



# Sort My Career Client Report

## Report prepared for

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## Introduction

The purpose of the SortMyCareer program is to help you identify your strengths for present and future jobs. Would you be happier and more successful as an artist, a tax consultant, or as a mechanic? The ten parts of our program help you make choices, and tell us which daily career activities you're most likely to enjoy.

Once we discuss your strengths, we will give you a list of careers. This list includes jobs where people with strengths and talents similar to yours have had successful careers. Use this list to help decide about the kind of work you want to do for a lifetime.

Also, even though we know about your interests, talents, and strengths, your success in any job will depend on how hard you are willing to work. For example, even though you have high enough scores to become a firefighter, you still need the self discipline and good judgement necessary to do the job. Let's look at the abilities that make each person unique and interesting.

## Aptitude 1: Working Personality

### Definition

Working Personality is an ability to fill a role in your career field. This trait is closely related to your daily work enjoyment. You need to know how well you will fit inside an organization and how well you will take on a variety of job assignments. You also need to know whether or not working alone or with little supervision is your strength.

There are two types of working personality that can be measured by the Word Association exercise. The first is called a *Generalist Working Personality*. Those who match with this group prefer jobs where there is more variety in their day-to-day activities. They would like to work on one project for an hour or two and then do something else for awhile. They would prefer to be doing something different in the afternoon than they did in the morning; something different on Tuesday than they did on Monday. If they are doing the same thing, then they want to be doing it with a different client or customer each time. Three-quarters of those tested score Generalist, while the remaining 25% are Specialists.

The second category is called a *Specialist Working Personality*. People in this group find more satisfaction when they are working in a single focus job. They want to learn more about the concepts; want to become better at performing this particular task. In short, they seem driven to become an expert in a specific activity.

Specialists become frustrated in Generalist jobs because their energy is spent in several different directions, so it is hard to gain a reputation as an expert. Generalists dislike Specialist careers because they do not offer enough variety. Thus, even though they may have the same other talents as a Specialist, they are not likely to stick with this type of work long enough to reach the status of an expert.

On the exercise, some individuals score very close to the dividing point between Generalist and Specialist. Since we do not have a definite result, we designate this as an *Uncertain Working Personality*. This is not a separate category. You are either Generalist or Specialist. There are instructions given to those with this result on how to plan their careers.

### Characteristics

People with a Generalist Working Personality tend to:

- Prefer jobs with a variety of activities.

- Enjoy working with a team rather than alone.
- Become managers in larger organizations.
- Know a lot about many subjects instead of everything about one field.

#### People with an Uncertain Working Personality:

- Are either specialist or generalist but exercise results were unclear.
- Should consider themselves specialists until they have on-the-job experience.
- Should pursue a specialized education in a field that matches their strengths.

#### People with a Specialist Working Personality:

- Are better suited to professional-level careers.
- Enjoy being an expert.
- Build strong job skills by going to school or on-the-job experience.
- Like to show what they know through writing or speaking.

### Discussion of Working Personality

One of the mysteries of life is why two individuals who seem to have equal talents and choose to enter the same occupation have very different results. Often one of these workers will continue to work in the chosen field and build a lifetime of achievement. The other individual will have initial success, sometimes spectacular success, but then quit after a few years and move on to a different career. One important predictor of this type of result is an aptitude called working personality. A certain type of job environment seems to fit certain people very well, but does not produce the same level of satisfaction for others with many of the same or similar abilities.

While it is hard for anyone who has never had a full-time job to understand why this would be so, most adults have either experienced this type of "personality" conflict themselves or know friends who have. If you are a student, we encourage you to take this discussion seriously. It may save you several years of wasted effort.

While the free-association technique had been used prior to 1910, the first attempt to study this method systematically was reported in G. H. Kent and Aaron J. Rosanoff's work called *A Study of Association in Insanity* (1910). This was an attempt to discover "pathogenic subconscious ideas" by comparing normal responses to specified stimulus words with the responses of the inmates of mental hospitals. Much later, Licht found a much different use for free association that showed promise in predicting what type of occupation the subject might enjoy.

As more and more data has been gathered, a better understanding of the differences between the two types of working personality has emerged. We will try to condense this body of information to the essentials:

For whatever reason, specialists and generalists do not find satisfaction from the same qualities of a job. Generalists prefer jobs that are divided into a number of daily tasks; these are ideally tasks not identical in nature. Let us use an advertising account manager as an example:

- This person might start the day dealing with messages and correspondence left over from the previous day.
- This might be followed by a meeting with a client and then the results of the meeting might need to be explained to staff members.
- At midday, there could be a luncheon with a prospective client or with an executive from his own firm.
- The afternoon might cover reviewing artwork for a current project, interviewing a job applicant, and preparing a presentation for tomorrow.

Each separate activity is not the job - the job is the cumulative result of these activities. The successful person for this type of work must use several different skills and interact with a number of people from diverse educational and work backgrounds. If this person is an expert in only one skill area, it will be much more difficult to achieve a good result.

Specialists, as a group, find more satisfaction when they can concentrate their efforts in one area or activity. An exaggerated description of a specialist's working day would be:

- Started work on project X at 9:00 am and continued working on X until 5:00 pm.

Even in the business world, the specialist will find more satisfaction if he/she is able to produce the best product or know more about their field than anyone else. If the specialist works on too many different activities, they will have a difficult time becoming an expert in just one field.

Generalists dominate in the business world, especially in areas such as sales, marketing, and management. But, there are generalist positions in virtually any occupation that you can name. This is because once you create an organization around a field, no matter how "specialized" that field might appear to be, you will need generalists to help the organization function effectively. There are, therefore, generalists in medicine, law, and engineering. They occupy positions such as director of a clinic, managing partner, and consulting engineer.

Specialists dominate in professional work and other fields like art, music, and writing where to achieve financial success one needs not just to be better than the average person but better than most other professionals in the field. In the business world, they like using their strong backgrounds in areas such as consulting. Another option in business that works for specialists is to own an independent business rather than working for a large corporation.

The labels, "Generalist" and "Specialist," were developed to remind clients of the type of education that is likely to be most beneficial to them. Generalists need a broader educational background; they need to know a little about everything. If generalists are inclined to pursue specialized degrees, they should consider a minor in business or liberal arts as well. Another common approach is to work for a few years and then pursue a Master's in Business Administration to prepare for long-term career needs.

Specialists need to choose a specific skill or field and then work hard to achieve status as an expert in that area. There is a definite advantage if a specialist can choose an area and begin to develop an expert's background as early in their educational career as possible. While earning a diploma that states that you are an expert is a good way of preparing for a specialist career, there are other alternatives. An apprenticeship with a recognized expert in your chosen field would be one. Vocational programs and on-the-job training also can be used. In areas such as sports, specialists can improve their skills by attending specialized camps or working with top coaches and trainers.

If your results were not clearly strong for either of the types of working personality, you should consider yourself a specialist and begin an expert's type of training. The reasoning for this recommendation is very straightforward. If you have an expert's degree and after two to three years find yourself frustrated because your job has a very narrow focus, the chances are that you are a generalist. If so, you can move toward the more generalist positions within your chosen field.

If you took a more generalist approach to your education and after a few years of work, you find that job less satisfying than you had hoped, it will be difficult to switch to a specialist position within that field. Employers are looking for applicants who have a strong background to fill their specialist openings. If you want to switch to one of these positions, you may have to return to school for several years in order to gain the necessary expertise and qualifications.

## ***References***

- Rosanoff, A. J. (Ed.) (1927) *Manual of Psychiatry* (6th ed., rev.). Hoboken, NJ, John Wiley & Sons, p. 546.
- Licht, Marie. (1947) The measurement of one aspect of personality. *Journal of Psychology: Interdisciplinary and Applied*, Vol. 24, pp. 83-87.

## **Interpretation: Your performance**

### ***Generalist Working Personality***

Your performance on the Word Association exercise is a strong indication that you possess a Generalist Working Personality. You should prepare for a career where you will be expected to contribute in several areas and work with all types of people. You will benefit from a wide-ranging education that prepares you

to discuss "anything with anyone." Most generalists enjoy working on team projects and inside a company or organization. If you pursue a long-term career, you will be expected to take on some management or leadership responsibilities.

Examples of Generalist Careers:

- Salesperson
- Public Relations
- Retail Manager
- Social Worker
- Hospital Administrator
- Plant Manager
- Meeting Planner
- Supervisor
- Government Worker
- Television Producer

## Aptitude 2: Working Style

### Definition

Each job has its own "personality" or working atmosphere. This is what is meant by *Working Style*. The environment in some organizations is very lively. Styles may change from day to day where the mixture of clients and employees is highly diverse. There are also jobs where the atmosphere or style seldom changes. Long-term job enjoyment is related to how compatible your abilities and preferences are with the style of a work place.

Careers that require frequent interaction with clients, participation in social activities, and supervision are better suited to someone with an *Extrovert Working Style*. Extroverts are more outgoing and people-oriented.

The second type of Working Style is called *Introvert*. Jobs that match an Introvert Working Style require you to work either by yourself or in a less aggressive social environment. Introverts can work with other people, but prefer smaller groups and more controlled situations. As a group, Introverts are more quiet and retiring in nature.

The majority of people fall between the strong Extroverts and strong Introverts. They are said to have an *Ambivert Working Style*. Ambiverts fit with the majority of occupations – where there is a mixture of Extrovert and Introvert activities. The typical Ambivert easily can move between social and individual responsibilities.

### Characteristics

People with a strong Extrovert Working Style:

- Are better at working with people, especially the general public.
- Are more effective in direct supervision of subordinates.
- Can be frustrated if the job requires spending long hours working alone - this includes school activities such as studying for tests and writing essays.
- Usually enjoy being physically active (not sitting in one place all day).

People with an Ambivert Working Style:

- Are more suited to careers that require spending some time working alone and some time interacting with co-workers and clients.
- Work well inside a company or an organization.
- Can adapt to a wide range of job environments.
- Have the most common Working Style.

People with a strong Introvert Working Style:

- Are better suited to most professional careers.
- Prefer working with acquaintances rather than strangers.
- Are more effective in dealing with people on a one-on-one basis.
- Become frustrated when performing aggressive social behaviors on a daily basis.

## Discussion of Extrovert and Introvert Working Style

Perhaps there is no other factor that has more "surface" validity than this one. Everyone knows a person who is very outgoing, bubbling over with enthusiasm, and the center of any social occasion. And they are familiar with another individual who is quiet, uncomfortable around strangers, and unassuming in nature. These are the classic examples of an "extrovert" and an "introvert."

Most people fall somewhere between these two extremes. They are reasonably sociable, but able to work on their own when this is necessary.

In the working world, some jobs clearly call for someone with an extroverted personality, while others clearly require the traits of an introvert. Most people have an opinion about which of these alternatives better matches their own behavior pattern, but it is hard to answer the question: "Am I more extroverted (or introverted) than most people?" Thus, you need to have an objective assessment of your working style.

According to a recent article by Gibby and Zickar, one of the earliest attempts to link personality testing with career issues was the Woodworth Personal Data Sheet of 1924. Up to that point, such testing was used to diagnose psychoses. The first extrovert/introvert subtest was part of the Bernreuter Personality Inventory in 1931. The Eysenck Personality Inventory was a major influence upon the Big 5 Personality Trait theory starting about 20 years later.

Eysenck's approach was to combine items focusing on sociability (one's need to interact with other people) and other items related to impulsivity (one's tendency to act in a spontaneous, unpremeditated way). (See studies on these two components such as that by Farley.) For the purposes of SortMyCareer the sociability items are more helpful in helping people understand what types of jobs would be more satisfying.

The Wikipedia article on extroversion and introversion contains further information on this subject. Pay more attention to the discussion of Eysenck's work than Jung's. Eysenck's work is the approach that led to the current measuring instrument.

## References

Gibby, Robert E. and Zickar, Michael J. (2008). A History of the Early Days of Personality Testing in American Industry: An Obsession with Adjustment. *History of Psychology*, 11, pp. 164-164.

Farley, Frank H. (1970). Further Investigation of the Two Personae of Extroversion. *British J. of Social & Clinical Psychology*, 9, pp. 377-379.

## Interpretation: Your Performance

### *Introvert Working Style*

Your performance on the About You exercise was clearly in the range that indicates that you have an Introvert Working Style. This is a clear advantage in careers where you need to spend much of your time working on individual projects and not on team work. We encourage you to develop social skills that allow you to work with others and deal with supervisors when required. Be careful if you decide to start your own business as you may need to balance your working style with someone more extroverted.

Examples of Introvert Careers:

- Writer
- Sculptor
- Engineer
- Medical Researcher
- Astronomer
- Accountant

- Computer Programmer
- Economist
- Patent Lawyer
- Appraiser

## Aptitude 3: Thinking Types

### Definition

Your *Thinking Type* is your fundamental way of viewing the world. Some people are more interested and skilled in working with physical, tangible concepts. Others are more at ease when they are working with concepts and intangibles.

Many individuals have a lifelong interest in taking things apart to see how they work or in making and building three-dimensional objects. The ability to visualize and solve this type of physical problem is the major aptitude of the people called *Structural Thinkers*.

There are other people who have a strong interest in working with ideas, understanding abstract concepts, and having insight about interpersonal relationships. *Abstract Thinker* is the term applied to this group.

While most Structural Thinkers have little interest in abstract concepts and most Abstract Thinkers find little satisfaction working with structural concepts, there are some people who occupy an intermediate position between the Structural and Abstract Thinkers. This group is referred to as having *Average Structural/Abstract Thinking*.

### Characteristics

People who are strong in Structural Thinking:

- Are better at working with physical, tangible, 3-dimensional projects.
- Can mentally work with spatial concepts.
- Need to work harder than most to understand social behavior.
- Usually enjoy making things and seeing how mechanical devices work.

People who are Average in Structural and Abstract Thinking:

- are more balanced in problem solving abilities.
- Can work with physical concepts, but prefer to work with familiar techniques.
- Prefer working with people on practical rather than theoretical problems.
- Are better at seeing both technical and organizational sides of a structural issue.

People who are strong in Abstract Thinking:

- Derive more long-term satisfaction working in abstractions.
- Have a better understanding of people and their inner lives.
- Are usually better at putting together and supervising a team of workers.
- Are less comfortable with solving problems involving science or engineering principles.

### Discussion of Structural and Abstract Thinking

By the age of 16, most people have some understanding of whether they are strong in performing structural, three-dimensional problem solving. When encountering a pile of building blocks, some toddlers go about the business of making the blocks into something. Others ignore the blocks, throw them about the room, or wait for some other child to build something that they can destroy. By the teens, individuals may have developed a lifelong interest in taking things apart to see how they work or spend hours exploring their physical surroundings. Later in life these structural thinkers pursue careers that require them to solve physical problems.

What is less obvious is that while these mechanically-minded individuals have been developing, there are others who have been showing an equal facility for understanding human behavior, working with

abstractions, and selling ideas. These abstract thinkers are actually more numerous than the structural group. While both of these aptitudes are present with both males and females, there are more structural thinking males and more abstract thinkers among females.

This pair of aptitudes divides the working world into three groups: careers where abstract thinking is the dominant trait, careers where strong structural ability is very helpful, and a third group of occupations where those who score average have the most success. Thus, it is very helpful to know how strong you are on both of these traits so you can pursue careers that offer the greatest chances for success.

The concept of intelligence has been further subdivided by some psychologists into crystallized intelligence and fluid intelligence. One of the two major factors within fluid intelligence is Spatial Thinking. Attempts to measure this trait have been made for about a century. It was a factor that everyone knew about even before the formal attempt was made to measure special aptitudes. There have been "mechanical geniuses" throughout recorded history as well as people who find three-dimensional problem solving very difficult. I remember the story of a young woman who enjoyed making her own clothes. When she encountered the first pattern that included sleeves, she studied the instructions very carefully and sewed on the sleeve. It was wrong. She tried a different alignment that she was convinced would solve the problem. Wrong again! There are 4 possible ways of matching a sleeve with the body of a dress. She finally got it right on the fourth trial.

One textbook contains a statement to the effect that to the author's knowledge there have been at least 800 tests used to measure Spatial Thinking or some component of this trait. The ancestor of the SortMyCareer approach to measuring Spatial Thinking is derived from a study of 8 subjects who were asked to mentally manipulate objects to see if they were identical to a standard object. Shepard and Metzler showed that the greater the amount of angular difference between the orientations of the two objects, the longer the time needed to determine the answer. The more mental rotation involved the longer the response - hence the label assigned to tests of this type - mental rotations.

Vandenberg followed with the development of a paper-and-pencil version of mental rotations in 1978. This version showed a strong relationship to other Spatial Thinking measures and was not influenced by verbal ability.

One of the interesting features of mental rotations is the difference between the average scores of males and females. It has been proposed that Spatial Thinking is a sex-linked, recessive genetic trait. If this hypothesis is true and the incidence of the recessive trait is 0.50, then three-quarters of females should score below the male median. The Vandenberg version of mental rotations has consistently shown sex differences of this magnitude.

It should be noted that the dominant trait under this hypothesis is not a negative or neutral trait, but is in itself an important aptitude, Abstract Thinking. Those possessing this trait have greater success than those with Spatial Thinking in fields that stress working with ideas, abstract concepts, and human behavior. Thus, anyone objecting to males, as a group, being better suited for careers in engineering and geology also must have an objection to women being better suited for careers in law, management, and the nurturing professions.

Some surprising recent experiments suggest that this sex difference may exist at very early ages - long before one would expect the effects of acculturation to appear. Thus, mental rotation problems in the Object Comparison exercise seem to tap into a very basic human ability.

Those with average or indeterminate ratings between the structural thinking and abstract thinking extremes have an advantage in occupations that require participation in both types of activities. For example, managers of technical problem solving projects often score closer to the center on these exercises. They have to understand the abstract concepts of management but they are discussing structural problems with their subordinates with engineering or mechanical backgrounds. The managers who are strong in just one of these areas have more difficulty keeping up with both areas of responsibility.

## References

Cattell, Raymond (1971), *Abilities: Their structure, growth, and action*. Oxford: Houghton Mifflin.

Cattell uses the terms crystallized intelligence and fluid intelligence to mean: Fluid Intelligence - the

ability to draw inferences and solve new problems. He believes it to be independent of acquired knowledge. Crystallized Intelligence, on the other hand, in his view was more of the ability to make use of acquired knowledge and developed skills. Verbal and numerical abilities are primary components of crystallized intelligence.

Carroll, John B. (1993). *Human Cognitive Abilities: A survey of factor-analytic studies*. Cambridge: Cambridge University Press.

Shepard, Roger N. and Metzler, Jacqueline. (1971). *Science*, Vol. 17 (3972), 701-703.

Vandenberg, Steven G. (1978). *Perceptual and Motor Skills*, Vol. 47(2), 599-604.

Smith, I. Macfarlane (1964). *Spatial Ability: Its educational and social significance*. San Diego: Robert R. Knapp. p. 255.

Moore, David S. and Johnson, Scott P. (2008). "Mental Rotation in Human Infants: A sex difference." *Psychological Science*, Vol. 19(11), 1063-1066.

Quinn, Paul C. and Liben, Lynn S. (2008). "A Sex Difference in Mental Rotation in Young Infants." *Psychological Science*, Vol 19(11), 1067-1070.

## Interpretation: Your Performance

### ***Strong Structural Thinking***

Your performance on the Object Comparison exercise was a strong indication that you possess the Structural Thinking aptitude. We encourage you to consider careers where you will have frequent opportunities to engage in activities that will use this important trait. These can include both hands-on activities (building) or just thinking about complex physical concepts. In school, this may require you to take more demanding subjects. The extra effort involved is likely to pay off financially and in satisfaction later in life. Structural thinkers trapped in non-structural jobs almost always regret their career choice.

Examples of Structural Thinking Careers:

- Geologist
- Physicist
- Doctor
- Architect
- Sculptor
- Civil Engineer
- Mechanic
- Fashion Designer
- Cinematographer
- Industrial Technologist

## Aptitude 4: Reasoning

### Definition

Solving problems is an important part of most occupations. In general, if there is only one correct or best answer to a problem, the process of finding the solution is called *Reasoning*.

One type of reasoning ability is the speed one takes to find the correct solution. This aptitude for solving reasoning problems quickly is called *Convergent Thinking*.

It is important to understand that there also are situations that require careful consideration of several options. Often none of these options is a perfect solution. Deciding what to do in this type of situation requires a different reasoning aptitude that is called *Strategic Thinking*. It is important to know which type of reasoning is your strong point.

At this point in the understanding of reasoning aptitudes, there are careers where success does not seem to be directly related to either Convergent Thinking or Strategic Thinking. This is called Average Reasoning Ability. For example, physicians have consistently shown strong Convergent Thinking ability,



but dentists typically show Average Reasoning Ability.

## Characteristics

People who are strong in Convergent Thinking:

- Are faster in finding patterns in data and information.
- Find it easier to solve problems that involve logical operations.
- Want to know that there is one solution and one correct answer.
- Often are so focused on immediate issues that long-term matters are neglected.

People who are Average in Convergent and Strategic Thinking:

- Can deal with both types of problem, but are somewhat slower in finding solutions.
- Do not need a career that emphasizes logical problem-solving.
- Often have an advantage in purely creative types of work.
- May be good managers of strong problem-solvers.

People who are strong in Strategic Thinking:

- Are more competent in working with dilemmas, problems with no right answer.
- Have an advantage in executive and other long-term planning jobs.
- Are often frustrated if working with strong convergent thinkers every day.
- Place greater emphasis on understanding the entire process; less concerned with day-to-day problems.

## Discussion of Convergent/Strategic Thinking

Solving problems is an important part of most occupations. It is important to understand that there are different types of problems and different aptitudes that can make it easier (and sometimes harder) to work with these problems. There are many examples of careers where the speed of solving problems is critical - such as a surgeon dealing with a complication in the middle of an operation. Some problems involve processes that are spread out over a long period of time and other problems have no "right" answer.

At this point in our studies, we believe that there are some people who excel in handling the problems where there is a definite "right" answer and speed is critical. This type of problem-solver is said to have strong *convergent thinking* ability.

Those who are better able to handle long-term problems and problems where it is difficult to determine the best solution, score differently on the exercises and are more talented in *strategic thinking*. Situations that do not have clear-cut "right" answers are called *dilemmas*, so another way of describing this group is that "they are better at working with dilemmas."

There are many people who do not show a preference for working with just one type of problem-solving. They seem capable of dealing with both types of situations, but are not exceptional in either one. This may be a measurement problem or it may simply mean that they do not have either aptitude.

If you show a definite talent toward either convergent or strategic thinking, look for careers that will challenge this strength. If you score in the middle, you are not restricted by the need to find outlets for either of these traits. Scoring in the middle would be appropriate for the majority of career options.

There have been problem-solving tests since the beginning of the aptitude testing movement. The earliest tests tended to deal with general tasks that might use several aptitudes, such as a test for engineering ability or a test for artistic skill. Gradually, an effort was begun to determine fundamental problem-solving traits that could be used in a range of careers. This is when the types of reasoning exercises used in this program originated.

Once the search for measures of reasoning ability began, many different exercises were developed. One compilation listed 236 different measures of reasoning. Since we are using an innovative approach to aptitude assessment, we used two of these so that we could determine which one provided the best

information. Both exercises were used in determining your classification.

## References

Myers, E.C. and Myers, G.C. (1921). Measuring Minds. NY, NY: Newsom & Co.

Carroll, John B. (1993), Human Cognitive Abilities: a survey of factor-analytical studies. Cambridge University Press, pp. 196-247.

## Interpretation: Your Performance

### *Convergent Thinking*

Your performance on the Pattern Finishing and Picture Matching exercises was well above normal. You definitely have the Convergent Thinking aptitude. We encourage you to consider careers where you can use this type of problem-solving ability. You have the capacity to look at individual facts and see how they fit into a pattern and to think logically. If there no regular opportunities to use this trait, you will experience restlessness and dissatisfaction. Sometimes those with the convergent thinking aptitude reach a point where their job no longer offers new challenges. If this happens, consider moving to a new organization or a new part of your chosen field so that there be some new issues or problems to solve. Learn to be patient with co-workers who cannot grasp solutions to problems as quickly as you can. Remember this can be a sign of their ability in some other part of the job.

Examples of Convergent Thinking Careers:

- Lawyer
- Investigator
- Physician
- Researcher, Social Sciences
- Mechanic
- Literary Researcher
- Credit Analyst
- Business Consultant
- Real Estate Appraiser
- Science Writer

## Aptitude 5: Idea Abilities

### Definition

Idea Abilities are the different ways that people use and apply information. It is important to know what approach works best for you. Some people are more effective at producing new, original ideas, while others are better at focusing on a specific idea or project. Each type of idea ability contributes to success in a range of occupations.

*Idea Fluency* is an ability to think of new ideas quickly when presented with a problem. It is important in fields that stress originality, in fields that stress communicating your thoughts, and in fields that stress reacting rapidly in tactical situations.

*Idea Fixation* is important in tasks that require focusing on a specific idea or project. Individuals with this trait are better suited to careers where accuracy is more important than speed, where it is necessary to concentrate on long-term projects, and where there are standardized procedures. Idea fixation is very beneficial when distractions need to be avoided.

*Mixed Idea Fluency/Fixation* – It is not always possible to classify each person as either strong in Idea Fixation or Idea Fluency. Individuals sometimes can judge their abilities by observing how easy they find certain tasks and how much they enjoy high Fluency or high Fixation activities. Those who have a mixed result should consider careers that may require some time working with producing ideas and some time working on projects that stress staying focused.

### Characteristics:

### People who are strong in Idea Fluency:

- Produce original ideas rapidly.
- Find that higher-quality ideas also require training and job experience.
- Find that other traits need to be considered in deciding which creative career would be best.
- Are often frustrated in jobs that are very repetitive.
- Are more comfortable in communicating ideas to other people in any situation.

### People who have Mixed Fluency/Fixation:

- Function at an average rate of speed when working on creative tasks.
- Are more easily distracted than those strong in Idea Fixation.
- Are more flexible in dealing with jobs that include both types of activities.
- Are more likely to complete demanding college programs, especially higher degrees, than those strong in Idea Fluency.

### People who are strong in Idea Fixation:

- Prefer focusing on one project at a time.
- If in a suitable career, are less likely to move between organizations.
- May have excellent ideas, but usually take longer to produce them.
- Are less comfortable with writing reports at the last minute and speaking on the spur of the moment.

## Discussion of Idea Abilities

Since the earliest periods of human society, it has been recognized that some people are more gifted in doing creative activities than others. We all know of someone who produces interesting ideas in art or music or telling stories with seemingly little effort. To be able to predict who is best suited to these creative careers, a task must be found that is relatively short in duration but still requires a high amount of the creative aptitude for success. Thus, the test developer needs to be quite creative to design such a task.

While the existence of highly creative individuals is easy to accept, it is harder to grasp that those without this trait have an advantage in other occupations. Those who produce very original ideas at a rapid pace (those with the Idea Fluency aptitude) are usually less happy and less successful in careers that stress focusing their attention on one project or issue at a time. The people who are better suited to these careers are said to possess an aptitude called *Idea Fixation*. This means that they find it easier to concentrate their attention on one activity at a time.

A fairly obvious example is a sports official. Coaches are looking for new ways of gaining an advantage over their opponents. They have an outlet for creative thinking. The sports official's job is to interpret the rules the same way at all times. Creativity is out of place in this job. The perfect sports official is able to concentrate on an event happening at high speed and make an accurate judgment every time.

Creativity is a complex activity - not just one factor. The exercises used in this program are designed to measure a fundamental part of this process - the flow of ideas. Those who have this aptitude can produce spontaneous ideas faster than the normal person. For a given problem in a given amount of time, these people can generate significantly more ideas related to this situation than those who do not have this talent. Please note that the aptitude predicts the number of ideas not the quality of these ideas. Quality is related to one's education and job experience.

Probably the most extensive study of creativity was by E. Paul Torrance who produced a number of tests for "creative thinking" in the 1960's. He believed that he had identified a number of creative factors. Of these, we are attempting to isolate is the one he called "fluency." The origin of this factor actually goes back even earlier than Torrance. In 1919 the British Industrial Fatigue Research Board (BIFRB) was set up to study (as the name suggests), the effects of long hours on work performance. The approach was to develop several types of standardized tests which could be administered when the subject was rested and at the end of a period of work. One of the tasks used was having the worker write a short essay on a question. The questions used were fictitious so that the subject was unlikely to have ever thought about the basis for the question beforehand.

Later this type of BIFRB test was adapted by O'Connor as a measure of "creative imagination." The methods used by the BIFRB to score this exercise were not sufficiently objective, so O'Connor tried several other scoring techniques. He ultimately settled on counting the number of words written in response to the question within a 10 minute period. While results have been promising, this method has two drawbacks: (1) there is a single score and (2) the subject's writing speed can have an effect upon the results.

The SortMyCareer approach is trying to eliminate these flaws while still measuring the "idea fluency" trait. The ease with which the individual is able to produce suggestions and solutions to an open-ended task is helpful in achieving success in several types of careers. Idea fluency is not directly related to the quality of the answers. Possession of idea fluency does not mean that the person can succeed in every type of creative activity. It is necessary to determine whether the individual has other key factors related to that specific career and whether the individual has a strong educational background related to that career. But, idea fluency is a factor that shows up repeatedly in validation studies of all sorts of creative occupations.

These validation studies also contained an unexpected result. They contain evidence that in a number of careers, those with strong results in Idea Fluency were less successful than those who were weak in this trait. Since these fields had the common characteristic of requiring the worker to concentrate his/her efforts on a relatively narrowly defined task, the conclusion was reached that this may be another positive aptitude. Currently, it is called Idea Fixation, but future studies may produce a different interpretation to explain these results.

Those who are stronger in Idea Fixation should understand that possessing this factor is just as positive as being strong in Idea Fluency.

## ***References***

Torrance, E. P. (1966). The Torrance Tests of Creative Thinking: Thinking creatively with pictures, Forms A & B. Bensenville, IL.: Scholastic Testing Service.

Science, April 7, 1922. Vol. 55, no. 1423, p. 368.

O'Connor, J. (1934). Psychometrics: A study of psychological measurement. Cambridge, MA.: Harvard University Press, p. 282.

Shambaugh, I. (ed.) et. al.(1988) You and Your Aptitudes. Dallas, TX: AIMS. p. 15-16.

An early example citing a number of those fields better suited to what we now call Idea Fixation is: O'Connor, J. (1940). Unsolved Business Problems. Boston: Human Engineering Laboratory.

## **Interpretation: Your Performance**

### ***Strong Idea Fluency***

Your performance on the Idea Fluency exercise was well above normal. You definitely have the Idea Fluency aptitude. We encourage you to consider careers where you will have frequent opportunities to engage in creative types of activities. However, you will need to examine your other strengths to determine where you focus this flow of ideas. For example, if you enjoy working with people and want to make a large income, you could consider business fields such as marketing and real estate. If your interests are more toward helping other people, you may want to consider a career in teaching or counseling. See your career list below for examples of careers that match strong Idea Fluency and the rest of your results. There are two types of careers that may be frustrating for you. First, people strong in Idea Fluency usually are frustrated in jobs that are very repetitive. Second, avoid careers that stress following fixed rules and standardized procedures and have no room for original thoughts. You will need some outlets for the many ideas you will be producing.

Some typical careers for strong Idea Fluency:

- Artist
- Music Composer
- Writer
- Salesperson

- Broadcaster
- Advertising Agent
- Politician
- Teacher
- Fund Raiser
- Entrepreneur

## Other Factors

## Visual Processing Speed

### Definition

In most occupations, there is a need to process information: words, numbers, and symbols. Some people are faster and more accurate in doing this part of their job. Visual processing speed is a factor that is important in any career that stresses working with details.

While everyone with normal vision can perform the Visual Processing Speed tasks, some people are extremely fast and accurate. Individuals who are exceptionally fast are labeled as having *Hyper-Visual Processing Speed*. Those who complete the same type of work but take at least 50% longer have Normal Visual Processing Speed. There is one other group. Intermediate Visual Processing Speed is the name used to designate those with results not quite strong enough to reach the Hyper-Speed category.

### Characteristics

People with Hyper-Visual Processing Speed:

- Are faster in working with words, numbers, and symbols.
- Are more accurate in dealing with detail work.
- Are better suited to attend large universities.
- Are better suited to making calculations and performing data-entry activities.

People with Intermediate Visual Processing Speed:

- Are competent in working with words, numbers, and symbols.
- Make some mistakes when dealing with details.
- Are better suited to average-small size colleges.
- Tend to be neutral regarding satisfaction in these activities.

People with Normal Visual Processing Speed:

- Take more time to complete assignments involving manipulating symbols.
- Make more errors when dealing with details than those with hyper-speed.
- Are definitely better suited to small-size schools and colleges.
- Usually have little satisfaction making calculations and performing data-entry activities.

### Discussion of Visual Processing Speed

Visual processing speed is not an all-or-nothing factor. While those who possess this trait are faster and more accurate in working with information, those who lack the aptitude can perform the same type of detail work. They just take longer to finish the work and they are more likely to make clerical errors. As a result, they find such jobs less satisfying.

Visual Processing Speed is an aptitude that has been measured for many years. When O'Connor, one of the earliest pioneers in the field of psychometrics, began a systematic investigation of aptitudes, the first exercise he used (Worksample 1) was very similar to the Rapid-Fire Comparison problem you completed. The fastest group in finishing the comparisons can be up to four times faster than the slowest group. In addition, the fast people (as a group) will make fewer errors than those who take much longer to do this task. The old adage of "slow but sure" is not accurate when applied to Visual Processing Speed.

There are occupations that stress this aptitude. These are fields where dealing with details quickly and accurately is part of the day-to-day work. If you score high, you can produce the volume of work that is expected while making few errors. If you had a strong score (were in the hyper-speed range), it does not mean that you must pursue a career that places a strong emphasis on speed and accuracy of doing paperwork. Almost any job will have some duties where Visual Processing Speed can be used. Unlike many of the other aptitudes, strong ability in this factor does not cause frustration if it is not used directly in your career. Certainly since computer technology has become part of nearly every occupation, there have been few complaints about this trait being unused on the job.

Those who complete processing tasks with normal speed sometimes need to be careful in choosing specific jobs and educational settings. Visual Processing Speed shows strong evidence of being a dominant, sex-linked genetic factor. As a result, three-quarters of females are believed to possess hyper-speed ability, but just one-half of males. We can see that those who do these tasks with normal speed are in the minority.

Since the majority can work at hyper-speed, there is a tendency for many supervisors to assume that everyone should be able to work at this above normal speed. This expectation is strengthened because a very large percentage of teachers possess the hyper-speed trait. As a general rule, the more students in a classroom and the larger the enrollment at a college or university, the more frustration you are likely to experience if you have the gene for normal Visual Processing Speed.

If you were classified as having a normal ability or if we were unable to obtain a clear result, we suggest that you avoid situations where you will be expected to perform at a hyper-speed level. Tests with time limits that do not allow everyone to finish can be especially frustrating. If you scored Normal, and find yourself making little clerical errors from time to time, do not choose a career that requires you to complete large amounts of paperwork or other detail work on a daily basis.

## ***References***

O'Connor, Johnson (1928). *Born That Way*. Baltimore: Williams & Wilkins. pp. 23-27.

## **Interpretation: Your Performance**

### ***Intermediate Visual Processing Speed***

Your performance on the Rapid-Fire Comparison exercise was between hyper-speed and normal speed. If you are working, you can consider any career where you will be asked to do some detail work, but not be required to do these chores all day long. For example, accountants work with details most of the time. In addition, accuracy is extremely important. A store manager spends part of each day on details, but also supervises employees and talks to clients. This type of career is better suited to an Intermediate Visual Processing Speed. Look carefully at the entire list of recommended fields and not just this single example based on one aptitude. If you are a student, unless you pick a very large school or a college major that emphasizes written assignments and/or computations, your level of ability in Visual Processing Speed should be adequate. Of course, scoring this strong does not exempt you from having to put forth a serious effort in school or on the job.

Examples of Intermediate Visual Processing Speed Careers:

- Purchasing Agent
- Merchandiser
- Clinical Psychologist
- Business Manager
- Nurse
- Museum Curator
- Historian
- Electronics Technician
- Marine Biologist
- Physical Therapist

## **General Vocabulary**

## Definition

General vocabulary is not an aptitude. It is acquired knowledge. A vocabulary exercise is the easiest way to measure the extent of your knowledge. If you know the definition of a vocabulary word, you should understand the concept the word represents.

Because vocabulary is based on knowledge, it can be improved. In fact, most people continue to improve in vocabulary throughout their lives. If you are dissatisfied with your current result, you are able to change it. Specifics on how to make this improvement will be discussed later in this report.

What has been measured is your General Vocabulary. Each career has its own unique Specialized Vocabulary - the concepts unique to that field. Examples would be *angular momentum* in Physics; or *writ of habeas corpus* in Law. For job success, you need a good Specialized Vocabulary for your chosen field. To communicate with people outside your chosen field, you also need an adequate General Vocabulary.

## Characteristics

People with a Strong General Vocabulary:

- Are better at understanding the material they read.
- Are more effective in communicating their ideas to other people.
- Earn better grades in school.
- Are better suited for fields that require advanced degrees.

People with an Average General Vocabulary:

- Are able to understand most written material; may have some difficulty with academic material.
- Are more comfortable explaining ideas orally than in print.
- Earn good grades in school, but may need to work harder at competitive colleges.
- Are better suited for fields that require only one college degree.

People with a Weak General Vocabulary:

- Can be improved with a modest amount of effort.
- Should consider less academic and more hands-on learning environments.
- Must be prepared to work harder at jobs requiring reading and writing.
- Should choose smaller classes or consider working with a tutor when taking subjects that do not come easy for you.

## Discussion of General Vocabulary

You are setting up an electrical experiment. The instructions tell you to connect a wire to the anode of an electrolytic cell. You know that the terms "anode" and "cathode" refer to the terminals on a battery. But, you are unsure which is positive and which is negative. If you connect the wire to the wrong terminal, the experiment will not work properly. This is why it is important to have a precise understanding of the meaning of a word. If someone tells you that you are obstreperous and you are unfamiliar with its meaning, you do not know if this was meant to be praise or a complaint.

There are many different vocabularies. The important words that describe concepts used exclusively in tennis, geology, and law are not the same. The word "fault" has different uses in each of these occupations. These are specialized vocabularies. The exercise you completed was for general vocabulary. These are the words used in normal conversation and especially in reading and writing about all types of information. Anode would be an example of a specialized vocabulary word, since it is mostly used in technical fields such as chemistry and electronics. Obstreperous is a general vocabulary word, since it can be used correctly in many different situations and its meaning is the same whether you are talking to a tennis player, a geologist, or a lawyer.

Since it is not an aptitude, why is it included in the SortMyCareer program?

There are several good reasons. Knowing how your general vocabulary compares to that of your competitors (classmates if you are a student; co-workers if you are employed) is a useful predictor of

how easy or hard it will be for you to succeed in this environment. If two students are equal in all other ways, the student with a clearly higher vocabulary will earn better grades and usually find school more enjoyable. Inside an occupation, if two workers are equal in all other ways, the person with a clearly higher vocabulary will earn more money, advance to higher positions, and report more job satisfaction.

The most important reason that you want to know how strong your vocabulary is at this point in your life is that vocabulary can be improved. If you are dissatisfied with your current result, you can make significant improvement with a modest amount of effort. If you want to improve, we have provided links to some programs designed to help you meet this goal. Often individuals with a more limited general vocabulary find that they learn more easily when they can observe someone doing a task or participate in on-the-job training. The basic point to understand is that if you choose a career where a stronger general vocabulary would make your life easier, you can learn the extra words needed to overcome this obstacle.

For most individuals, the ability to use words to communicate to other people is acquired between the ages of 12 and 14 months. Once this breakthrough has taken place, the infant rapidly adds new words to its vocabulary. Most psychologists believe that there is a critical stage in development when this ability is acquired. An infant might use 3 words at age 60 weeks, 12 at 61 weeks, 19 at 62 weeks, and so forth. If at this critical stage there is a delay in development due to an illness or some other factor that causes the building of vocabulary to be slowed or interrupted, it is easy to see that the infant can fall behind.

Let us assume that Child A starts using words at age 60 weeks and proceeds to learn new vocabulary at a normal pace (as described above). Child B begins the process a few weeks later or has a disruption that slows the process. At age 62 weeks A uses 20 words and B uses only 10. During the next week, B adds 6 new words, but A adds 10. B falls further behind.

So it is easy to see that if the process of gaining the use of new words is delayed (for whatever reason) at this critical stage, the gap is likely to persist and even get larger over time. Add to this the finding that some individuals have one or more aptitudes that can make this process go faster than normal. One additional complication is that children raised in bi-lingual situations seem to have the disadvantage of needing to learn two or more words for each vocabulary concept.

It is usually impossible to pinpoint the specific reason why a person has a weaker general vocabulary than his/her peers. The important issue is whether this person will try to remedy this condition. There are links to resources to help you build your vocabulary, if you decide that this is a worthwhile goal. Substantial improvement can be made with a serious effort.

If you spend 15 minutes a day studying the vocabulary words you have not yet mastered for 10 weeks (less than 20 hours total study), you can achieve a stronger background that can help you in school and in your career. Many people using this approach have made a 10-year improvement by the end of the 10 week period. We encourage you not to feel that your vocabulary will limit your career potential. Instead, you have the option of improving your general vocabulary to the level necessary to accomplish the goals you have set.

## ***References***

Cohen, Leslie B. and Brunt, Jason. (2009) "Early Word Learning and Categorization: Methodological Issues and Recent Empirical Evidence." In: *Infant Pathways to Language: methods, models, and research disorders*. NY: NY. Psychology Press, pp. 245-266.

Vagh, Shaher Banu, et. al. (2009). "Measuring growth in bilingual and monolingual children's English productive vocabulary development." *Child Development*, Vol. 80 (5), pp. 1545-1563.

## **Interpretation: Your performance**

### ***Strong General Vocabulary***

Your performance on the General Vocabulary exercise was well above normal. You should have no difficulty in understanding non-technical reading material and in explaining your ideas to other people. You should be able to earn above average grades at competitive colleges, if you make a reasonable effort. People at your level often pursue careers that require attending graduate school or professional school.



## Interests

### Definition

One of the exercises in the SortMyCareer program allowed you to indicate your likes and dislikes among a wide range of occupations. An Interest in a career is not the same thing as having the aptitude to compete successfully in that field. It is your opinion of whether you would enjoy participating in that field.

The questions that were part of the Interest exercise were chosen for a specific reason. They represent the major groups of occupations (Job Families) classified by the O\*NET project. The Occupational Information Network (O\*NET) has been a leading source of career data since 1998.

You can use both your aptitude and your interest results to explore the occupations included in the O\*NET database. You will be able to link directly to O\*NET discussions of either individual occupations or Job Families.

The major reason for stressing aptitudes over interests in the analysis of your SortMyCareer results is important for you to understand. The reason is that aptitudes remain the same throughout your life but interests can and often change dramatically as you gain more experience. Since the fields that look most attractive to you today may not be the same ones that you will prefer ten years from now, it is risky to base your long-term decisions on interests alone.

Interests can help you in two ways. First, if your aptitudes are a strong fit with several occupations, your current interests might help you narrow your choices. It is more efficient to explore a career that matches both your aptitudes and interests than it is to consider one that only matches your talents. Second, you may have an interest in a field that is not a good match with your aptitude results. Commonsense tells you that you should investigate this field carefully before making a decision. You may find that the career is not as attractive as you had supposed or you may find positions within this field that do fit with your talents.

One final point you should understand. In selecting the careers that we recommend that you consider, the primary focus has been aptitudes. We will not recommend an area where you have high interest but where aptitude research does not predict lasting satisfaction.

## Your Aptitude Profile and Recommendations

### Aptitude Profile

Aptitude	Result
1. Working Personality	Generalist Working Personality
2. Working Style	Introvert Working Style
3. Thinking Types	Strong in Structural Thinking
4. Reasoning	Convergent Thinking
5. Idea Abilities	Strong Idea Fluency
6. Visual Processing Speed	Intermediate Visual Processing Speed
7. General Vocabulary	Strong General Vocabulary

### Career Recommendations

The following analysis of the time you spent completing the assessment is what this is all about. Our hope is that by considering all of the displayed job families, you will find a match that you agree with and are motivated to pursue. This extraordinary opportunity to pick your life's work, while it takes effort, is a chance not to be missed.

Consider how many times we have heard family and friends say, "If I'd have only..." This assessment gives

you the chance to plan beyond regrets and to assume control of a life career plan that is based on your interests, abilities and Aptitude! Congratulations on your investment of time and resources in the most critical part of planning what you want to do for the rest of your career.

### These careers match both your interests and aptitudes:

#### GENERAL

- chef
- millwright
- technical writer, industry



#### ENGINEERING CONSULTANT OR MANAGER

- aerospace engineer
- agricultural engineer
- biomedical engineer
- chemical engineer
- civil engineer
- environmental engineer
- fire-protection engineer
- geological engineer
- health & safety engineer
- industrial engineer
- marine architect
- marine engineer
- materials engineer
- mining engineer
- nuclear engineer
- petroleum engineer
- product safety engineer



#### Key

These icons indicate the required level of education normally required for each career:



Postgraduate or Professional Degree



University Degree



Vocational Diploma or Trade Certificate



High School Diploma



No Qual. Needed

#### MANAGER - MECHANICAL OPERATIONS

- manager-installers
- manager-mechanics
- manager-repairers



#### TECHNICAL MEDIA CAREERS

- animator
- cinematographer
- industrial designer
- multi-media artist
- sound engineering technician



### These careers match your aptitudes but are outside your current interests:

#### GENERAL

- coroner



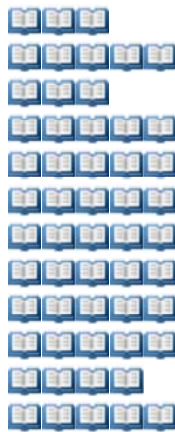
#### ALLIED HEALTH CAREERS

- athletic trainer
- dietitian



#### Key

- dispensing optician
- independent pharmacist
- nursing ward supervisor
- nutritionist
- occupational therapist
- orthotist
- physical therapist
- physician assistant
- prosthetist
- prosthodontist
- recreational therapist
- speech-language pathologist



These icons indicate the required level of education normally required for each career:



Postgraduate or  
Professional Degree



University Degree



Vocational Diploma or  
Trade Certificate



High School Diploma



No Qual. Needed

### APPLIED ARTS CAREERS

- baker
- dressmaker
- etcher/engraver
- jeweler
- precious metal work
- precious stone work
- tailor
- upholsterer



### AVIATION CAREERS

- flight engineer
- ship pilot



### COMPUTER RELATED CAREERS

- computer systems administrator
- network administrator
- web administrator



### MEDICAL PROFESSIONAL - PHYSICIAN IN GROUP PRACTICE

- anesthesiologist
- dentist
- family practice
- internist
- ob/gyn
- oral surgeon
- orthodontist
- pediatrician
- veterinarian



### STRUCTURAL DESIGN CAREERS

- architect
- city planning aide
- landscape architect
- regional planner
- regional planning aide
- urban planner



## TECHNICAL MEDIA CAREERS

- costume attendant



## Final Words

We hope that you have enjoyed participating in the SortMyCareer program. Please take the time to read through the rest of your materials and to work with your parents, teachers, and counselors in developing your career plans.

Picking a career is like other important decisions - the more you know about the situation, the better your choices will be. It will take some time to look into the different options. Ideally, you should spend some time visiting people in careers that appeal to you. This effort will be worthwhile. You will be more confident that you have made a good choice. You will be motivated to start working on and preparing for your future success.

You are invited to visit our website so that you can use the materials that we have included to aid you in making your career decision. We will be adding new improvements as they become available. Logging-in to the SortMyCareer website also will allow you to report on your career progress. This follow-up information will help other people for many years to come.

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