

CREATRIX™ Innovation=Creativity * Risk Taking

What is Creatrix™? The Creatrix™ is designed to assess your capacity to generate creative, or original ideas, and risk taking, to drive those ideas forward in the face of adversity. Over a lifetime we develop a preferred way of operating in the world with the kinds of ideas that we develop and a propensity for the kinds of risks we take to drive ideas forward.

As you review your results, keep in mind that *there is no right or wrong Orientation* in the Creatrix™. Each individual and their Orientation provides great value to a team and an organization. Where one person might create breakthrough ideas; these ideas can have an organization spinning out of control if they are not deliberately executed. People who are too focused on execution and plans can restrict the kinds of innovative ideas that are brought forth.

A Little History of Creatrix™! Creatrix™ was developed over forty years ago. It has been extensively used for leadership development, executive coaching, team development and large-scale innovation efforts across organizations. A detailed history and the research behind it is included at the end of your Orientation profile.

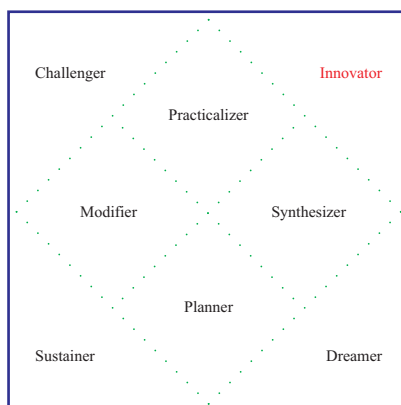
Can I/We Change Our Creatrix™ Orientation-the 7 Drivers? One of the unique things about Creatrix™ is that it provides every person, a team and an organization with the opportunity to understand the results more completely. One's creative and risk taking capacity can be altered - *if that's your choice*. There are seven Drivers of Creativity and Risk Taking. Each of these Drivers serves to help you, your team, and your organization dissect and understand what's underneath the Creatrix™ Orientation. By implementing specific practices and challenges, you can move and stretch yourself, your team or your organization in ways that you didn't think possible.

Creatrix™ as an Innovation Tool! Creatrix™ provides all of us with an understanding of creativity and risk taking. Being innovative requires a combination of both creativity and risk taking. The Creatrix™ helps define innovation for a team and an organization, so that a shared understanding can be developed across the organization; if you can't define it, then how does innovation really transpire? We call this the Innovation Equation!

How Does My Creatrix™ Compare To Others'? Since 1974, over 70,000 people have taken Creatrix™. Our database includes people from very small organizations, to Fortune 500 companies. It includes manufacturing, financial services, government, high -tech, education, health care, engineering, architecture and many other sectors. It includes people across multiple cultures and countries. The following percentages shown below reflect the Creatrix™ results from our database. As you look at your own individual, team and organizational results, be aware that very few of us are Innovators - only 5%; scoring high on both breakthrough creativity and risk taking. Most of us are Modifiers, people who make products and services better - probably the most important success factor for continued product development. Again, we need all Orientations to make our teams and organizations successful. *Depending on the strategies and goals, we need to call on different Orientations to accomplish what we want.*

Thank you, Jacqueline Byrd, Ph.D.
Co-Author of *The Innovation Equation*, published by Pfeiffer/Wiley and available on Amazon and our newest pamphlet, *The Innovative Leader*, available through Creatrix 2005.

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% of the Orientations in the Creatrix™ Database

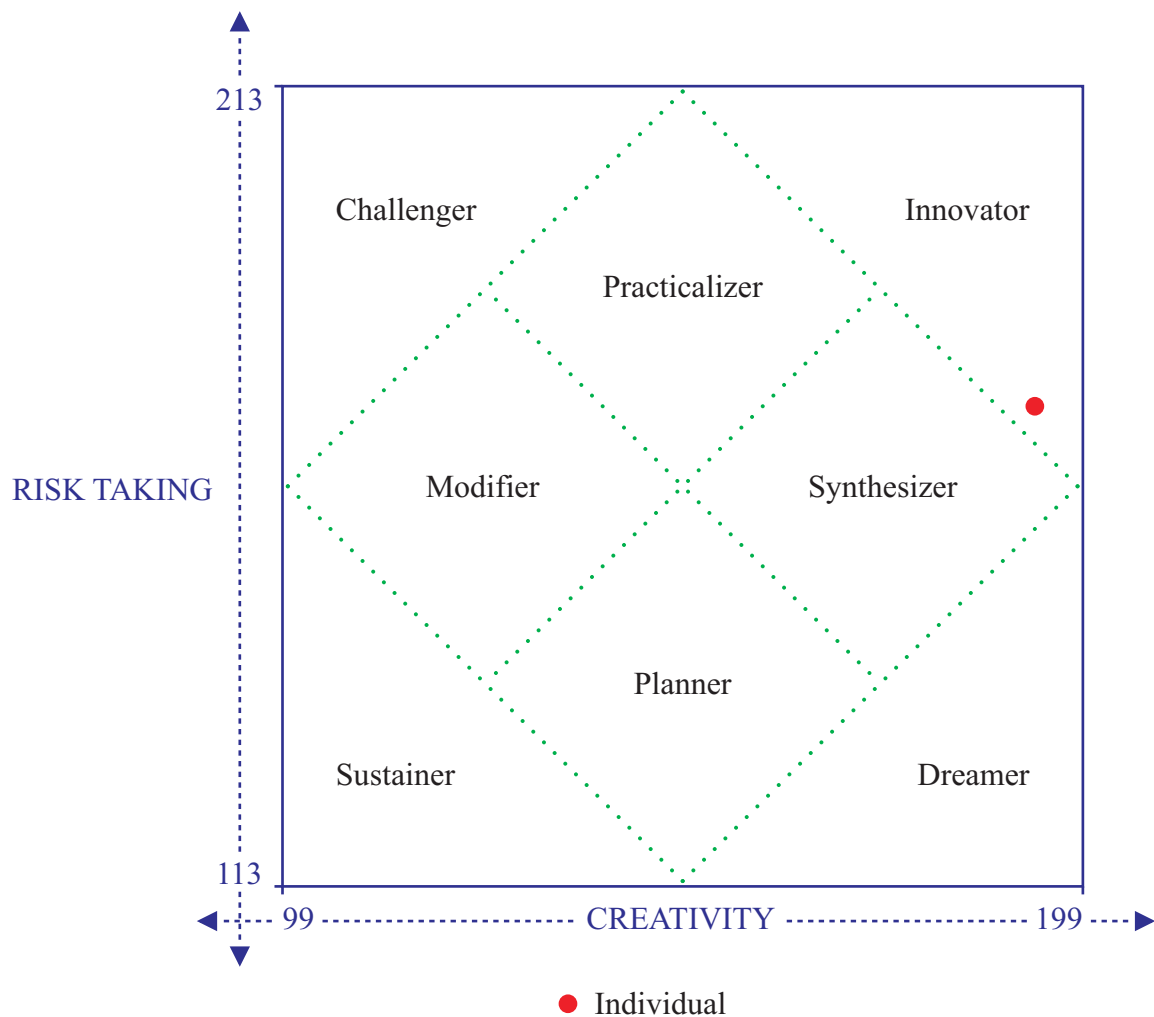
| | |
|----------------|--------|
| Challengers | 7.3 % |
| Practicalizers | 19.6 % |
| Innovators | 5.1 % |
| Modifiers | 36.9 % |
| Synthesizers | 9.5 % |
| Sustainers | 10.3 % |
| Planners | 10.9 % |
| Dreamers | .4 % |



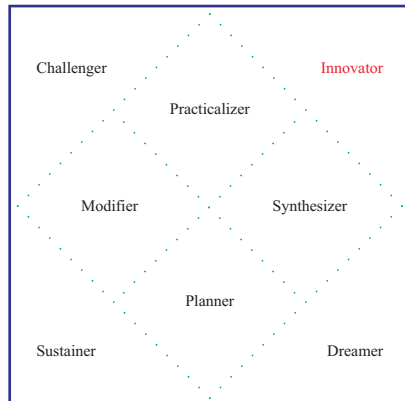
Creativity Score: 193
 Risk-Taking Score: 173
 Orientation: Innovator



The Creatrix:



Innovator



Innovators are very high on both risk taking and creativity. Most major nonincremental successes in American industry are the result of Innovators. (Henry Ford is perhaps the most commonly-used example of a man with an idea. But men like Bill Gates and Ted Turner appear at the top of the contemporary list of Innovators.)

Contributions

Innovators can sense breakthrough products, which must be accepted from time to time if an organization is to compete. Most breakthroughs involve new technology and various kinds of changes which are viewed initially as disruptive to an organization. Innovators are aware of this fact and will fight fiercely for the breakthrough's acceptance. They are both admired and probably feared. Innovators continue to believe in their ideas when no one else does. When their ideas are not accepted in an organization, Innovators frequently look for capital to start their own companies. They are not afraid to take risks. The Innovator seems just like the Challenger to some: outspoken, hard to influence, and of a single mind. Unlike the Challenger, however, the Innovator always has a better mousetrap.

Hindrances

Innovators may become so fixated on an idea that they are not willing to wait until the time is right. Innovators feel so strongly about certain potential breakthroughs that they cannot see the implementation problems. From most people's point of view, Innovators will risk more than they can afford to lose. When what they want is not forthcoming, Innovators may develop a paranoid idea that the organization is against them.



Orientation Profiles provide a synopsis of each of the eight orientations. Here you can see the differences at a glance and begin to understand a fuller range of creativity and risk-taking perspectives.

Challenger

- ☐ Have the attitude of "do it" - if we do nothing we will lose out
- ☐ Get excited about new ideas - most often to drive home the ideas of others
- ☐ May take on too many ideas and can find it difficult to complete all of them

Sustainer

- ☐ Usually prefer stability to change
- ☐ Consistent
- ☐ Often feel change is done for its own sake
- ☐ Hold an organization accountable and true to its mission

Modifier

- ☐ Add value by making incremental improvements
- ☐ Provide the constant little improvements needed
- ☐ Like to test the waters as a first step
- ☐ Take risk only when the benefits outweigh the current state of affairs

Synthesizer

- ☐ See possibilities in everything
- ☐ Create by putting things together - often unusual combinations that work in new ways
- ☐ Will drive an idea home but not at all costs - more cautious than the Innovator

Innovator

- ☐ Have a new idea every minute
- ☐ Always think they can figure out how they can make things happen
- ☐ Keep an organization off balance - which is not always a good thing
- ☐ Can hit the "grand slam"

Dreamer

- ☐ Are creative - they constantly are coming up with new ways to do things
- ☐ Strong on ideas, not strong on how to get them accomplished
- ☐ Can be the creative juice for the organization, but need to partner with people who can execute the ideas

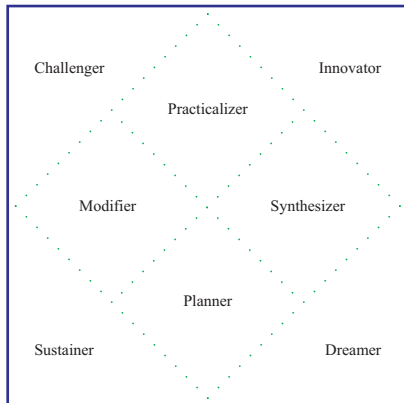
Practicalizer

- ☐ Like changes - but not too many all at once
- ☐ Are willing to try something new, but look for it to be practical
- ☐ Will push ideas that they believe in
- ☐ Will come up with creative ideas but do not consider this their strength

Planner

- ☐ Believe that an idea has merit if it fits within "the plan"
- ☐ Want information and data before taking a risk
- ☐ Will come up with creative ideas within known parameters





Can you change your orientation? Can a Planner become a Synthesizer and a Modifier become a Planner or Practicalizer?

The answer is yes. It would be very difficult, if not impossible, to move from being a Sustainer to an Innovator, but changing your orientation can be done. So, why would you do it? Because being more creative and taking risks keeps you developing yourself and contributes to the innovative ideas, products, services of a company - something most companies need and want today!

But, you may like yourself just the way you are and you may be happy with the description of your creativity and risk-taking orientation. Each orientation contributes something, and you may already be making the kinds of contributions that you and your organization value.

If, however, you would like to move more toward the right upper corner where highly-creative people and risk takers find themselves - the Innovators - then the next pages should be helpful to you.

Individuals, Teams and Organizations that score higher on creativity and risk taking plot closer to the right side on the continuums on the next pages. These are the Creativity and Risk Taking Drivers.

This information will help you to focus on the drivers that you are really good at and those that you would like to improve upon. The Seven Drivers of Creativity and Risk Taking are your tickets to greater success at increasing your own capacity, a team's or organization's capacity to be more innovative.

Just imagine if every employee within an organization were to become only slightly more innovative - the impact would be exponential. Just imagine if you were to become slightly more creative and were willing to take a little more risk!

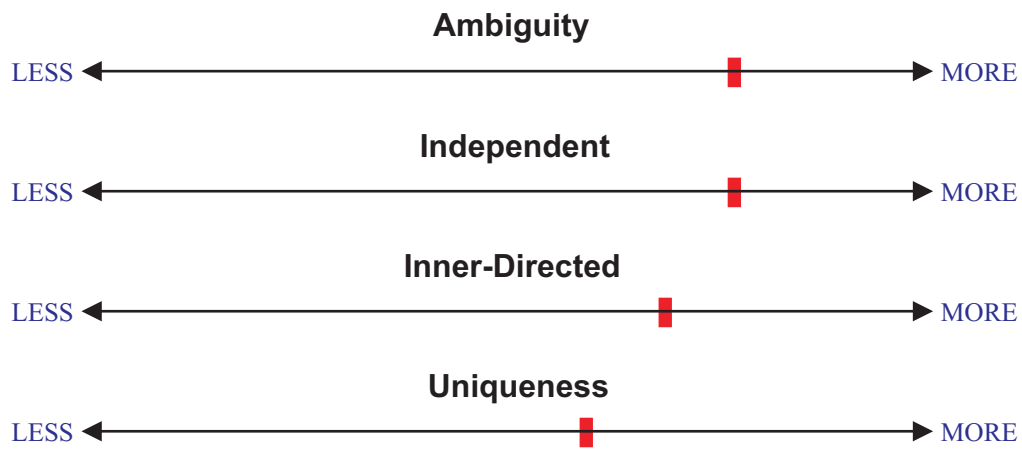
If you would like more information contact the Creatrix Team at 952.925.1757 or your individual Creatrix Consultant.



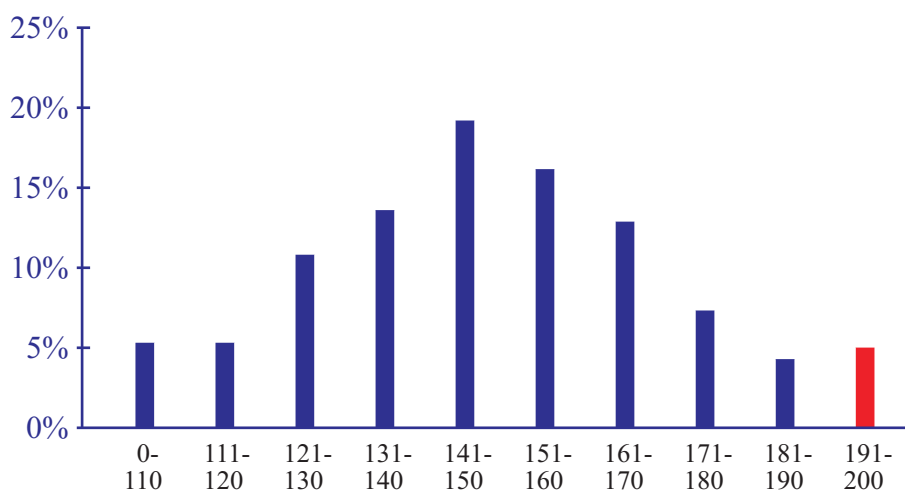
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Creativity Drivers:



Distribution of Creativity Scores Across Population



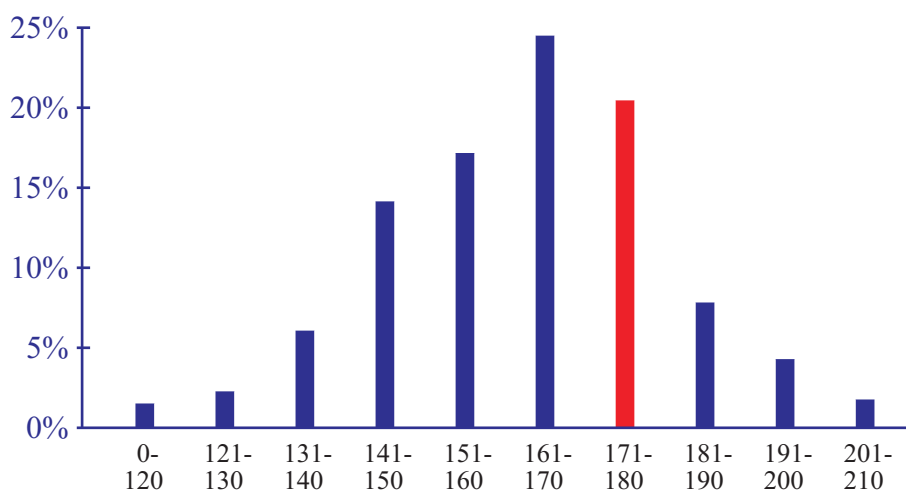
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Orientation: Innovator



Risk-Taking Drivers:



Distribution of Risk-Taking Scores Across Population



The Seven Drivers of Creativity & Risk Taking

Creativity Drivers:

| | |
|-----------------------|---|
| Ambiguity | Able to operate with uncertainty and vagueness - don't require highly-structured organizations, goals or objectives to accomplish or create things, ideas, services or products |
| Independent | Not subject to the control or influence or determination of another or others - will not subordinate themselves - don't like to be managed |
| Inner-Directed | Determine their own expectations and norms -march to the beat of their own drummer |
| Uniqueness | Appreciate and value differences - value uniqueness in both self and others |

Risk-Taking Drivers:

| | |
|-----------------------|---|
| Authentic | Being what you purport to be: genuine - "walk your talk" - "tell it like it is" |
| Resilient | The capacity to spring back, rebound and to successfully adapt and learn even in the face of adversity and stress |
| Self-Accepting | Approving and/or satisfied with your behaviors or actions -"liking yourself" |



Background and Development of The Creatrix™ Inventory©*

One of the primary motivations for developing the Creatrix Inventory, created by Dr. Richard E. Byrd in 1974 and updated in 1986 and again in 2000 by Dr. Jacqueline Byrd, was to measure the creative sense and risk taking of individuals in organizations. Understanding the creativity and risk taking of individuals in organizations helps us to better understand why one organization stagnates and another takes excessive risk and lands in bankruptcy, and another is moderately to extremely successful.

Creativity is defined as the ability to think of unconventional ideas. Risk Taking is the willingness to push your ideas forward, even in the face of adversity. While IQ may be a predictor of academic success and a safe bet for success on certain kinds of jobs, it provides no guarantee as to a person's ability to make a uniquely fresh contribution to industry or to any other field of work.

And while it's true that we are products of our genetic and social origins, the difficulty is that we are most often in situations, which demand repetition rather than creativity, conformity rather than diversity. These restrictions on experimenting with new ideas are imposed on most of us from early childhood. In our jobs we may be caught in a variety of binds. The company wants coordination, implementation and follow-through—pretty much in the same old ways.

An implicit assumption of this instrument is that over a lifetime people develop a general predisposition toward creativity and risk taking. Having no evidence to the contrary, The Creatrix Inventory allows individuals and organizations to benchmark their current levels of creativity and risk taking.

Individuals and organizations often ask whether they can change their creativity and risk taking orientations. People sometimes find that they have an orientation that they don't like. Our answer is that we all have choices and by understanding what drives your creativity/risk-taking propensities and what gets in your way of being more creative and taking more risks is what makes the difference. The Creatrix Inventory provides individuals not only with their current orientation profile Sustainer, Dreamer, Planner, Modifier, Practicalizer, Synthesizer but clarity as to what drives that orientation eg.. the seven drivers of creativity and risk taking.

* The original instrument was called the C&RT



Norms

The Creatrix Inventory has no right or wrong answers. Scores for both creativity and risk taking are plotted on relative scales. In order to provide a context for interpretation of the results, it was necessary to set norms for creativity and risk taking which reflect the general population. With this in mind, normative data needed to be collected, and over time reviewed, to ensure that the norms continue to reflect the populations. Thus when scores are plotted on the Creatrix, they are done so in context of a much larger population.

Continued development and refinement of the Creatrix Inventory consists of several studies that provided necessary guidance over time. The norms for the Creatrix Inventory were originally developed from a sample of over 500 employees representing seven organizations. The original development took place in 1974. In 1986, these original norms were retested based on a population of nearly 200 employees from several organizations, including manufacturing, consulting, and one architectural firm. Thirty-eight percent (38%) of the respondents were female, 61% were male, and 1% did not state gender. Twenty-three percent (23%) were in technical support (engineering, research, and development), 18% were from salaried support (human resources, marketing and business development), and 7% were hourly support (secretary, clerk). Based on the results of the retest, the scales were adjusted to reflect the normative data.

Another sample was drawn in 2000 to reexamine the norms and calculate reliability for the risk-taking and creativity scales. Data from 279 subjects was used in this analysis. The respondents were from several large manufacturing firms, government, a large university, and several small organizations. The sample included: accountants, artists, educators, engineers, nurses, upper level managers, and people from sales and marketing. Slightly over 50% of the respondents were female (140) and slightly less than 50% of the respondents were male (138). One respondent did not state gender. The scores from this sample were quite similar to the results gathered in 1986. The following figures reveal the similarity. The scores plotted in Figure 1 Frequency of Creativity Scores (1986 Sample) are very much like the ones reported in Figure 2 Frequency of Creativity scores (2000 Sample)

General Considerations

The scales have been constructed with the assumption that individuals will take it when things are "going well" for them. Although it is possible for a recent traumatic incidence in a respondent's life to impact the way he or she scores, the norms given here have been judged as an accurate rule of thumb for interpretive purposes.



Figure 1
Frequency of Creativity Scores
(1986 Sample)

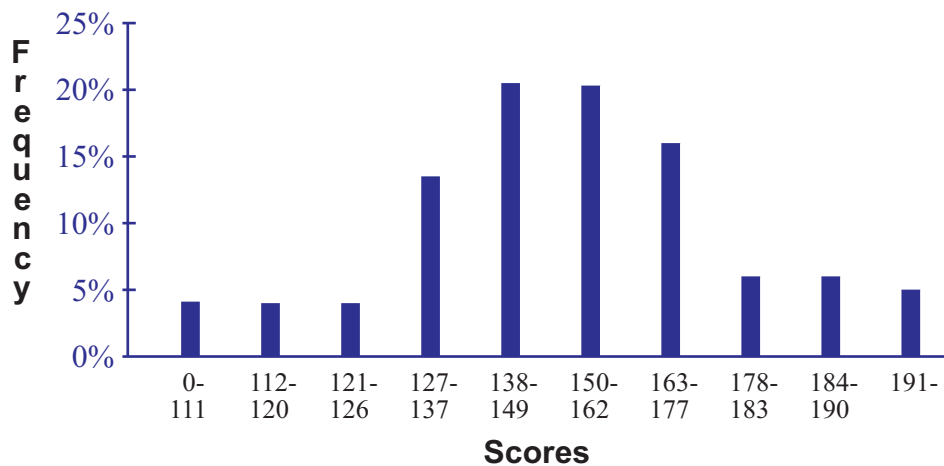
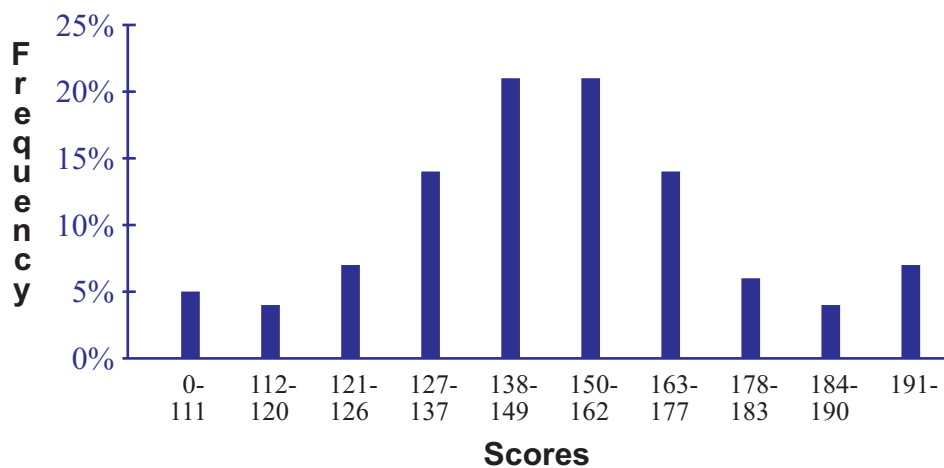


Figure 2
Frequency of Creativity Scores
(2000 Sample)



The scores for Risk Taking from the sample drawn in 2000 are highly similar to the 1986 scores as well.



Figure 3
Frequency of Risk-Taking Scores
(1986 Sample)

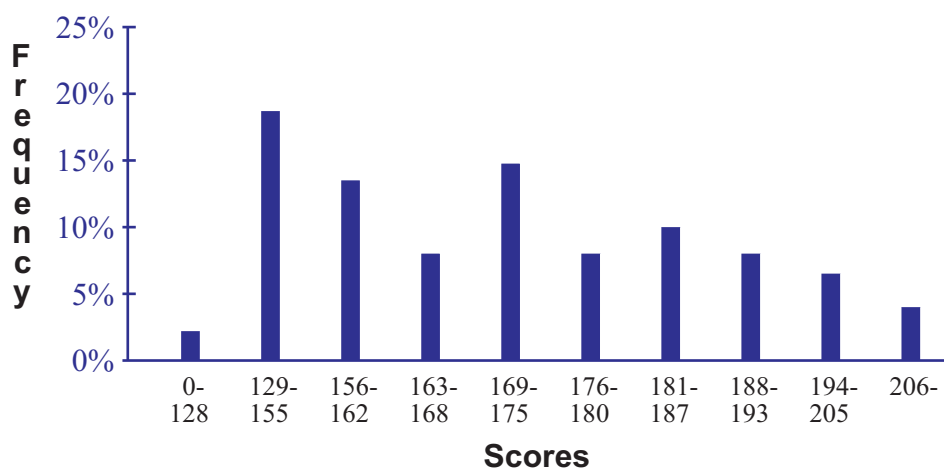
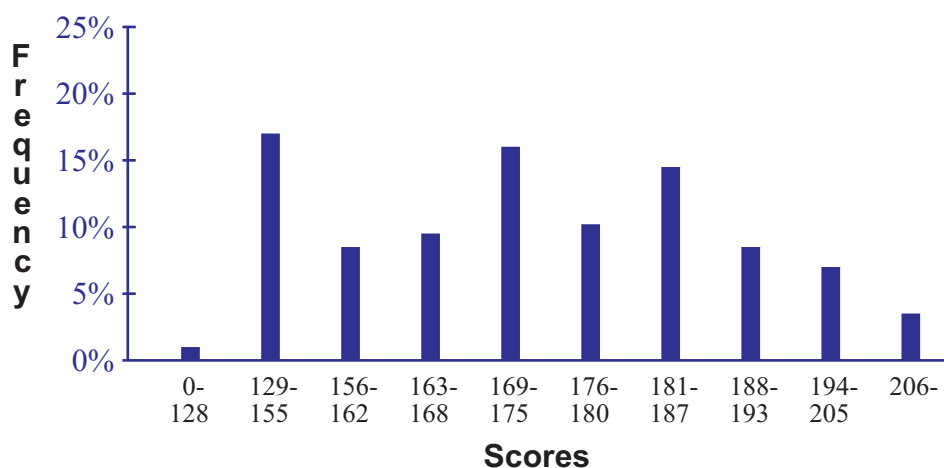


Figure 4
Frequency of Risk-Taking Scores
(2000 Sample)



The results of the sample drawn in 1986 (Figure 3) are quite similar to the results of the sample drawn in 2000 (Figure 4).

The high similarity between the two samples suggests that the norms established earlier are valid and can still be used to establish the baselines when graphing the creativity and risk-taking scores on the Creatrix Inventory.



Validity

In assessing the validity of this instrument, it is important to consider its intention. The Creatrix Inventory is not designed to be a test. No attempt was made to avoid the "halo effect" in the construction of the instrument and, consequently, if it were a test, it might be possible for respondents to determine the "right" answer. The Creatrix Inventory is designed for self-assessment and educational purposes. Since the practitioners we have interviewed have confirmed this as a purpose, we have no reason to doubt its validity if respondents use it to answer honestly - which they should in an educational/self-assessment situation.

Users have reported a new or greater understanding of the following:

- ☐ The underlying determinants of creativity and risk taking
- ☐ The value of this understanding in creating new ideas and taking risks—being more innovative
- ☐ Themselves and their own career needs
- ☐ People for whom they have worked
- ☐ How to deal effectively with individuals whose orientations are different from their own
- ☐ How to effectively manage a diversified group in order to best utilize their talents and increase innovative capacity

These user reports establish face validity. In addition, the results are consistent with what researchers tell us are typical of individual's behaviors in organizations. New organizational members tend to be greater risk takers than those who have been in organizations for more years. The salaried support staff made up of human-resource, business-development, and marketing professionals scored the highest on risk taking, with top management scoring the lowest on risk taking. After age fifty-five, risk-taking scores decreased in this sample. Newcomers to the organization scored highest on risk taking, with a large drop in these scores for organizational members who had been in the firm for over five years. As was verified in the initial norms assessment, women tended to score higher on risk taking than did men.

Creativity measures suggest that creativity decreases in the first year a person is in an organization. Hourly support, secretaries, and hourly administrative personnel scored much lower on creativity than did any other group. Creativity was highest in people 26 to 35 years of age, and men scored higher on creativity than did women. The most recent analysis revealed that men scored higher on creativity than did women, but no significant differences with age.



Reliability

Reliability is defined as the level of consistency of the measuring device. That is, can the results of creativity and risk taking be replicated consistently (across individuals and populations). The primary assumption of the Creatrix is that Creativity and Risk Taking are discrete notions. Further, these primary categories can be sub-divided into constructs called Drivers. Thus, we begin with several iterations of factor analysis. Factor analysis helps us understand whether people are reading an item the same way, whether they give a similar interpretation and have a similar perception of what the item is about. Factor analysis is used when we wish to investigate the underlying structure or basic dimensions of a set of variables or when we wish to reduce a set of variables to a smaller set. (Basic Statistical Concepts in Testing and Assessment, Walsh and Betz, 2000). The most recent (2003) and largest (N=1,530) reliability study for the Creatrix was conducted as a part of Paul Brown's dissertation (2003). We will use these results here.

Factor analysis revealed two clear constructs: Creativity and Risk Taking. Twenty one (21) items loaded on factor 1 and nineteen (19) items loaded on factor 2 which explained 64% of the variance (3-factor solution, varimax rotation; maximum likelihood). Factor one consisted of creativity items and factor 2 consisted of risk taking items. Further iterations of factor analysis of Creativity items identified four (4) factors: these were labeled Ambiguity; Independence; Inner-Directed; and Uniqueness. Risk taking items revealed three (3) factors: these were labeled Authenticity; Resiliency; and Self Acceptance.

Reliability coefficients suggest that we can place high confidence in the results of the Creatrix.

Creativity - alpha = .83

- ☐ ambiguity = .59
- ☐ independence = .59
- ☐ inner-directed = .50
- ☐ uniqueness = .68

Risk Taking - alpha = .89

- ☐ authenticity = .80
- ☐ resiliency = .79
- ☐ self-acceptance = .62

Therefore, the Creatrix Inventory as now constructed is a reliable instrument that yields a clear index of creativity and risk taking.

Summarized by Richard Bents, Ph.D., Future Systems Consulting and Jacqueline Byrd, Ph.D., Richard Byrd Company



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