventurousness O4, $r=-.34$, $r=-.30$, $r=-.30$, $r=.30$, $p<0.001$. The negative correlations mean that those scoring high on excitement seeking tend not to be cautious. Strangely enough, they also tend to score low on morality and cooperation. Nonetheless, they also tend to score high on adventurousness.

There are several jobs that are dangerous – firefighting for example. People scoring high in excitement seeking are relevant for jobs considered dangerous, since they are incentivised to perform these kinds of tasks. Excitement seeking was removed from the questionnaire, however a good proxy to measure excitement seeking may be cautiousness.

E6 Cheerfulness

Cheerfulness, as the term suggests, describes people who are generally cheerful. High scores on cheerfulness indicate someone who likes to amuse and be amused. They enjoy taking part in activities that make them laugh, such as sharing or listening to jokes. They are joyful, easily amused, and have a positive stance towards life.

Moderate correlations for cheerfulness are observed with friendliness E1, depression N3, anxiety N1, trust A1, vulnerability N6 and self-consciousness N4, $r=.48$, $r=-.48$, $r=-.38$, $r=.36$, $r=-.34$, $r=-.32$, $p<0.001$. Cheerfulness is negatively correlated with depression N3, anxiety N1, and anxiety management N6. One can hardly imagine someone depressed or anxious to be cheerful. Nonetheless, it's easier to imagine cheerful people to be friendly and perhaps trust others.

Cheerfulness helps people be friendly and pleasant. Similar to friendliness, this facet may be advantageous in lines of work where pleasant social interactions are productive, such as the previous example of the bartender. It's difficult to imagine a situation where a cheerful person may not be desirable, however, it's possible to imagine several lines of work where cheerfulness may be irrelevant, especially in professions that do not require social interactions.

Questionnaire		Domain	Key	Label	Question	Disabled	Status
IPIP	●	Extraversion	E1	Friendliness	I avoid contacts with others		
IPIP	●	Extraversion	E1	Friendliness	I feel comfortable around people		
IPIP	●	Extraversion	E1	Friendliness	I keep others at a distance		
IPIP	●	Extraversion	E1	Friendliness	I make friends easily		
WPA	●	Extraversion	E1	Friendly	I avoid contact with others	F	active
WPA	●	Extraversion	E1	Friendly	I feel comfortable around people	F	active
WPA	●	Extraversion	E1	Friendly	I keep others at a distance	F	active
WPA	●	Extraversion	E1	Friendly	I make friends easily	F	active
IPIP		Extraversion	E2	Gregariousness	I avoid crowds		
IPIP		Extraversion	E2	Gregariousness	I love large parties		
IPIP		Extraversion	E2	Gregariousness	I prefer to be alone		
IPIP		Extraversion	E2	Gregariousness	I talk to a lot of different people at parties		
IPIP	●	Extraversion	E3	Assertiveness	I take charge		
IPIP	●	Extraversion	E3	Assertiveness	I take control of things		
IPIP	●	Extraversion	E3	Assertiveness	I try to lead others		
IPIP	●	Extraversion	E3	Assertiveness	I wait for others to lead the way		
WPA	●	Extraversion	E3	Assertiveness	I take charge	F	active
WPA	●	Extraversion	E3	Assertiveness	I take control of things	F	active
WPA	●	Extraversion	E3	Assertiveness	I try to lead others	F	active
WPA	●	Extraversion	E3	Assertiveness	I wait for others to lead the way	F	active

● No changes were made

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Questionnaire		Domain	Key	Label	Question	Disabled	Status
IPIP	●	Extraversion	E4	Activity-level	I am always busy		
IPIP	●	Extraversion	E4	Activity-level	I am always on the go		
IPIP	●	Extraversion	E4	Activity-level	I do a lot in my spare time		
IPIP		Extraversion	E4	Activity-level	I like to take it easy		
WPA		Extraversion	E4	Industrious	I cannot keep up with the things I have to do.	T	trial
WPA	●	Extraversion	E4	Industrious	I do a lot in my spare time	T	r
WPA		Extraversion	E4	Industrious	I have no spare time	T	trial
WPA		Extraversion	E4	Industrious	I have no time to rest	T	trial
WPA		Extraversion	E4	Industrious	I react quickly	T	r
WPA	●	Extraversion	E4	Industrious	I'm always busy	T	active
WPA	●	Extraversion	E4	Gregariousness	I'm always on the go	T	active
IPIP		Extraversion	E5	Gregariousness	I talk to a lot of different people at parties		
IPIP		Extraversion	E5	Assertiveness	I take charge		
IPIP		Extraversion	E5	Assertiveness	I take control of things		
IPIP		Extraversion	E5	Assertiveness	I try to lead others		
IPIP		Extraversion	E6	Cheerfulness	I have a lot of fun		
IPIP	●	Extraversion	E6	Cheerfulness	I look at the bright side of life		
IPIP	●	Extraversion	E6	Cheerfulness	I love life		
IPIP	●	Extraversion	E6	Cheerfulness	I radiate joy		
WPA		Extraversion	E6	Optimist	I believe the future will be better than the past	F	active

● No changes were made

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Questionnaire		Domain	Key	Label	Question	Disabled	Status
WPA	●	Extraversion	E6	Optimist	I look at the bright side of life	F	active
WPA	●	Extraversion	E6	Optimist	I love life	F	active
WPA	●	Extraversion	E6	Optimist	I radiate joy	F	active

● No changes were made

WPA: Workable Personality Assessment

Conclusion

At the moment we collect data that will allow us to include industriousness E4 for scoring. Extraversion E1 and assertiveness E3 provide consistently good alpha values and therefore the items in these facets are left as they are. Optimism E6 also provides good alpha values, that is because previously, we changed one item in the first version of the questionnaire and this proved to be a good choice.



Neuroticism

A person displaying neuroticism, can be generally considered anxious, frustrated, irritable, embarrassed, or shy. They may also be unable to control impulses, desires and stress. Neuroticism has six facets: anxiety, anger, depression, self consciousness, immoderation and vulnerability.

N1 Anxiety

Individuals scoring high in anxiety, generally find it difficult to feel calm and peaceful. They may be anxious most of the time, they may worry about things that have already happened, or things that are about to happen, and generally fear for the worst. They may be easily disturbed by events, and find it difficult to adapt to new situations.

High and moderate correlations for anxiety N1 are observed within neuroticism, anger N2, depression N3, self-consciousness N4 and vulnerability N6, $r=.40$, $r=.58$, $r=.38$, $r=.62$, $p<.001$. It's well known that anxiety and depression are related, and anger is a different way to express high levels of activation of the sympathetic nervous system. Low social confidence may stem from anxiety. Finally, anxiety is the result of being unable to remain calm.

Anxiety N1 also has some negative correlations with cheerfulness E6, and self-efficacy C1, $r=-.38$, $r=-.32$, $p<0.001$. It's reasonable to expect cheerfulness to be negatively related with any neuroticism facet, however this is not so evident for self efficacy. Perhaps we can imagine that anxiety may stem from the self perception of low self-efficacy and low control over one's life events. In this case, this negative correlation makes sense.

In several cases, anxious people tend to harm themselves mostly by feeling anxious and their anxiety may be irrelevant in handling their tasks. Anxiety on moderate levels may be productive, especially if someone feels anxious about completing a task. Individuals scoring high on anxiety may not be well suited for stressful jobs. However, in job roles where planning for the worse is a valuable asset, they may be a very good fit.

N2 Anger

People scoring high on anger tend to be short tempered. They get irritated easily and have difficulty managing their anger, and also tend to complain about things. They generally find it difficult to be calm and peaceful.

Anger is moderately correlated with other neuroticism scales, anxiety N1, vulnerability N6 and depression N3, $r=.40$, $r=.34$, $r=.31$, $p<0.001$. Anger is also negatively correlated with cooperation A4, $r=-.49$, $p<0.001$, which is to be expected since people scoring high on cooperation tend to be kind to others.

Although anger tends to be perceived as a negative trait, there are cases where someone is required to speak up when things are going wrong.

N3 Depression

Individuals scoring high in depression tend to be, as the term suggests, depressed. This should not be misinterpreted however with clinical depression. Although individuals with clinical depression may score high on this scale, high scores on depression N3 do not necessarily fit the criteria for clinical depression. People scoring high in this scale may have frequent mood swings, feel blue, and have low self esteem. They may also have a low opinion of themselves and find it hard to find meaning in life.

Although seriously clinically depressed people may not even apply for a job, someone scoring high in that scale may pose an ethical dilemma. For instance, should we suggest they seek help? In most of the cases they will not fit the criteria for clinical depression. On the other hand if they are contacted and informed that they may need help, they could feel stigmatized or offended. Although BIG 5 questionnaires may be used in clinical settings, we believe that this questionnaire should not be used as a diagnostic tool, which is why the depression scale was removed from the questionnaire.

Depression is correlated highly and moderately with the rest of the facets in neuroticism, anxiety N1, anger N2, self-consciousness N4, immoderation N5, and vulnerability N6, $r=.58$, $r=.31$, $r=.33$, $r=.37$, $r=.51$, $p<0.001$. Depression also has high negative correlations with cheerfulness E6, friendliness E1, self-discipline C5, trust A1, and sympathy A6, $r=-.48$, $r=-.39$, $r=-.36$, $r=-.33$, $r=-.33$, $p<0.001$.

Unless someone is clinically depressed, people scoring high on depression may be able to perform their tasks without problems.

N4 Self-consciousness

Self-consciousness generally refers to how confident one feels in social situations. People scoring high on this scale may find it difficult to approach others, may feel intimidated or embarrassed in social situations, and may find it difficult to express their opinions. They may also feel uncomfortable with strangers and in unfamiliar social settings.

Self-consciousness is moderately correlated with vulnerability N6 and depression N3, $r=.34$, $r=.37$, $p<0.001$. Self-consciousness N4 also has moderate correlations with friendliness E1, gregariousness E2, assertiveness E3, and cheerfulness E6, $r=-.54$, $r=-.42$, $r=-.41$, $r=-.32$. Obviously people scoring high on self-consciousness are expected to score low on several extraversion facets. Finally, self-consciousness correlates negatively with self-efficacy, $r=-.32$.

Like the previous scales on extraversion, self-consciousness is relevant for jobs where social interactions are undesirable and counterproductive. In addition, it's relevant in lines of work where people are not required to raise their opinions.

N5 Immoderation

Immoderation refers to an inability to plan. Immoderate individuals may often overindulge, binge eat and drink, spend more than they can afford, and are generally unable to resist temptations or think about the consequences of their excesses. In some cases, they may later regret actions of immoderation, or in the worst case, they may have no regret.

The scale of immoderation also poses an ethical problem. High scores in that scale may be suggestive of an eating disorder which may not be relevant at all with work performance. In addition, some neurological drugs and problems, such as brain trauma, may cause immoderate behaviour. However, in several clinical situations people may not be aware that they are unable to display restraint. So, even if they are truthful in their responses, they may not score high on that scale. These cases demonstrate why this scale is problematic and offer a good reason to remove it.

Immoderation does not have a moderate correlation with other facets in neuroticism other than depression N3 $r=.37$, $p<0.001$, and we can also observe moderate negative correlations with self-discipline C5 and cautiousness C6, $r=-.35$, $r=-.33$, $p<0.001$. These results are not counterintuitive. Immoderation was completely removed from the questionnaire. Immoderation in general may or may not impact a person to do a job, since these people may be only immoderate in their personal life.

N6 Vulnerability

Vulnerability indicates how well someone can cope in stressful situations. High scores on vulnerability indicate someone who cannot remain calm in stressful situations. During stressful events they may be overwhelmed and feel a sense of panic, and may find it difficult to think clearly and make decisions. In general, they are overtaken by emotions and in such cases their actions or inactivity may be counterproductive.

Vulnerability has high and moderate correlations with anxiety N1, anger N2, depression N3, and self-consciousness N4, as discussed above $r=.62$, $r=.34$, $r=.51$, $r=.34$, $p<0.001$. Notably vulnerability relates negatively with a variety of other facets, such as self-efficacy C1, Self-discipline C5, cautiousness C6, assertiveness E3, and cheerfulness E6, $r=-.44$, $r=-.39$, $r=-.30$, $r=-.33$, $p<0.001$.

Vulnerable people may not be well equipped to cope in situations where there are sudden changes, or in situations where there are no clear rules or where rules may change abruptly. They may also be unable to cope with stressful situations, such as an angry customer for instance. However, they may be unaffected in work conditions with clearly defined rules and in situations where they know what they have to do.

Questionnaire		Domain	Key	Label	Question	Disabled	Status
IPIP	●	Neuroticism	N1	Anxiety	I am afraid of many things		
IPIP	●	Neuroticism	N1	Anxiety	I fear for the worst		
IPIP	●	Neuroticism	N1	Anxiety	I get stressed out easily		
IPIP	●	Neuroticism	N1	Anxiety	I worry about things		
WPA	●	Neuroticism	N1	Calm	I fear for the worst	F	active
WPA	●	Neuroticism	N1	Calm	I get stressed out easily	F	active
WPA	●	Neuroticism	N1	Calm	I worry about things	F	active
WPA	●	Neuroticism	N1	Calm	I'm afraid of many things	F	active
IPIP	●	Neuroticism	N2	Anger	I am not easily annoyed		
IPIP	●	Neuroticism	N2	Anger	I get angry easily		
IPIP	●	Neuroticism	N2	Anger	I get irritated easily		
IPIP	●	Neuroticism	N2	Anger	I lose my temper		
WPA	●	Neuroticism	N2	Even-tempered	I get angry easily	F	active
WPA	●	Neuroticism	N2	Even-tempered	I get irritated easily	F	active
WPA	●	Neuroticism	N2	Even-tempered	I lose my temper	F	active
WPA	●	Neuroticism	N2	Even-tempered	I'm not easily annoyed	F	active
IPIP		Neuroticism	N3	Depression	I am often down in the dumps		
IPIP		Neuroticism	N3	Depression	I dislike myself		
IPIP		Neuroticism	N3	Depression	I feel comfortable with myself		
IPIP		Neuroticism	N3	Depression	I often feel blue		

● No changes were made

● Minor changes that slightly change the meaning were made

WPA: Workable Personality Assessment

Questionnaire	Domain	Key	Label	Question	Disabled	Status
IPIP	Neuroticism	N4	Self-consciousness	I am afraid to draw attention to myself		
IPIP	Neuroticism	N4	Self-consciousness	I am not bothered by difficult social situations		
IPIP	● Neuroticism	N4	Self-consciousness	I find it difficult to approach others		
IPIP	● Neuroticism	N4	Self-consciousness	I only feel comfortable with friends		
WPA	Neuroticism	N4	Socially confident	I feel nervous meeting people I don't know	F	active
WPA	● Neuroticism	N4	Socially confident	I find it difficult to approach others	F	active
WPA	● Neuroticism	N4	Socially confident	I only feel comfortable around friends	F	active
WPA	Neuroticism	N4	Socially confident	I'm bothered by difficult social situations	F	active
IPIP	Neuroticism	N5	Immoderation	I am able to control my cravings		
IPIP	Neuroticism	N5	Immoderation	I easily resist temptations		
IPIP	Neuroticism	N5	Immoderation	I go on binges		
IPIP	Neuroticism	N5	Immoderation	I rarely overindulge		
IPIP	● Neuroticism	N6	Vulnerability	I become overwhelmed by events		
IPIP	Neuroticism	N6	Vulnerability	I feel that i m unable to deal with things		
IPIP	● Neuroticism	N6	Vulnerability	I panic easily		
IPIP	● Neuroticism	N6	Vulnerability	I remain calm under pressure		
WPA	● Neuroticism	N6	Relaxed	I become overwhelmed by events	F	active
WPA	Neuroticism	N6	Relaxed	I get overwhelmed by emotions	F	active
WPA	● Neuroticism	N6	Relaxed	I panic easily	F	active
WPA	● Neuroticism	N6	Relaxed	I remain calm under pressure	F	active

● No changes were made

● Minor changes that slightly change the meaning were made

WPA: Workable Personality Assessment

Conclusion

The dimension of neuroticism in general provides very good alpha values for all facets. Anxiety N1 and anger N2 were left unchanged. For self-consciousness N4 we did some changes in the first version of the questionnaire, which have increased alpha values.



Openness to experience

A person displaying openness to experience tends to be open-minded, imaginative, and interested in arts or nature. They are generally drawn to new experiences, have a sense of curiosity, and have liberal beliefs. Interested in ideas in general, they are also intrigued by new ideas and thinking. They pay attention to their emotions and have a good understanding of them. Openness to experience has six facets: imagination, artistic interests, emotionality, adventurousness, intellect and liberalism.

O1 Imagination

Imagination refers to the act of imagining in general. This can be described as getting lost in thoughts, daydreaming, vivid imaginings, and wild flights of fantasy, and so on.

Imagination has a moderate correlation with intellect O5, $r=.34$, $p<0.001$, but no other correlations are observed. That suggests that imaginative people tend to be problem solvers as well.

People scoring high on imagination may have an advantage in creative lines of work such as painters, musicians, and artists in general. Obviously, someone with a vivid imagination may find repetitive tasks unfulfilling.

O2 Artistic interests

Artistic interest and appreciation in this context generally refers to people interested in arts and beauty in general. Beauty as observed in nature may be included in these interests, so they may like flowers, landscapes or sunsets. They may also have a positive attitude towards the arts in general, including poetry, literature, dance, and theater.

Artistic interests O2 has moderate correlations with emotionality O3, adventurousness O4, intellect O5 and liberalism O6, $r=.38$, $r=.35$, $r=.45$, $r=.37$, $p<0.001$. It's also correlated with sympathy A6, $r=.41$, $p<0.001$.

The facet of artistic interests was removed for brevity. However, a good proxy for measuring artistic interests is intellect since it correlates moderately with artistic interests. In most lines of work artistic interests may not be relevant, unless of course someone is interested in hiring an artist, but you do not need a questionnaire to understand if someone is an artist. For these reasons this facet was removed.

O3 Emotionality

Emotionality refers to people attentive to their emotions, who understand their emotional states and the feelings of others. This could also be labeled as emotional awareness. These people may be passionate about things or causes, and they may experience their emotions intensely.

Emotionality is moderately correlated with sympathy A6 and altruism A3, $r=.40$, $r=.33$, $p<0.001$, which is intuitive.

Persons with emotional awareness may have an advantage working in counseling, or jobs where they have to attend to others, or where understanding people's feelings is crucial (e.g. one on one sales). Some other professions require a more cold blooded approach to other people's emotions, in order to stay focused on the task at hand.

O4 Adventurousness

Adventurousness refers to the extent someone is interested in trying new things and experiences. Someone adventurous does not experience anxiety or negative emotions when changes occur. Such individuals in general avoid being creatures of habit, they embrace change and actively seek new experiences, such as trying new foods or visiting new places.

Adventurousness correlates moderately with intellect O5, and with imagination O1, $r=.41$, $r=.35$, $p<0.001$. Since adventurousness correlates moderately with intellect and imagination it's certain that these people are not necessarily seeking thrills and excitement and dangerous activities.

Adventurous people may have an advantage working in flexible organizations where rules and requirements change regularly.

O5 Intellect

Intellect refers to a general interest in problem solving. Such individuals report that they understand complex ideas, can handle complex information, and are comfortable with challenging ideas. They may enjoy reading challenging materials, have a rich vocabulary, and report that they can handle a lot of information.

Intellect correlates moderately with imagination O1, emotionality O3, and adventurousness O4, $r=.34$, $r=.45$, $r=.41$, $p<0.001$.

Individuals scoring high in intellect may have an advantage in lines of work where they have to solve different or difficult problems, or where they are required to learn new things regularly in order to perform their task. On the other hand, they may have no advantage in more repetitive lines of work.

O6 Liberalism

Liberal individuals are those who believe in liberal thinking and views. They tend to support liberal parties, and they think that there is no absolute right or wrong. Liberalism could also be better understood by looking at its exact opposite, which is conservatism. Conservative individuals believe that we are too soft on criminals and crimes, and that laws should be strictly enforced.

Conservatives tend to be religious, and sensitive to national ideas and symbols such as the flag or the national anthem.

Liberalism correlates moderately with artistic interests O2, $r=.37$, $p<0.001$.

Liberalism as a facet refers to political views, for that reason it was seen as irrelevant and was removed from the questionnaire.

Questionnaire		Domain	Key	Label	Question	Disabled	Status
IPIP	●	Openness-to-experience	O1	Imagination	I enjoy wild flights of fantasy		
IPIP	●	Openness-to-experience	O1	Imagination	I have a vivid imagination		
IPIP	●	Openness-to-experience	O1	Imagination	I like to get lost in thought		
IPIP	●	Openness-to-experience	O1	Imagination	I love to daydream		
WPA	●	Openness-to-experience	O1	Imaginative	I enjoy wild flights of fantasy	F	active
WPA	●	Openness-to-experience	O1	Imaginative	I have a vivid imagination	F	active
WPA	●	Openness-to-experience	O1	Imaginative	I like to get lost in my thoughts	F	active
WPA	●	Openness-to-experience	O1	Imaginative	I love to daydream	F	active
IPIP		Openness-to-experience	O2	Artistic Interests	I believe in the importance of art		
IPIP		Openness-to-experience	O2	Artistic Interests	I do not enjoy going to art museums		
IPIP		Openness-to-experience	O2	Artistic Interests	I do not like poetry		
IPIP		Openness-to-experience	O2	Artistic Interests	I see beauty in things that others might not notice		
IPIP	●	Openness-to-experience	O3	Emotionality	I don't understand people who get emotional		
IPIP		Openness-to-experience	O3	Emotionality	I experience my emotions intensely		
IPIP	●	Openness-to-experience	O3	Emotionality	I feel others emotions		
IPIP		Openness-to-experience	O3	Emotionality	I rarely notice my emotional reactions		
WPA	●	Openness-to-experience	O3	Empathetic	I don't understand people who get emotional	T	r
WPA		Openness-to-experience	O3	Empathetic	I enjoy talking about other people's emotional states	T	trial
WPA	●	Openness-to-experience	O3	Empathetic	I feel others' emotions	T	r
WPA		Openness-to-experience	O3	Empathetic	I have a sixth sense in understanding others' emotions	T	trial

● No changes were made

● Minor changes that slightly change the meaning were made

WPA: Workable Personality Assessment

Questionnaire	Domain	Key	Label	Question	Disabled	Status
WPA	Openness-to-experience	O3	Empathetic	I instantly understand other people's emotions	T	r
WPA	Openness-to-experience	O3	Empathetic	I prefer talking to people about their daily activities rather than their feelings	T	trial
WPA	● Openness-to-experience	O3	Empathetic	I rarely notice my emotional reactions	T	r
WPA	Openness-to-experience	O3	Empathetic	I spend most of the time paying attention to my feelings	T	trial
WPA	Openness-to-experience	O3	Empathetic	I'm exceptional at understanding other people's feelings	T	trial
IPIP	Openness-to-experience	O4	Adventurousness	I am attached to conventional ways		
IPIP	Openness-to-experience	O4	Adventurousness	I dislike changes		
IPIP	Openness-to-experience	O4	Adventurousness	I prefer to stick with things that I know		
IPIP	Openness-to-experience	O4	Adventurousness	I prefer variety to routine		
WPA	Openness-to-experience	O4	Conventional	Changes are not always for the best	F	active
WPA	Openness-to-experience	O4	Conventional	I dislike changes	F	active
WPA	Openness-to-experience	O4	Conventional	I dislike the unknown	F	active
WPA	Openness-to-experience	O4	Conventional	I prefer to stick with things that I know	F	active
WPA	Openness-to-experience	O4	Conventional	I prefer variety to routine	F	active
WPA	Openness-to-experience	O4	Conventional	I'm attached to conventional ways	F	active
IPIP	● Openness-to-experience	O5	Intellect	I am not interested in theoretical discussions		
WPA	● Openness-to-experience	O5	Intellect	I avoid philosophical discussions		
WPA	● Openness-to-experience	O5	Intellect	I have difficulty understanding abstract ideas		
WPA	● Openness-to-experience	O5	Intellect	I love to read challenging material		
WPA	● Openness-to-experience	O5	Theoretical	I avoid philosophical discussions	F	active

● No changes were made

● Minor changes that slightly change the meaning were made

WPA: Workable Personality Assessment

Questionnaire		Domain	Key	Label	Question	Disabled	Status
WPA	●	Openness-to-experience	O5	Theoretical	I have difficulty understanding abstract ideas		
WPA	●	Openness-to-experience	O5	Theoretical	I love to read challenging material		
WPA	●	Openness-to-experience	O5	Theoretical	I'm not interested in theoretical discussions		
WPA		Openness-to-experience	O6	Liberalism	I believe that there is no absolute right and wrong		
WPA		Openness-to-experience	O6	Liberalism	I believe that we should be tough on crime		
IPIP		Openness-to-experience	O6	Liberalism	I tend to vote for conservative political candidates		
IPIP		Openness-to-experience	O6	Liberalism	I tend to vote for liberal political candidates		

● No changes were made

● Minor changes that slightly change the meaning were made

WPA: Workable Personality Assessment

Conclusion

From the dimension of openness we are currently collecting data for emotionality or empathy O3. For the dimension of openness to experience, imagination O1 and intellect O5 were left unchanged. In imagination O1 there was only one question with a very minor difference, which improves readability. Emotionality O3 at the moment is completely changed and we collect data to evaluate if these changes will improve alphas for scoring. Conventional O4 on the other hand is currently used for scoring however we also collect data to see if alphas can be further improved.

Correlation matrix of facets in IPIP JNEO-PI-R

	A1	A2	A3	A4	A5	A6	C1	C2	C3	C4	C5	C6	E1	E2	E3	E4	E5	E6	N1	N2	N3	N4	N5	N6	O1	O2	O3	O4	O5	O6
A1																														
A2	0.23																													
A3	0.24	0.33																												
A4	0.24	0.48	0.25																											
A5	-0.08	0.28	0.18	0.22																										
A6	0.2	0.27	0.46	0.18	0.22																									
C1	0.11	0.11	0.12	0.02	-0.25	0.04																								
C2	0.07	0.18	0.07	0.14	0.07	-0.01	0.23																							
C3	0.17	0.44	0.24	0.38	0.18	0.08	0.23	0.27																						
C4	0.12	0.18	0.24	0.07	-0.06	0.12	0.51	0.26	0.24																					
C5	0.09	0.13	0.15	0.1	-0.11	0.01	0.59	0.38	0.29	0.45																				
C6	0.01	0.26	0.11	0.31	0.03	0.07	0.21	0.2	0.36	0.12	0.28																			
E1	0.36	0.2	0.32	0.12	-0.18	0.21	0.25	0.15	0.22	0.21	0.28	-0.01																		
E2	0.21	-0.01	0.14	-0.05	-0.1	0.12	0.08	0.08	0.07	0.04	0.16	-0.1	0.55																	
E3	0.03	-0.07	0.05	-0.19	-0.4	-0.06	0.46	0.08	0	0.32	0.38	-0.02	0.27	0.19																
E4	0.09	-0.02	0.12	-0.02	-0.12	0.05	0.36	0.18	0.12	0.33	0.39	0.01	0.23	0.2	0.34															
E5	-0.03	-0.3	-0.05	-0.3	-0.22	-0.07	0.11	-0.06	-0.27	0.02	0.02	-0.34	0.1	0.23	0.27	0.24														
E6	0.36	0.17	0.3	0.12	-0.22	0.19	0.29	0.07	0.14	0.19	0.27	-0.02	0.48	0.29	0.24	0.25	0.24													
N1	-0.26	-0.15	-0.04	-0.2	0.19	-0.01	-0.32	-0.1	-0.16	-0.14	-0.26	-0.22	-0.25	-0.15	-0.23	-0.12	-0.05	-0.38												
N2	-0.31	-0.22	-0.18	-0.49	-0.01	-0.17	-0.11	-0.06	-0.21	-0.08	-0.14	-0.24	-0.19	-0.08	0.01	-0.07	0.14	-0.27	0.4											
N3	-0.33	-0.24	-0.14	-0.19	0.23	-0.05	-0.33	-0.15	-0.23	-0.2	-0.36	-0.23	-0.39	-0.17	-0.28	-0.19	0	-0.48	0.58	0.31										
E4	-0.21	-0.03	-0.1	-0.03	0.29	-0.09	-0.32	-0.02	-0.13	-0.11	-0.29	-0.07	-0.54	-0.42	-0.41	-0.26	-0.17	-0.32	0.38	0.25	0.33									
N5	-0.16	-0.24	-0.07	-0.27	0.08	0.03	-0.26	-0.22	-0.28	-0.22	-0.35	-0.33	-0.17	0.01	-0.03	-0.14	0.18	-0.19	0.28	0.27	0.37	0.17								
N6	-0.2	-0.14	-0.04	-0.13	0.28	0.01	-0.44	-0.14	-0.19	-0.26	-0.39	-0.3	-0.22	-0.07	-0.33	-0.16	-0.03	-0.34	0.62	0.34	0.51	0.34	0.29							
O1	-0.13	-0.11	0.02	-0.19	-0.18	0.07	0.03	-0.17	-0.23	-0.02	-0.11	-0.15	-0.02	-0.04	0.07	-0.06	0.23	0.02	0.08	0.11	0.11	-0.04	0.25	0.06						
O2	0.06	-0.11	0.23	0.1	-0.03	0.41	0.1	-0.03	-0.03	0.12	0.03	-0.01	0.16	0.06	0.03	0.04	0.06	0.13	-0.02	-0.11	-0.01	-0.18	0.05	-0.05	0.28					
O3	0.12	0.14	0.33	0.01	0.11	0.4	0.06	0.03	-0.02	0.09	0.03	-0.04	0.14	0.06	0.03	0.01	0.02	0.09	0.21	0.1	0.08	-0.02	0.15	0.18	0.22	0.38				
O4	0.04	-0.03	0.09	-0.03	-0.12	0.21	0.14	-0.08	-0.09	0.1	0.08	-0.04	0.19	0.13	0.21	0.14	0.3	0.15	-0.23	-0.07	-0.14	-0.28	0.03	-0.2	0.21	0.35	0.12			
O5	-0.01	0.02	0.05	-0.09	-0.2	0.16	0.21	-0.07	-0.07	0.17	0.12	0.05	0.12	0.03	0.27	0.07	0.16	0	-0.16	-0.04	-0.08	-0.25	0.02	-0.21	0.34	0.45	0.16	0.41		
O6	0.03	-0.06	0.05	-0.05	-0.13	0.23	-0.04	-0.19	-0.25	-0.08	-0.16	-0.12	0.01	-0.02	0.01	-0.04	0.12	0.01	0.03	-0.01	0	-0.08	0.17	-0.01	0.27	0.37	0.2	0.29	0.27	

Estimation of aberrant responding

There are many reasons why a candidate may not respond truthfully to the questions of a personality questionnaire:

- They may believe that they didn't do well in the ability exams and think they have already been disqualified, so they choose to respond randomly.
- They feel under time pressure to do something else.
- They are bored or have lost interest in the questionnaire.
- They applied under pressure from their family. So they really want to fail the exam and will try to present themselves negatively.
- They are convinced that they have better chances when presenting themselves as an ideal candidate. Such a candidate may also recruit a friend or relative to discuss some or all of the questions.
- They fear that they will disclose information that can be used against them in some weird way, so may be reluctant to disclose information.
- Many people genuinely believe that they are better than they are in reality. Such self-deception is also a source of error.

To deal with these issues, we consulted the literature on test faking and the report includes a number of indications that may reveal unusual response patterns.

Response Style

Extreme Responses

A measure of how often the candidate chooses or avoids to use the extreme responses in the rating scale. Low values are a sign of avoiding extreme responses. High values are a sign of picking almost only extreme responses. (Johnson, 2005; IPIP, n.d.-b; Niessen et.al., 2016)

Middle Response

How often the candidate chooses the middle response, indicating an unwillingness to express a preference. Very high scores are indicative of a person unwilling to disclose information about themselves. (Johnson, 2005; IPIP, n.d.-b; Niessen et.al., 2016)

Item-Level Consistency

Has the candidate responded in a consistent way to questions that are close in meaning? A low score might suggest random responses, or incoherent thinking when completing the questionnaire. (Costa & McCrae, 1997; Christiansen et al., 2017; IPIP, n.d.-b)

Profile Quality

Overall Direction

Is the candidate profile leaning left or right? For many occupations, some characteristics seem more desirable to be on the left edge of the graph (extrovert, agreeable, conscientious, open and emotionally stable). Extreme low or high values should be perceived as the candidate attempting to appear as overly socially undesirable or desirable respectively. (Dundley et al., 2005)

Variability

Very low values indicate an almost flat profile making it hard to draw a conclusion about that person. On the contrary, very high values of Variability indicate a profile that is profoundly diverse, full of extreme personality characteristics. (Dundley et al., 2005)

Scale-Level Consistency

Each personality trait consists of different questions. If the candidate responds consistently to questions about the same trait, a high score will be obtained. A very low score may indicate that the candidate has responded randomly. (Costa & McCrae, 1997)

Response frequency

	item	1	2	3	4	5	responses
A1	I trust others	0.22	2.29	21.67	63.97	11.84	1832
A1	I believe that others have good intentions	0.05	1.91	19.76	62.99	15.28	1832
A1	I trust what people say	0.49	6.28	40.01	48.2	5.02	1832
A1	I distrust people	0.33	1.91	16.76	63.43	17.58	1832
A2	I use others for my own ends	0.38	4.15	16.21	45.8	33.46	1832
A2	I obstruct other people's plans	0.27	0.87	6	46.78	46.07	1832
A2	I may sometimes cheat to get ahead	0.49	2.02	7.81	40.39	49.29	1832
A2	I take advantage of others	0.87	2.67	9.39	40.99	46.07	1832
A3	I love helping others	0.05	0.05	3.33	40.23	56.33	1832
A3	I'm concerned about others	0.16	1.86	6.66	59.55	31.77	1832
A3	I take no time for others	0.16	0.87	4.97	50.11	43.89	1832
A3	I'm indifferent to the feelings of others	0.66	2.24	10.75	40.34	46.02	1832
A5	I have a high opinion of myself	10.26	42.74	29.2	15.5	2.29	1832
A5	I boast about my virtues	2.07	8.02	19.6	47.6	22.71	1832
A5	I believe that I am better than others	2.07	10.59	29.97	34.61	22.76	1832
A5	I think highly of myself	12.77	44.1	30.02	11.63	1.47	1832
C1	I handle tasks smoothly	0.11	0.82	4.2	57.75	37.12	1832
C1	I know how to get things done	0.11	0.33	4.64	56.17	38.76	1832
C1	I almost always complete tasks successfully	0.16	1.53	5.08	50.98	42.25	1832
C1	I excel in what I do	0.05	0.27	9.88	53.66	36.14	1832
C3	I respect rules	0.22	1.09	5.24	46.83	46.62	1832
C3	I may break some promises	0.33	7.04	14.74	44.98	32.91	1832
C3	I always keep my promises	0.11	1.97	10.32	52.95	34.66	1832
C3	I tell the truth no matter the consequences	0.93	9.39	19.6	46.12	23.96	1832
C4	I do more than what's expected of me	0.05	0.6	6.82	54.8	37.72	1832
C4	I do just enough work to get by	1.04	3.77	7.81	47.49	39.9	1832
C4	I work hard	0	0.16	1.2	32.37	66.27	1832
C4	I put little time and effort into my work	0.87	0.82	1.47	18.78	78.06	1832
C5	I am always prepared	0.11	4.2	14.14	55.73	25.82	1832
C5	I waste my time	0.38	1.97	6.66	35.1	55.9	1832
C5	I carry out my plans	0.05	0.49	2.84	60.81	35.81	1832
C5	I have difficulty starting tasks	0.27	3.33	7.75	56.5	32.15	1832
E1	I make friends easily	0.22	1.75	7.48	46.45	44.1	1832
E1	I avoid contact with others	0.16	0.71	4.53	47	47.6	1832
E1	I keep others at a distance	0.33	5.29	17.41	55.4	21.56	1832
E1	I feel comfortable around people	0.05	1.15	5.9	53.49	39.41	1832
E3	I take control of things	0.16	1.04	15.72	62.17	20.91	1832

	item	1	2	3	4	5	responses
E3	I try to lead others	0.38	2.46	18.18	58.19	20.8	1832
E3	I take charge	0	1.69	13.37	58.13	26.8	1832
E3	I wait for others to lead the way	0.33	3.06	25.82	56.66	14.14	1832
E6	I believe the future will be better than the past	0.11	0.71	8.08	41.32	49.78	1832
E6	I radiate joy	0.11	3.11	21.67	44.98	30.13	1832
E6	I love life	0	0.55	4.48	37.12	57.86	1832
E6	I look at the bright side of life	0.06	0.68	5.49	41.57	52.21	1768
N1	I get stressed out easily	0.49	4.86	9.55	50.27	34.83	1832
N1	I fear for the worst	1.58	12.45	20.03	47.22	18.72	1832
N1	I worry about things	1.91	26.8	28.22	33.24	9.83	1832
N1	I'm afraid of many things	0.55	7.1	13.76	51.31	27.29	1832
N2	I get irritated easily	0.33	2.84	7.42	53.77	35.64	1832
N2	I'm not easily annoyed	0.87	6.6	12.55	52.57	27.4	1832
N2	I get angry easily	0.33	1.42	4.86	38.65	54.75	1832
N2	I lose my temper	0.27	1.53	4.42	33.41	60.37	1832
N4	I find it difficult to approach others	0.33	2.02	7.81	49.56	40.28	1832
N4	I'm bothered by difficult social situations	1.31	9.33	13.54	45.69	30.13	1832
N4	I feel nervous meeting people I don't know	0.76	9.66	17.03	42.25	30.29	1832
N4	I only feel comfortable around friends	2.4	4.86	14.3	58.52	19.92	1832
N6	I panic easily	0.66	2.73	6.5	43.78	46.34	1832
N6	I remain calm under pressure	0.27	0.98	5.19	47.71	45.85	1832
N6	I get overwhelmed by emotions	0.44	5.46	11.63	50.49	31.99	1832
N6	I become overwhelmed by events	0.55	5.08	11.68	55.79	26.91	1832
O1	I love to daydream	9.33	31.33	28.55	26.36	4.42	1832
O1	I enjoy wild flights of fantasy	6	17.03	35.48	34.22	7.26	1832
O1	I like to get lost in my thoughts	12.01	39.9	22.16	23.74	2.18	1832
O1	I have a vivid imagination	1.09	5.29	17.3	55.46	20.85	1832
O4	I'm attached to conventional ways	0.87	8.13	26.64	50.66	13.7	1832
O4	I dislike changes	0.33	3.28	10.86	52.67	32.86	1832
O4	I prefer to stick with things that I know	0.55	9.55	23.09	53	13.81	1832
O4	I prefer variety to routine	0.55	6.77	25.38	46.72	20.58	1832
O5	I have difficulty understanding abstract ideas	0.49	2.73	8.85	56.03	31.9	1831
O5	I'm not interested in theoretical discussions	0.55	3.6	14.03	49.89	31.93	1832
O5	I avoid philosophical discussions	1.2	7.81	17.85	48.64	24.51	1832
O5	I love to read challenging material	0.27	2.89	9.39	49.07	38.37	1832

Structure

After we performed reliability analysis, we sought to verify the structure of the questionnaire. For that reason we use a minres (residual minimization) algorithm to run exploratory factor analysis for each big dimension separately (five factor analyses). This type of analysis can verify the structure of each big dimension. Table 7 displays the rotated loadings for each dimension. Table 7 indicates that most of the loadings confirm the structure, although there are some items that load to more than one factor at the same time. However, these analyses do not include the latest changes implemented in the questionnaire at the moment, and we hope that results will be further improved in later iterations of the questionnaire.

Pattern loadings

	item	F1	F2	F3	F4
A1	I trust others	0.86	0.03	-0.01	-0.01
A1	I trust what people say	0.67	-0.03	-0.05	-0.03
A1	I believe that others have good intentions	0.56	-0.05	0.02	0.14
A1	I distrust people	0.47	-0.02	0.28	0.02
A5	I have a high opinion of myself	0	0.89	-0.02	0.01
A5	I think highly of myself	0	0.82	-0.01	-0.01
A5	I believe that I am better than others	0.02	0.37	0.3	0.07
A2	I take advantage of others	0.02	-0.07	0.66	0
A2	I may sometimes cheat to get ahead	0.03	-0.08	0.51	0.09
A2	I use others for my own ends	0.05	0.15	0.5	0
A2	I obstruct other people's plans	-0.05	-0.01	0.45	0.14
A5	I boast about my virtues	-0.02	0.19	0.37	-0.01
A3	I am concerned about others	0.07	-0.01	-0.14	0.59
A3	I take no time for others	-0.04	0	0.18	0.51
A3	I love helping others	0.09	-0.02	0.02	0.46
A3	I'm indifferent to the feelings of others	-0.03	0.07	0.18	0.44
C1	I excel in what I do	0.74	-0.03	-0.03	-0.03
C1	I know how to get things done	0.62	0.02	-0.02	0.01
C4	I do more than what's expected of me	0.57	0.04	0.24	-0.07
C4	I work hard	0.54	0.05	0.14	0.03
C5	I carry out my plans	0.48	0.03	-0.02	0.18
C1	I almost always complete tasks successfully	0.46	0.09	-0.03	0.16
C1	I handle tasks smoothly	0.42	0.03	-0.03	0.24
C5	I am always prepared	0.34	0.22	-0.09	0.28
C3	I always keep my promises	0.13	0.77	-0.06	-0.06
C3	I may break some promises	-0.14	0.74	0.09	0.06
C3	I tell the truth no matter the consequences	0.08	0.32	-0.06	0.1
C3	I respect rules	0.21	0.23	-0.11	0.19
C4	I do just enough work to get by	0.09	0.07	0.56	0.02
C4	I put little time and effort into my work	0.02	-0.02	0.51	0.15
C5	I waste my time	0.04	0.05	0.22	0.48
C5	I have difficulty starting tasks	0.18	0.01	0.16	0.4
E3	I take charge	0.77	-0.05	0.08	
E3	I take control of things	0.73	0	0	
E3	I try to lead others	0.6	0.06	-0.06	
E3	I wait for others to lead the way	0.49	0.19	-0.09	
E1	I avoid contact with others	0.05	0.7	-0.05	

	item	F1	F2	F3	F4
E1	I keep others at a distance	-0.13	0.61	0.03	
E1	I feel comfortable around people	0.08	0.56	0.13	
E1	I make friends easily	0.08	0.47	0.19	
E6	I look at the bright side of life	-0.03	-0.02	0.81	
E6	I love life	0.02	0.12	0.56	
E6	I radiate joy	0.17	0.13	0.46	
E6	I believe the future will be better than the past	0.2	-0.02	0.38	
N1	I get stressed out easily	0.72	0.03	0.02	0.01
N6	I panic easily	0.72	-0.03	0	0.05
N6	I remain calm under pressure	0.56	0.07	0.08	-0.04
N6	I get overwhelmed by emotions	0.47	0.17	-0.05	0.16
N6	I become overwhelmed by events	0.35	0.12	0.14	0.2
N2	I get angry easily	-0.05	0.8	0	0.08
N2	I lose my temper	-0.02	0.7	-0.02	0.07
N2	I get irritated easily	0.22	0.59	0.09	-0.14
N2	I'm not easily annoyed	0.2	0.47	0.07	-0.16
N4	I find it difficult to approach others	-0.07	0.04	0.81	-0.02
N4	I feel nervous meeting people I don't know	0.08	-0.06	0.69	0.02
N4	I'm bothered by difficult social situations	0.17	0.01	0.42	0.17
N4	I only feel comfortable around friends	0.02	0.09	0.38	0.14
N1	I fear for the worst	0.04	0.1	0.03	0.57
N1	I'm afraid of many things	0.19	0.01	0.15	0.44
N1	I worry about things	0.24	0.03	0.1	0.35
O4	I prefer to stick with things that I know	0.66	0.02	-0.03	
O4	I dislike changes	0.62	-0.05	-0.01	
O4	I'm attached to conventional ways	0.51	0.02	0.05	
O4	I prefer variety to routine	0.42	0.12	-0.12	
O5	I love to read challenging material	0.35	-0.09	0.26	
O5	I have difficulty understanding abstract ideas	0.34	-0.11	0.33	
O1	I love to daydream	-0.02	0.79	-0.04	
O1	I enjoy wild flights of fantasy	0.06	0.55	0.09	
O1	I like to get lost in my thoughts	-0.07	0.54	0.05	
O1	I have a vivid imagination	0.22	0.39	0.11	
O5	I'm not interested in theoretical discussions	0	-0.01	0.76	
O5	I avoid philosophical discussions	-0.03	0.07	0.7	

Validity

Validity refers to what extent we measure what we intend to measure. In this case we want to measure future job performance. The definition of job performance may vary. Usually, job performance may mean how productive someone is. Other times we may be interested in the productivity of a team or the success of a company. In the latter cases, we are interested in collective job performance, not merely the acts of the individual, but the codependency and interactions of teams, groups and organizations.

The success of an organization depends on several factors where recruitment is only a part. Gamage (2014) reported rather striking relations between Recruitment & Selection Intensity (RSI) and factors such as labor productivity, product quality, organizational innovations, customer satisfaction, and perhaps most importantly, financial performance. HR is not only responsible for recruitment, however, Gamage (2014) suggested that this particular engagement alone, relates with positive or negative organizational outcomes in the SMEs industry in Japan.

Provided that personnel selection has an outcome in organizational performance, the question is what criteria HR uses to achieve its targets. The criteria usually cannot be the same in different sectors and these criteria relate to specific outcomes. For instance, if a retail company is interested in customer loyalty, it may also be interested in moral behavior. In fact, Roman and Ruiz (2005) suggested a link between moral sales behavior and customer loyalty. One can only imagine that if an organization aims for short term profit, it's also interested in a person low in morality. And although nobody will admit interest in short term profit, that indicates a difficulty in measuring productivity. In such cases, a productivity measurement after a considerable time may yield loyalty.

These examples indicate the importance of measurement, design, analysis, and decision making in HR. First and foremost, it's important to have a definition of favorable outcomes and the impact of these outcomes in the organization. For instance, does HR aim for long term employment? Maertz and Griffeth (2004) suggested that people scoring high in conscientiousness would tend to think about the impact of their resignation in the company they work. A decision to quit, presumably depends on job satisfaction. Cohrs et al., (2006) suggested that openness to experience relates positively to job satisfaction in teachers of mathematics. One can only imagine that openness to experience is not a desirable attribute in tedious, repetitive task-based jobs where there are no requirements of continuous learning. In contrast, in such cases, HR may be really interested in people scoring low in openness to experience.

The examples above serve to indicate several things. Perhaps the most important is that personality testing may serve as a tool in selection, but the end result, like any tool, depends on how this tool is used. Also, some aspects of personality that may be desirable at first glance, are not always what an HR recruiter may really be interested in. Common sense suggests that we need a person scoring low in openness to experience, to fit well in a factory production line.

Nonetheless, there is evidence suggesting that conscientiousness alone tends to be important in several lines of work. Hurts and Donovan (2000) examined meta analytically in several studies, measuring performance characteristics and personality dimensions. They found that conscientiousness compared to other aspects of personality tends to be related with performance across several job titles. In their study they sampled studies involving skilled and semi-skilled workforce, managerial workforce, customer service and sales workforce. In all cases conscientiousness was the strongest predictor for work performance measures. In other lines of work other aspects of personality had differential outcomes. For instance, agreeableness seemed to improve performance in customer service, but it had a very small but negative effect on performance in managerial positions. Their results are not counterintuitive, suggesting that common sense in several cases can be a good guide in selecting relevant personality traits for a specific job.

A more difficult task would be to predict or measure exactly how much an influence of a personality characteristic may have for a particular job. In the Hurts and Donovan (2000) study, although conscientiousness was always found to have a positive relation with performance measures, it was more important in sales and less important in skilled and semi-skilled workforces. The same is also true for other aspects of personality, and the extent to which these should be ignored due to small effects on the outcome always depends on the specific circumstances of a particular job. In fact, personality measurement should not be a panacea in personnel selection. General ability and intelligence test where they may be relevant, and knowledge tests may also be useful.

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