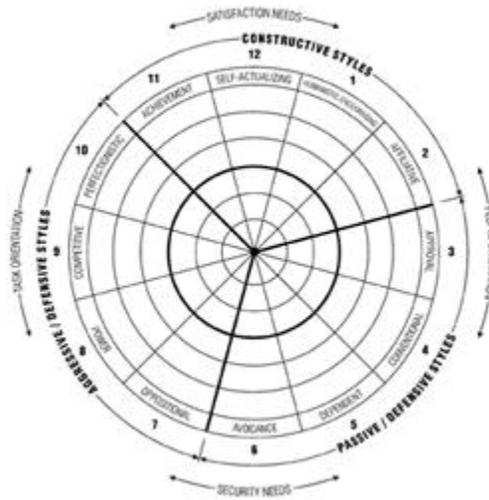


How to Measure and Define an Effective Culture that Produces Positive Safety Outcomes



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By
Thomas A. Smith, President
Mocal, Inc.

tsmith@mocalinc.com
www.mocalinc.com

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"What we have is failure to communicate." Strother Martin, in a scene from the movie, Cool Hand Luke.

When it comes to safety why talk about culture let alone define it? Well, it seems culture is one of those things that exists and has a huge impact on all areas of organizational performance. The culture of an organization impacts everything it does; how it treats employees, suppliers, how production is run or services performed, how distribution is handled, how well customers are satisfied, and how employee safety is addressed.

A lot of attention is now being paid to creating a "safety culture." In this author's opinion there isn't a separate culture for how a company runs production and another for how they handle safety. The various elements that make up the work system are dependent on the overarching culture that exists in the company. To be sure, there are subcultures that exist in the structures of organizations but they ultimately respond to the culture that guides the mission, vision and values of the business.

The Challenger and Columbia accidents we now know were an outcome of the culture (not just the "safety" culture) of the organization. The cultures at Enron, World Com are more examples of culture having a negative impact on organizations. In his book, *The Toyota Way*, Jeffery Liker states, "The purpose of this book is to explain the Toyota culture and principles it is based on." ¹ Toyota is an example of the effect of a constructive culture. The problem is, we have great difficulty understanding what the word "culture" means.

Here are some definitions of culture over the years:

Kroeber & Kluckhohn (1952)	Transmitted patterns of values, ideas, and other symbolic systems that shape behavior.
Becker & Grant (1970)	A set of common understandings, expressed in language.
Van Maanen & Schein (1979)	Values, beliefs and expectations that members come to share.
Swartz & Jordon (1980)	Patterns of beliefs and expectations shared by members that produce patterns and behaviors.
Ouchi (1981)	Set of symbols, ceremonies and myths that communicate the underlying values and beliefs of the organization to its employees
Martin & Shiel (1983)	Glue that holds together an organization through shared patterns of meaning. Three component systems: context or core values, forms (process of communication, e.g. jargon), strategies to reinforce content (e.g., rewards, training programs.)
Uttal (1983)	Shared values (what is important) and beliefs (how things work) that interact with an organization's structures and control system to produce behavioral norms (the way we do things around here.
Scholtes (1998)	If it means anything, culture should describe the day-to-day experience of the ordinary worker.

I once heard culture described as the broth in soup. You can add the best ingredients to a soup, the finest carrots, onions, potatoes, etc. but if the broth of the soup is lousy you're going to have

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lousy soup. All businesses have a culture. Whether management realizes it or not culture drives the success or failure their operations. Just like the broth of a soup. If you have a lousy culture, you are probably going to have less than stellar performance in all areas of your business and which includes quality and safety. Culture is what differentiates two companies making similar products from each other. Both will have the same tools available to them; money, equipment, machinery, materials, methods and people. The ultimate deciding factor of their performance will depend on their cultures.

A person's daily work experience is dependent on the culture of their company. It drives how managers treat employees when it comes to their work performance, training, ethical behavior, individual job skills and safety. It would be very difficult to have a bad work culture and a good safety culture at the same time in any organization. Culture is the glue that holds the system together and determines how each essential part of the system works and responds with the others.

Since the early 1980's companies have been trying to understand how to change management systems to achieve better results. They have seen that improving quality is the key to reducing waste, scrap and rework. It is now accepted that without good quality you won't be able to stay competitive in the business world.

Companies have also learned that to improve quality you must engage the help of all of your employees. There has been a huge effort to have employees work on teams to study work systems, collect data about the system and solve problems of quality everyday. For these types of things to be happening a company has to fundamentally change its culture. This approach to managing systems has resulted in better quality of products and services. To sustain these new management techniques a positive constructive culture must be also be created and sustained. It is the new and improved culture that allows the new techniques to succeed.

You don't need to create a specific culture for each new tool or technique to work. The fact is, a positive constructive culture is what guarantees new tools and changes will be applied successfully. When a culture is right, quality improves, safety improves, productivity goes up, customers buy a company's product or service, markets expand and everyone wins.

Companies are doing a lot of adding to the ingredients of their culture with initiatives like, total quality, re-engineering, six-sigma, lean manufacturing, theory of constraints, balanced scorecards. These are the tools they use to run and improve their processes. A lot of managers don't seem to realize the successful application of all of these tools depends on what type of culture exists in their company. There isn't an individual culture for each of these initiatives. Nor is there a separate culture for safety.

What is the rationale of focusing on a "safety culture?" unless it is to keep safety as a separate management function? This would be a mistake, since safety should be integrated in all work systems the same as quality. Quality and safety are both outcomes of the management system and are interdependent with all other parts of the work system. As with quality, safety is not a shared or divided responsibility. It is a joint effort in which everyone must work together in a collaborative manner to achieve the outcomes desired. This cannot happen unless a positive constructive exists in the organization.

Managers and culture

Most middle managers believe that talking about culture is a lot like talking about the weather. You can talk all you want about it all you like but there is not much you can do about it. They view it as a big mystery, something beyond this world better left to be studied by some university professors. On an individual basis they are probably right.

But an organization that ignores culture does so at its own peril. Culture can stop any mission or vision statement in its tracks or propel it forward. So management usually tries to do something about culture by issuing their Mission, Vision and Values statement and having it plastered all over the lobby walls of their buildings and posted in the company newsletter. It may include a section on having high ethical standards but the everyday reality can be quite different.

The problem management faces is how to ensure the intentions of their mission statement are clearly understood and practiced throughout the organization and lead to a constructive culture. The answer is, develop and operational definition of “culture.”

Operational definitions

“In the opinion of many people in industry, there is nothing more important for the transaction of business than the use of operational definitions. It can also be said that no requirement is so much neglected.” W. Edwards Deming²

When two or more people must agree on a specification you need to create an “operational definition.” Operational definitions are not what you intended but what you actually receive. They make what you see or believe and I see or believe, mean the same thing. When you have an operational definition anyone involved in using it will understand it explicitly. Without an operational definition, specifications are meaningless. Specifications can refer to measurements and performance. So when top management proclaims the safety of employees is the number one priority, is it really? The only way to find out is to create an operational definition of “safe.”

What is an operational definition?

An operational definition puts communicable meaning into a concept. The concept of a definition is ineffable. How do you define when something is safe? Can we be absolutely certain that what I believe is safe and what another person believes is safe, are the same? We would have to look at a job and both agree whether or not we both think it is safe. If we both agree the job is safe we have an operational definition. An operational definition is one that reasonable people can agree on. It translates the Voice of the Customer into the Voice of the Process. (Actually, in this case, unless one of us is the actual person doing the job you couldn't really say the job is truly safe. It would require that the worker who does the particular job participating in the creation of the operational definition.)

When you need a clear, concise, detailed definition of a specification or measure so two or more people can agree on the outcome today, tomorrow in the future you need to create an operational definition. Operational definitions prevent misunderstandings when you actually run a process. An operational definition is not what you intended, but what you actually receive.

To make an operational definition of a specification, measure or concept you need:

1. The criteria to be applied to the object or group
2. A test method to be applied to a group
3. The decision: yes or no: the object or group did or did not meet the criteria

Imagine you are painting a part and your customer wants the surface to be “smooth.” You have 2-5 inspectors who perform a visual inspection and record the defects of the paint jobs. You find out that defective jobs run from 10-15% a day. You investigate and determine the number of defective paint jobs varies wildly from inspector to inspector.

You gather the inspectors together to find out what is going on and they bring some parts that have “wrinkles” and some don't. You ask them to define a wrinkle so everybody can understand. This will usually result on many different descriptions. Then you have each inspector examine the parts to show you what they call a “wrinkle.” Each inspector examines the same parts and each

one comes up with a different number of wrinkles. Some parts may have one or two wrinkles and these same parts when viewed by a different inspector have no wrinkles. What's a wrinkle?

When you make an operational definition you must first decide on the purpose for making it. For instance, how do you define an "ideal culture?" In the case of a business you are looking for a specification for culture that will create a positive environment (the broth of the soup) that will enable an organization to satisfy customers and employees. (the ingredients of the soup, i.e. quality, six sigma, lean production, high quality parts and service, etc.).

As shown above, there are many definitions of culture. To have a communicable meaning of an ideal culture you must define it in operational terms of sampling, test and criteria. What the words ideal culture means to one person cannot be known to another. To apply the term ideal culture in business everyone in the business must agree on an operational definition.

Some examples of what your purpose for defining a company's culture may be:

The question is, "What is an "effective safety culture?" (We want to know operationally what it is, not what is stated in the company's mission, vision and values statement.)

Purpose: We want to define the culture of our business to determine if we have created a great place to work for our employees.

Purpose: We need to define the culture of our business to ensure our high ethical standards will meet the Sarbanes-Oxley act.

Purpose: We need to define our culture so our shareholders will invest in the company.

Purpose: We need to define our culture so we have a safe place for our employees to work in everyday.

Each one of these definitions would probably produce different answers. None would be wrong. They just represent a system for communicating and measuring an ideal culture relative to who's asking the question and for what purpose. This is the same as asking your friends, what is a good movie? The answer is, it depends on whose asking and the reason they are interested.

Management must operationally define its Vision, Mission, Beliefs and Values so everyone in the organization understands and follows them. If you define organizational culture as the shared beliefs and values guiding the thinking and behavior styles of its members, you can set up a way to measure these and determine if what management desires actually exists.

The Voice of the Customer

"the user or the master of a house will be a better judge of it than that of the builder: ... and the guest will be a better judge of the feast than the cook." Aristotle

Since the 1970's management has learned that quality is defined by the customer. There are many ways to learn what a customer thinks about a product or service. If a company doesn't pay very close attention to how its customers think and behave, it can lose them and ultimately go out of business, and this happens to many companies. Operational definitions put the Voice of the Customer into the Voice of the Process.

Since customers define quality, the Voice of the Customer (VOC) is the most important part of the production line. Customers exist in all parts of the system. They include the assembler, the designer, the suppliers, insurance providers and any other elements of the system required to make your product or service. There are internal and external customers. If you listen to only one customer you are setting yourself up for failure.

Management is always trying to get the most out of employees to achieve high productivity. The philosophy of management, or how they go about trying to get people to share in this effort, is manifested in their proclamations or mission statements. You could think of these statements as the Voice of Management.

The workers on the other hand have to work in the actual systems designed by management on an hourly, daily, weekly, monthly and yearly basis. They live in the world created by management. To understand this world you need to create a Voice of the Employees (customers).

Often, the lofty mission statements of management's intention and the reality of the job are so far apart you wonder if anyone realizes what's going on out there. Management starts out with the intention of making the company a "great place to work." However, the employees of many of these "great places to work" will tell you, nothing could be farther from the truth. Consider the following real life example of a company's "statement of values."

Excellence - We are satisfied with nothing less than the very best in everything we do. We will continue to raise the bar for everyone. The great fun here will be for all of us to discover just how good we can really be.

Integrity - We work with customers openly, honestly and sincerely. When we say we will do something, we will do it; when we say we cannot or will not do something, then we won't do it.

Respect - We treat others as we would like to be treated ourselves. We do not tolerate abusive or disrespectful treatment. Ruthlessness, callousness and arrogance don't belong here.

Communication - We have an obligation to communicate. Here, we take the time to talk with one another...and to listen. We believe that information is meant to move and that information moves people.

This was the Enron's statement of values. They kind of missed the mark on that one.

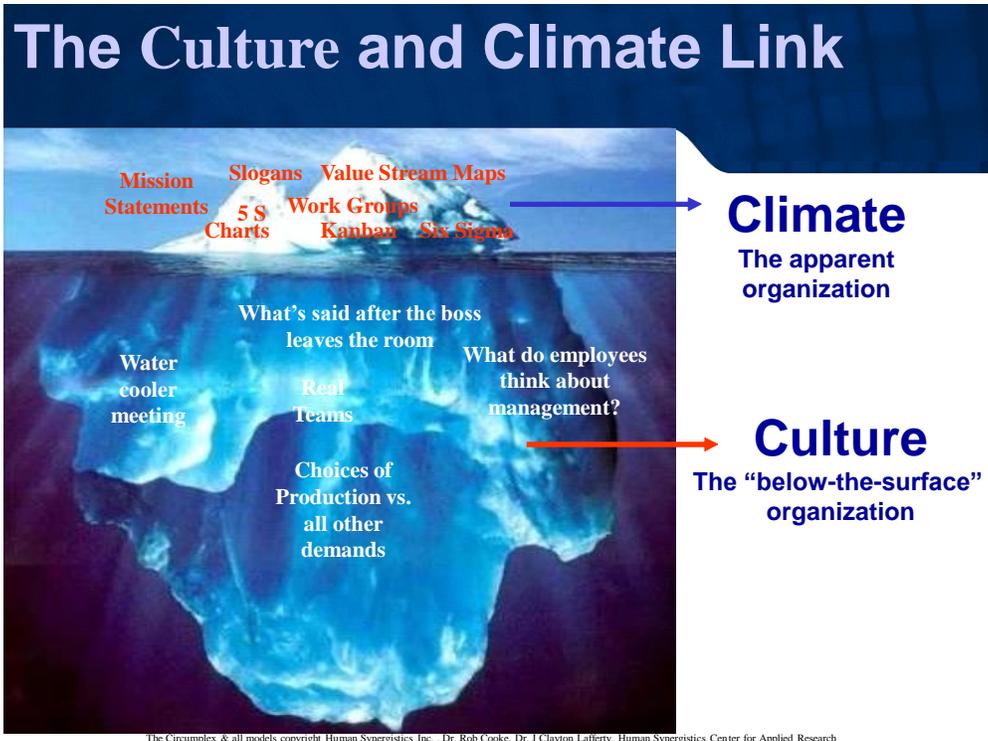
It is imperative that the Voice of the Customer principle be used to learn about the culture in an organization. It is the only way you can have an operational definition of what is a "good culture." What employees believe is a "good culture", is a critical criteria to determining if what management intends to occur when production or service runs, actually happens. Then you can see if the Voice of Management (Mission, Vision, Values, (which usually include safety, that drive the culture) matches what employees face on a daily basis when doing their jobs, i.e. the Voice of the Employees. If it does not, you have a cultural disconnect. The operational definition translates the Voice of the Employees so it can be heard.

Measuring culture – what you say and what you see is not always what you get

Almost every manager will tell you they don't have any way of really measuring culture. It's an abstract subject, one they can't put their hands on. They believe culture is more or less a guessing game so they focus on the hard side of management such as production goals, takt time, flow, inventory turns, number of employee injuries or near hits, the numbers, etc. They believe that since you can't measure culture there's nothing they can do about it.

Fortunately there are ways to take the mystery out of measuring culture. Doing so gives management and employees a way to create an operational definition of culture so both can agree on this ethereal word. First, you have to realize the difference between culture and climate.

Climate manifests itself by things you can see, such as mission statements, published policies, i.e. safety, human resources, quality, and procedures, cartoons on office walls and other artifacts, when you experience and interface with organization. Culture is what happens when managers leave the room. The picture below provides a visual display of how to view culture and climate as an Iceberg.



We can see the things that make up climate of an organization but you can't see culture. That is why we need an “operational definition” of culture so we can measure so everyone can agree on what we are talking about. To create the operational definition all parties will have to agree on:

1. the critical criteria of culture,
2. a method of testing for the critical criteria
3. make a yes or no decision we are meeting the criteria. T

The first problem we face is the fact that most of us don't sit around everyday and think about culture. We wouldn't have a clue where to start.

Fortunately, there are people that do this very sort of thing for a living. We use the Human Synergetics International's (HSI), Organizational Culture® (OCI) and Organizational Effectiveness Inventory®³ (OEI) to measure culture and complete a gap analysis between what is an “ideal culture” and the one that actually exists in a business. HSI has over 30 years of research and real-world experience about measuring culture in organizations.

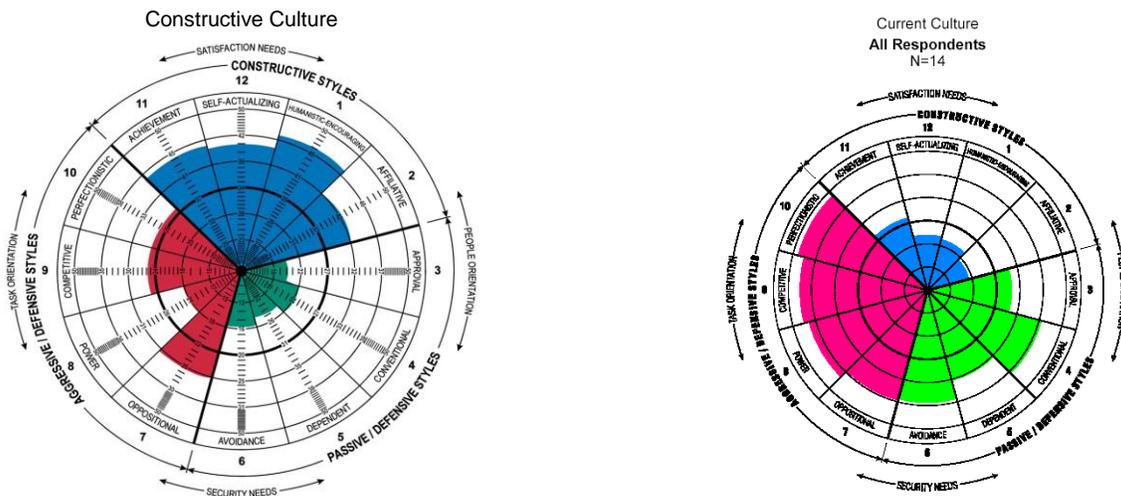
The OCI and OEI was developed to measure culture and the affect it has on the daily work routines of employees. These instruments have been tested extensively for their reliability, validity and appropriateness for organizational change and management programs. They have been normed on thousands of companies and have historical data that allows comparisons.

Critical criteria for culture

Basically, their research has identified 12 different cultural styles. Some of these styles have a positive impact and help a business support the use of the many tools they will use to improve quality, productivity, safety and customer satisfaction for both the short and long term. Other thinking styles have very negative impact on the ability of a company to achieve results it desires.

Employees are asked to review 120 statements that described the thinking and behaviors they are expected to follow when doing their jobs and interacting with other employees and customers. These 120 statements relate to the 12 styles identified on the circumplex (circular graph). The responses are plotted so we have a visual representation of what the “culture” of an organization is according to the people who face it on a daily basis.

Once the survey is complete the results are plotted on a circumplex to show the cultural styles that exist in the organization. Generally speaking, when the graph has the highest extensions in the 11, 12, 1 and 2 o'clock positions this represents a “constructive” cultural style. (See the chart on the left below) High extensions in the 7, 8, 9 and 10 o'clock areas show an “aggressive/defensive” cultural style (The chart on the right below) and extensions in the 3, 4, 5 & 6 areas would reflect a “passive/defensive” cultural style (Not shown, but you get the idea). Research has shown that businesses with the constructive style have better performance in all key business measures including; safety, profit, employee turnover, employee job satisfaction, growth and customer retention. ⁴



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Having a statistically valid tool to measure culture provides the operational definition of what the present culture is and what employees believe is an “ideal” culture. When a company learns how to define culture operationally it can determine its culture and can then make better choices of how it can make any needed transformations to the ideal culture.

Most companies know they should be working on their culture and most aren't doing anything about it. They are like the traveler who is looking for a place called Silver Mountain so he stops and asks a local mountain man for directions. After a few moments of deep thought, the mountain man tells him, 'If I were going to go to Silver Mountain, I wouldn't start from here.' At least the Mountain man knows where he is at. When managers try to work on improving the culture of their company they often start from the wrong place. They wind up using the Columbus method of management. He didn't know where he was going when he started, when he got there he didn't know where he was at the end he died never really knowing where he had been.

The best way to avoid this situation is to start with an operational definition of culture. Then you will have a decent chance of understanding where you are starting from and be able to do something constructive about getting where you want to go.

¹ Licker, Jeffery, *The Toyota Way*

² Deming, W. Edwards, *Out of the Crisis*

³ The Organizational Culture Inventory and Organizational Effectiveness Inventory are instruments developed and copyrighted by Human Synergistics International, Plymouth, MI.

⁴ Article presented at the 2005 ASTD Expo, Orlando, FL., June 6, 2005, *Financial Returns from Organizational Culture Improvement: Translating “Soft” Changes into “Hard Dollars”*