



SOCIETY OF ACTUARIES

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Which Way to Go? Let Aptitudes Guide You

by Mary Pat Campbell

During the years of exam-taking, one looks toward the end of a seemingly endless series of tests. Newly minted FSAs are rarely interested in subjecting themselves to another battery of tests. And yet, a few months after I attended the FAC, I walked into the Manhattan office of the Johnson O'Connor Research Foundation (JOCRf) to undergo some six hours of tests. But instead of the familiar feeling of the intellectual marathon that are FSA exams, the experience was varied and interesting. Best of all, you don't need to study for these tests.

The JOCRf tests for aptitudes, which they define as "*natural talents, special abilities for doing, or learning to do, certain kinds of things easily and quickly*". Johnson O'Connor himself started down the road of aptitude testing when he worked for General Electric in the 1920s, and was trying to determine how to best fit employees there with particular jobs.

The first of what are now a couple dozen tests was picking up small metal pins and inserting them in a pegboard in order to test manual dexterity. Johnson O'Connor and his fellow researchers had found that performance on this test, as well as the others they administer, remains stable in a relative sense, when compared to a peer group based on age ranges. For example, on the manual dexterity test, people will peak in speed and accuracy at a certain age, but within their own age group they will stay in a certain percentile of performance. Scores above 70th percentile on a particular test are categorized as high in that aptitude; likewise, scoring below 30th percentile is considered low in that aptitude.

So why go through this testing? In my case, it was to help get a better feel for which of the various actuarial career paths would best suit me.

You see, in addition to keeping stats on the relative performance of people, the JOCRf also researches which aptitude patterns suit which careers best, in order to give advice to people in help picking an appropriate college and major (teens as young as 14 can be tested), a profession, or a particular path within a profession. For many professions studied by JOCRf, you need to possess particular aptitudes in order to be able to compete well—for example, if you have difficulty in seeing patterns in numbers (tested by asking the client to complete number sequences), you're most likely going to make a really dismal actuary.

But it's not just a matter of which aptitudes you possess a high score in—for some professions, scoring low or average in particular aptitudes is equally important:

- An aptitude may distract a person from getting a job done; if your mind is buzzing with ideas all the time, it may be difficult to concentrate on a single idea enough to take it all the way through execution.
- Particular aptitudes need to be used if you score high in them to avoid frustration—structural visualization is one of these.

For example, accountants tend to score low or average in structural visualization (tested with a mental paper-folding test and hands-on assembly of a 3D jigsaw puzzle). A person scoring high in structural visualization working as a corporate lawyer, for example, may find his job infuriating as he does not have an outlet for this ability. On the other hand, if such a person were to go into patent law, he could find ways of using it.

In the case of the actuarial profession, the JOCRf researchers have found that actuaries sat-



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ified in their careers score in the high range in structural visualization, number series and analytical reasoning, which involves taking something and putting its component parts in a logical relationship. If you have gotten through the exams and some years of actuarial work, chances are good you possess these aptitudes. But there's more to actuarial work than that, and there are many varied paths one can travel in one's actuarial career: product development, valuation, research in modeling, programming actuarial software, regulatory work, marketing, management, consulting, academia ... for such a small profession, there are many niches a person can fill.

So here are where some of the other aptitudes come into play, along with two other tests the JOCRF administers that aren't aptitude tests, but a personality test and a general knowledge test.

For example, there's ideaphoria, which is an ease in generating a lot of ideas quickly. Mind you, they don't test if any of your ideas are actually good, just whether you can generate a lot of them quickly. This is one of those aptitudes where having a high score is not necessarily good for certain positions. For example, business executives, except those in marketing, tend to be lower in ideaphoria; they need to be able to focus on ideas one at a time and consider other people's ideas more rather than necessarily generating their own. A person scoring high in ideaphoria can channel that manic flow into teaching, consulting, writing, marketing, product development, and any other pursuit where cranking out a high volume of ideas in a short period of time is a plus. People with high scores in ideaphoria would likely better avoid the type of actuarial work where you're doing the same thing year in and year out.

Another aptitude that may be relevant to an actuarial career is inductive reasoning, an aptitude associated with troubleshooting. A person scoring high in this aptitude might best work on systems or debugging other people's work. The medical profession is a career in which

high inductive reasoning is a *sine qua non*—it's related to diagnosis.

Finally, another relevant aptitude is foresight, which relates to the ability to plan for the long term. This can be helpful in many areas of actuarial work, especially if you want to consider the life cycle of a new insurance product being developed. A high score in foresight is also handy if you are in management and need to consider business growth over the long term, and what kinds of talent development you would need in your company.

In addition to these aptitudes, there is the consideration of personality, which the JOCRF categorizes into two groups: objective and subjective. The objective personality works well with and through other people, and is suited for general management positions and more teamwork-oriented environments. The subjective personality, on the other hand, is very personally tied to their work, and better suited to work on their own piece of a project—they do well as an expert or a guru in their chosen field.

A subjective person in a management position can cause lots of grief, ending up as the classic micromanager, even sometimes redoing the work of their subordinates. This is not to say that subjective people are introverted and objective people extroverted; you can be a gregarious subjective person or a diffident objective person. This test has to do with how you relate to your work. To paraphrase a description by a JOCRF staff member: *work to an objective person is like a hard-boiled egg, the separation between work and self, like the separation between yolk and white, is well-defined. To the subjective person, life is an omelet, with work and self thoroughly mixed together.*

Finally, there is the one test you can actually study for: a vocabulary test. Again, this test is referenced against a peer group, and results are in terms of percentiles. Here, you can increase your percentile over time through focused study, and the JOCRF has found that a

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high vocabulary pays off in career success in all fields: the group with the highest vocabulary scores are not college professors, as you might think, but top business executives.

This test does track somewhat with general knowledge: as you get older, you know more, and the same progression is seen with vocabulary. The larger your vocabulary, the more sources you can read and understand. But also, the "hardest" words in the test are generally very precise and obscure terms, which may be related to being able to make fine distinctions in meaning and be related to communications

skills. Executives have to communicate with a wide range of people and make their meaning clear. As the late William F. Buckley, Jr. wrote, "*I am lapidary but not eristic when I use big words.*" Well put.

So if you are trying to choose between possible paths, or would like to be able to find the path that best fits you, contact the Johnson O'Connor Research Foundation <http://jocrf.org>, which has offices in 11 cities across the United States. It's given me much food for thought, and if nothing else, has helped me to follow the Socratean oath: "*Know Thyself.*" □

