

AVIATOR

User Manual

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INTRODUCTION

Aviator is a personality questionnaire designed for the aviation industry.

1.1. The Rationale for Aviator

The roots of Aviator lie in the assessment and selection of pilots, both for commercial and military purposes. Pilot behaviour is an important area of study. The implications of poor pilot performance are so significant, both in terms of the human and financial cost, that pilot selection has received considerable effort, attention and scrutiny, particularly in the wake of air accidents and near misses.

The role of pilot involves tasks and responsibilities where personality can have a material impact. Pilot assessment has therefore majored on identifying the relevant qualities of potential candidates. Historically, the focus of this psychological assessment tended to be on cognitive skills such as tracking, and decision-making under load. More recently however, the relevance of personality to performance has become clearer, so attention is now also focussed on this vital area. Often, the assessment process includes a 'psychologist interview', where a trained psychologist, armed with a personality profile, probes the candidate to explore their character. The aim is to predict their likely behaviour in a range of circumstances that can vary, in moments, from tedious monotony to extreme danger.

Aviator has grown out of this heritage. The rationale behind its development was to create a tool that would capture the complex, often subtle judgements made by a professional psychologist, and automate these into an expert system that would remove the need for expensive face-to-face psychological assessment.

In Aviator this has been achieved with a new level of assessment depth and granularity – such that the observations made in each participant report are often the result of interactions between at least three, and sometimes up to five different personality traits.

The team behind the development of Aviator includes widely published occupational psychologists and associated professionals with many years experience in the selection of pilots and other aviation staff. Although pilots fulfil a vital, pivotal role, there are many other jobs and functions also crucial to the successful operation of an aviation business. These include cabin crew, engineering, customer services, air traffic control and the like. These various functions also require people

with values and personalities appropriate for their line of work. Aviator has therefore been developed to have relevance for a broad range of aviation related roles.

1.2. The Empirical Foundations of Aviator

As well as needing to be face-valid and relevant for aviation settings, a quality assessment tool must also be based upon sound personality and psychometric theory. Aviator is built upon the widely respected research of Raymond Cattell.

Cattell's research and subsequent model of personality was based on his ground-breaking studies in the 1940s, using the then emerging but now ubiquitous data reduction technique of factor analysis. Cattell gathered a large amount of data which assessed individuals from many different countries on 169 traits, initially identified by analysing commonalities in the meaning of twenty thousand words from the dictionary.

He identified 16 underlying factors which seemed to explain why certain relationships emerged in the data. For example, people who are neat and tidy also tend to be moralistic. Importantly, the 16 factors he identified were those which appeared in different countries and across age groups; therefore his work has a built-in global and cross-cultural relevance.

Intentionally, this kind of statistical method has no theoretical underpinning, although Cattell believed they represented discoveries similar to the periodic table in chemistry. His was an empirical approach, and the scales are therefore essentially statistical inventions. The approach could have identified 30 factors, or 3. But in practice it identified 16 factors.

Cattell's work still has great relevance today. It has both depth and rigour. Some personality tools available in the market take a simplistic, 'personality-light' approach. Their insights are based on easily recognised behavioural scales, which, whilst they may gel with users' own internal frameworks and day-to-day language, do not necessarily cover fully the deeper, fundamental psychological constructs that underpin behaviour.

The Cattell model is rigorous, and yet the world of work, and in particular the world of aviation, has changed considerably since the 1940s. What is required today is a user-friendly tool that provides real depth of personality assessment, crafted for the modern aviation context. This is why Aviator has been created.



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1.3. Aviator – A Truly Expert System



Please take the time to read and understand this manual – the more time you invest in Aviator, the more powerful a tool it becomes.

Aviator extends Cattell's model to 21 different scales, to reflect the increased complexity of the modern world of work, as well as emerging social trends such as narcissism and burnout. These scales are defined and explored in more detail in this manual, enabling full and informed interpretation. Please take the time to read and understand this manual – the more time you invest in Aviator, the more powerful a tool it becomes.

Aviator has one other significant benefit – it produces an expert-system report that interprets and summarises the personality profile. We have put enormous effort into making this the most sophisticated, insightful and user-friendly expert system in the market place. Specifically, the system is based on 'multi-level algorithms'. That is, statements are not dropped into the expert-system report simply based on a single scale score, rather the statements are crafted based on the interaction of three (or more) different, relevant scales. This gives a more nuanced, subtle and refined level of interpretation, and moves us much closer to our original goal when creating this system – 'a psychologist in a box'. To be clear, no expert system can replace the granular insight and expertise achieved by a good psychologist using a sound personality tool, but the Aviator expert-system report is a very good second.

A further important point concerns the language in which the reports are produced. The phraseology is less categorical ("*she is, he will*") than some other tools. This is because our understanding of personality has moved on in recent years and, in particular, the importance of context in determining behaviour has been demonstrated. Aviator reflects this in the way it is written. We understand that on occasion this may frustrate some users – people often want to know precisely what type of person someone is and exactly how they might behave – but behaviour is more complex than this (for more information, check out *Fundamental Attribution Error*, Jones and Harris 1967, on the internet). Aviator therefore encourages you to explore the profile with the person and seek corroboration – more time consuming, but more accurate and more honest. In our view, the maximum value is gained from personality data when it is used to explore what follows (and what does not follow) from the way participants describe themselves.

WHEN TO USE AVIATOR

The ability to understand other people, and indeed ourselves, has never been more important. In a connected world, gaining insight into the values, motivations, drivers and behaviour of those we interact with can yield huge benefits to all concerned. Aviator can therefore be usefully deployed in a wide range of different contexts. The suggestions below are merely illustrative.

2.1. Selection

In the aviation environment, the decision to hire someone has great significance for both the organization and the individual. Recruitment errors can resonate for years, whilst bringing in the right person can transform an entire operation. Most roles require a set of technical skills or expertise particular to that sector or market. These technical skills however, whilst absolutely essential, are usually totally insufficient for success in the role. Also required is the ability to build relationships, make timely decisions, and interact with others in a constructive manner. Aviator provides valuable insights into these critical areas, allowing the selector to make informed judgments, and opening the door to a rich, relevant and illuminating discussion between the selector and the candidate. This dialogue with the candidate about the fit between their profile and the vacant role can add real insight and understanding to both parties. Such discussions also serve to give the candidate a realistic preview of the role for which they have applied.

2.2. Development

An Aviator report forms an excellent basis for a discussion about an individual's development needs and aspirations. Aviator can play a useful role in training courses, development centres, coaching, mentoring and other learning interventions. It can also be deployed very effectively at team level, for example, as part of a workshop where members explore their own and their colleagues' personality and work style preferences. Aviator also works well as part of the performance management cycle, in particular, at key inflection points in the person's career. For example, when they are considering a new role, or perhaps where there might be some performance issues to address.



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2.3. Promotion

Deciding who to promote can sometimes be a challenging and emotionally-charged responsibility. There may be several candidates who are in the running, each of whom has their own strengths and development areas relative to the role. You may wish to compare the internal candidate pool with external candidates about whom much less is usually known. And although you may have job performance data about internal candidates, typically this will only relate to their current or recent roles, and not necessarily the role you are considering promoting them into. In these circumstances, Aviator provides a face-valid, relevant platform for gathering comparable data across the whole group. Holding feedback sessions with each candidate, at which their profile is discussed and explored as part of the promotion process, can add enormous insight for all parties, not least the candidate who is able to gain greater understanding of the challenges and rewards of the role. Aviator can also be deployed in succession planning applications.

2.4. Other Applications

Increasingly, many individuals are taking responsibility for their own skills and career development. They want personal access to tools that can enable self-insight and self-learning. Aviator allows the individual to complete their own questionnaire online and then receive an expertly interpreted report, enabling them to identify the type of work environments they will thrive in. This can bring real value for school-leavers, graduates, supervisors, managers, high potentials – indeed anyone seeking to understand themselves more fully.

Career counselling is a further area where Aviator can add significant value. In particular, as part of professional outplacement and career guidance programmes.

2.5. Caution: Using *Aviator* Wisely

When a tough decision has to be made, especially one that impacts negatively on others in the workplace, it can be tempting to look for a tool or a process to make this decision for you. In these circumstances, psychometrics are a poor substitute for an open, honest conversation as part of a broader performance management dialogue. To be clear, psychometrics, such as Aviator, can play an important part in helping to identify who, for example, is most equipped to make the transformation to a new role or a new way of working. But, wherever possible it should

be used alongside other relevant sources of data about the person to help reach a balanced, fair conclusion.

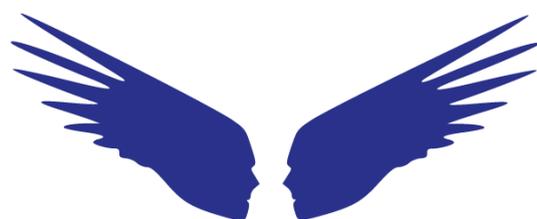
It should also be noted that Aviator is fundamentally an occupationally-oriented tool. Whilst it measures a set of scales and constructs that underpin human nature more broadly, the structure of the tool and, in particular, the online nature of the administration and report-production, are not suited to clinical environments. It is not designed to diagnose or address personality disorders.

2.6. Legal and Professional Considerations

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AVIATOR

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