The Diagnosis and Treatment of an Organization's Work Climate

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Abstract

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You get a better notion of the merits of the dinner from the dinner guests than you do from the cook. -Aristotle

The ©Work Climate Questionnaire (WCQ) is a simple and valid technique for measuring the impact of forces in the employee's work environment. Employees first identify critical forces in their work, then rate each force along with two dimensions: the **importance** of the force in job productivity, and the degree to which the force operates as a **positive or negative influence**. Average ratings are converted to standard (z) scores and plotted on two-dimensional "force-field" charts. Plotting and interpreting the force-field charts are explained. The resulting displays allow the researcher to diagnose specific supporting and stressful conditions in the work environment and plan specific treatments to celebrate accomplishments and support change. The application of this technique is discussed in the context of a hospital setting, an environment recognized for generating extremely high employee stress.

Note: This study was first reported in 1978. Recently, I read an article in the New York Times (Sunday, March 28th, 2015) titled: Learning to See Data. In it, Benedict Carey talked about 'big data overload' and the need to develop 'perceptual learning' skills to capture, among other insights, the 'gestalt' of patterns and meanings concealed in the data. I believe that the way data are analyzed and reported in this paper can help develop those perceptual skills to find insight and meaning in your efforts to interpret and improve work climate.

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A. Introduction

> "Conflict is the gadfly of thought. It stirs people to observation and memory, instigates them to invention, and shocks them out of sheep-like passivity. Conflict is a sine-qua-non of reflection and ingenuity. Without creative conflict, organizational growth will be stunted." John Dewey

But conflict is also the gadfly of occupational stress and employee burnout. Most institutions today do not enjoy the level of organizational health that allows conflict to be used creatively for productive change. Instead, conflict caused by an organization's poor climate results in occupational stress. This stress manifests itself in depression, sickness, substance abuse, low morale and loss of self-esteem leading too high absenteeism and low productivity. It is estimated that American industry has had a $17 billion annual shortfall in productivity capacity over the last five years because of stress-induced mental disorders.(1)

Stress according to Appelbaum is "an internal reaction to an environmental event." He goes on to explain that "organizations create a climate in which stress is one of the underpinnings, with such factors as decision-making, leadership, communication, motivation and planning. Applebaum argues that data on the incidence of varieties of stressful occupational climates "indicate that individuals are systems with interconnections between stress level, health, satisfaction, personal growth and productivity."(1) Conflict leads to stress and both conflict and stress are symptoms of an organization's climate or overall health, along with the quality of decision-making, supervision and communications.

After presenting other ideas on organizational climate, this paper describes a practical method for measuring conflict and climate. This procedure creates an "image" or "chart" of an organization's climate by plotting employee opinions about

selected environmental work related variables. The technique uses the Work Climate Questionnaire (WCQ) and is cousin to the Environmental Forces Inventory (EFI) which was used successfully in public schools. (15, 16, 17) With data collected at a large (400 bed), mid western, comprehensive care hospital, this paper demonstrates how to chart an organization's climate and how to interpret the charts.

B. What is organizational climate?

Campbell defined organizational climate as "a set of attributes specific to a particular organization that may be induced from the way the organization deals with its members and the environment."(2)

To Gaston, organizational climate is a "concept used to identify characteristic attitudes and behaviors of workers, such as: degree of job satisfaction, leadership style, motivation, work atmosphere and roll perception."(3) In his dramatic account of how a psychiatric ward in a hospital changed its climate from "demotivation" to "remotivation," Gaston concludes that "the starting point of developing a motivational organizational climate is **understanding forces that motivate the individual**." (3)

Gaston also concludes that subsystems such as departments, "cannot alter organizational climate independent of the context of the larger system."(3) Gaston sites Levinson who wrote that "a motivating organizational climate starts with understanding the workers' needs, and with employees assessing how well their needs can be met doing what the organization needs to have done."(4)

According to Levinson, the highest point of self-motivation occurs when the needs of the worker and the responsibilities of the organization "mesh, interrelate and become synergistic."(4)

These definitions imply that:

- There are many different attributes in one organization that different from other organizations.
- The definition of climate specifically emphasizes how employees are treated within the organization.
- The definition addresses the larger environment in which the employee functions.
- A first step in developing healthy organizational climate is to **understand the forces that motivate the individual.**

Organizational climate, then, is determined by a constellation of "forces" or variables that exist in an organization, how they interact with each other and how they impact on employee needs. And, because of the complexity of each organization, sets of forces must be examined simultaneously at different organizational levels as well as for different job classifications. This approach to assessing organizational climate suggests that:

- Forces affecting an organization's climate are specific to that organization. While there are differing degrees of similarity with other organizations and many forces do overlap in influence, it is important to consider each organization as unique. Consequently, employee identification of these forces is necessary to ensure validity.
- The Forces should be examined simultaneously as they interact with each other and as they relate to actual behavior.
- The measurement of these forces should be part of an ongoing, data-based organizational development program.

C. Measuring organizational climate

In many cases, efforts to measure organizational climate focus on worker attitudes of aspirations. The employee is presented with a list of statements reflecting various levels dimensions of worker attitudes such as:

- People are proud to work here.
- The administration is very responsive to employees.
- It is very hard to get to know people in this organization.
- Getting ahead in this company is very difficult.

The employee is asked to rate the statement, usually on a Likert response scale ranging from "strongly agree" to "strongly disagree." The ratings are then summarize to yield a global score like "attitude toward work" or sub-scores such as "loyalty," "peer relations," "responsibility," or "self-esteem." These attitude scores are often used to determine the causes of stress(5), to examine profiles of climate factors(6), or to study the relationship of a single characteristic like "self-esteem" to overall job satisfaction.(7) Such scores do document the impact of stress on employees but have less utility to understand an organization as a unique and dynamic system or to identify the specific source of the stress, and its relationship to other forces or sources of stress.

It seems then, to understand and change organizational climate, the constellation of dynamic forces that operate within each organization must first be identified for the environment being studied, then accurately measured and examined.

D. Rationale for the Work Climate Questionnaire (WCQ)

The dynamics of an organization, as **perceived** by the employees, are the roots of climate. If the goals of an organization is to help its employees implement the mission, to produce a product, or to apply professional skills, than effort should be made to **identify** all the forces that influence employee performance. The extent of which those forces **enhance or inhibit** performance must also be determined. In this paper, the degree to which employee-identified, performance-influencing forces are negative or positive, important or unimportant, defines organizational climate.

This basic understanding of "climate" is neither new nor complex. The concept of a "field-of-force" was developed in psychology by Kurt Lewin in 1948 as a means to understanding an individual's behavior in relation to his environment, to provide a common reference for the "interplay" of so-called "internal states" with "objective reality." For example a child's repeatedly prevented from a desired object, say a ball, eventually constructs an internal barrier that allows him to "forget" about the ball to avoid further frustration. (Aesop's fable of sour grapes is related.) Lewin's representation of the child's "force- field" will show an intervening barrier between the ball and the child. It might further show a gamut of other consequences of the obstacle such as a generalized construction of the child's psychological field inhibiting mobility. Such consequences are unrelated to the ball yet may persist long after the situation with the ball. In short, a psychological force-field is an "open" system for taking into account, at an abstract level, any number of factors: circumstances in the environment as well as learned patterns of behavior.(8)

The concept of "field-of-force" was later extended to deal with sociological phenomenon.(9) A different type of force-field, called a "phase space," was used to chart characteristics of a group (such as ethnic prejudice or rate of production in a factory) as functions of multiplicity of forces, acting over time.

The use of force-field analysis to study social groups was spurred by a series of studies demonstrating that efforts directed at individuals were relatively ineffective in changing social behavior as compared to the effects of group process; and that change achieved in an individual context was often short-lived, at best, unless accompanied by corresponding changes in group standards.(9, 10, 11)

Therefore, to effect lasting institutional change (climate change) it is necessary to deal with the institutional environment itself. It seems that a logical way to begin is to chart this environment as a field- of-forces, each force rated on importance and on whether it is a positive impetus directed toward the organization's desired state of affairs. The WCQ was specifically designed to accomplish this purpose.

E. Using the Work Climate Questionnaire in a hospital environment

Hospitals are out front as stress-producing organizations. When Collingan and his colleagues ordered 130 major occupations for incidence of mental disorders, 7 of the 27 occupations with the highest rates of mental dysfunctions were in the healthcare field.(12)

When hospital employees who do not work excessively in healthcare are included (dishwashers, telephone operators, social workers, secretaries, ect), 15 of the top 27 occupations with the highest rates of mental dysfunction are found in hospitals.(13)

The hospital discussed in this paper is committed to offering its employees a healthy organizational climate. To do this, a special Employee Task Force was organized and charged with making recommendations to the CEO on ways to improve the hospitals' climate.(14) One recommendation from this Task Force was to begin an on-going effort to measure the hospital's organizational health or climate. The technique they selected for measuring climate was the WCQ, an instrument that was simple and effective, yet with a high demonstrated validity and reliability. (15, 16, 17)

Identifying the Forces

Forces in the employees' work environment, in the same terms as they are perceived by employees, were first identified. To do this, two items were added to a questionnaire being administered to employees. These items asked employee to:

1. List of things, people or activities that contribute to doing your job well and make your work enjoyable.
2. List the things, people or activities that keep you from doing your job well, that make your job difficult.

Except for forces F & K, the forces most frequently mentioned by employees were:

A- Physical Facilities where I work
B- My Immediate Supervisor
C- Employees in other departments
D- People I work closely with
E- Supplies and Equipment I need
F- I, myself
G- In-service Training I receive
H- Hospital Policies
I- How Decisions are made
J- Patients
K- The Mission of the hospital
L- How People treat each other
M- The Medical staff
N- The Nursing staff
O- Salary and Benefits I receive
P- Hospital Administration
Q- Staff I supervise

Force F, "I myself" was included to measure a component of self-esteem (specifically locus-of-control).

Force K, "The Mission of the hospital," was added to evaluate a project to make the mission more visible to employees.

Recording employee attributes on the Work Climate Questionnaire (WCQ)

To measure the effect of forces in a "social-psychological field," in this situation the hospitals work environment, it is necessary to identify the dimensions or degree of influence that is to be measured. At least two dimensions are required for an adequate specification of any field or environment. Consequently, the effects of individual forces upon the employee were measured in terms of both "**importance**" (amount of influence) and "**affect**" (the degree to which influence is positive or negative). These two dimensions correspond to the "vector" (strength) and "valence" (affect) in Kurt Lewin's original model.

To complete the WCQ, the employees were asked to carry out two tasks for each of the 16 forces:

TASK 1 - **Importance/Strength** Rate each force on a scale of 1 to 11, according to how **important** it is in influencing your work performance. A rating of "1" would indicate the force is **not important** or influential as you work to perform your job and a rating of "11" would indicate that it is **very important** and influential as you work to perform your job.

TASK 2 - **Affect** Rate each for in a scale of 1 to 11 according to its **positive** or **negative** affect on you as you work to perform your job. A rating of "1" indicates the force has a **strong-negative** influence on your performance and a rating of "11" indicates that the force has a **strong-positive** influence on your performance.

A two-page uncomplicated and clearly formatted WCQ survey instrument was constructed to record employee ratings. Employees needed approximately 15 minutes to complete it. Space was also provided on the questionnaire for employees to "write in" and rate any other important force that was overlooked. Because employees were involved in developing the list of forces, no additional force was identified.

Making and reading charts based on the WCQ

The power of the WCQ lies in its ability to reflect two different aspects of a force's influence; "**importance**" and "**affect**", simultaneously and to chart relative positions of all forces. This capability is essential for obtaining a "picture" or "image" of a work environment. For example, Figure 1. is a force-field of average ratings (converted to standard (z) scores) made by 53 hospital employees who left employment over a five-month period. The comparison for average rating to standard (z) scores allows the separate distributions for Task A and Task B to be 'normalized' and compared on the same scale or metric, a normal distribution. This allows two distributions of scores to be plotted on the same grid or chart.

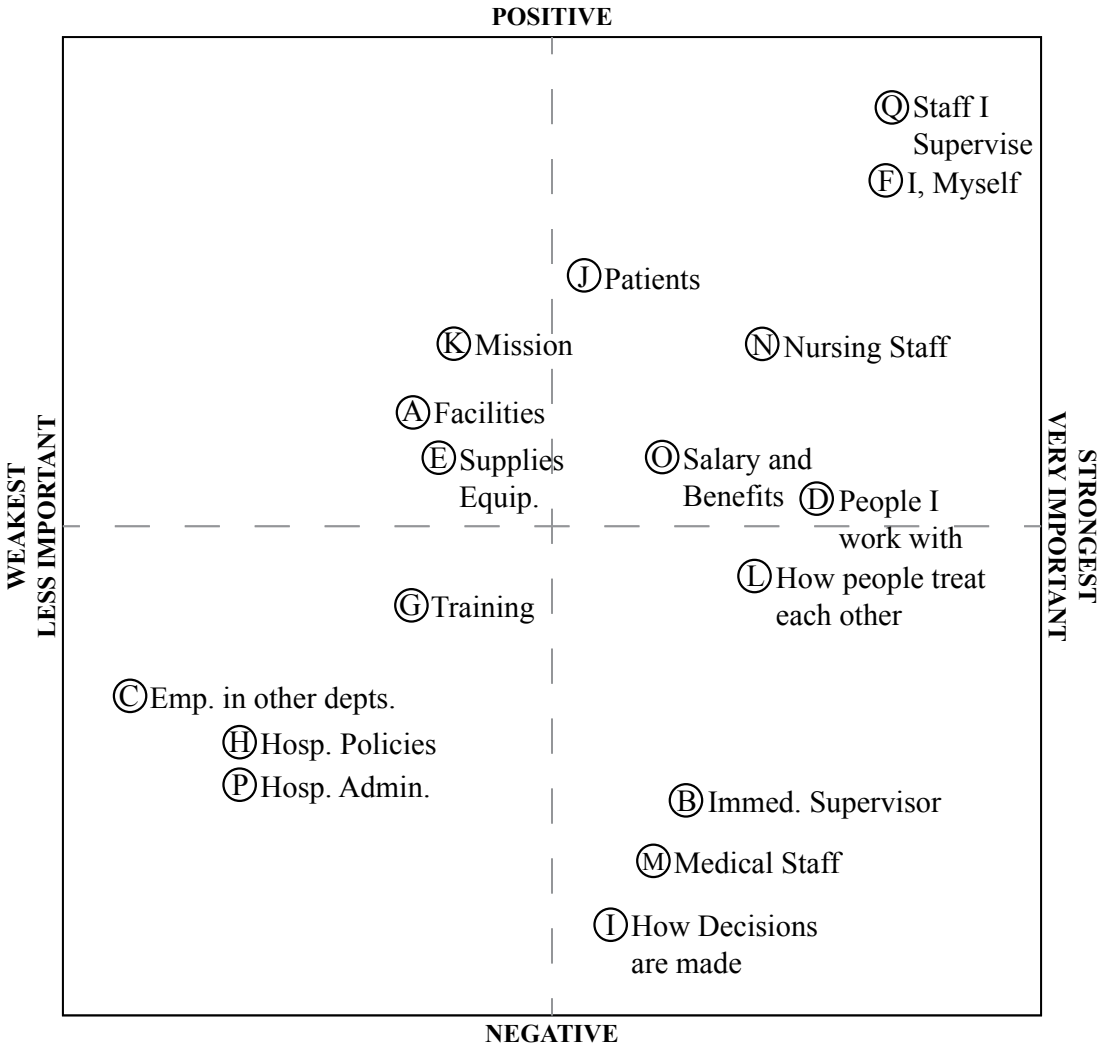


Figure 1. Work Climate force-field from 53 employees who exited over a five-month period.

The force-field plot for exiting employees offers a unique chart of this organization's climate. The two dimensions of the chart represented in Figure 1, are horizontal for "**importance/strength**" and vertical for positive-negative "**affect**." In each plot, the relative position of each force is determined by a pair of coordinate values. These values correspond to standard (z)score deviations of the force measured relative to all other forces.

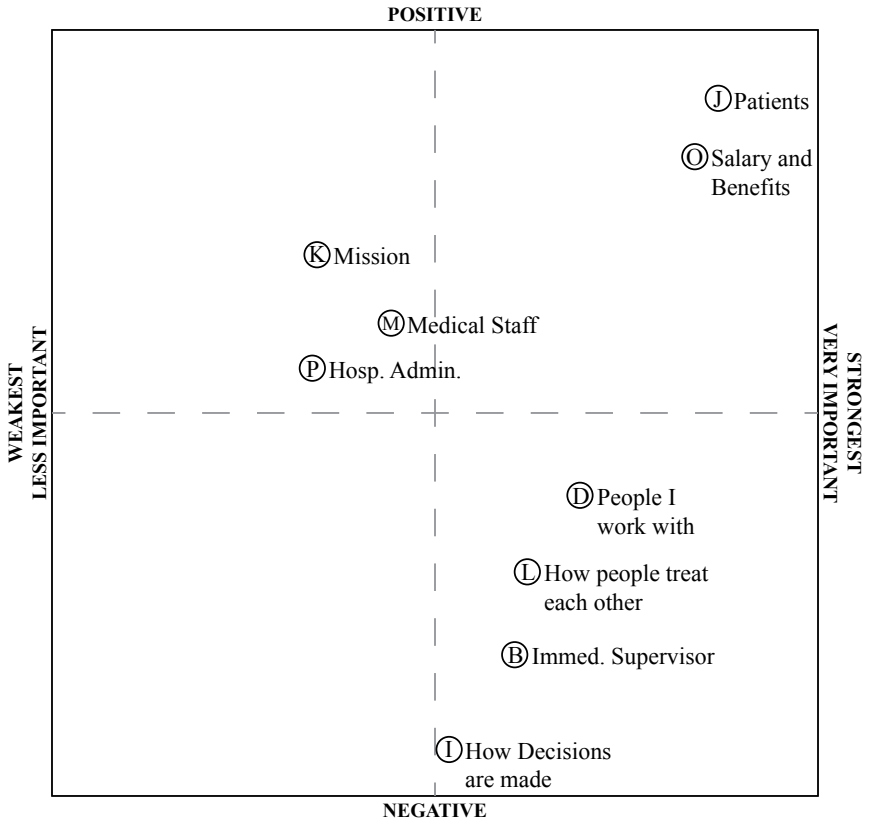
The factors located in the four quadrants of the force-field provide important information for climate analysis. Factors that contributed most to the employee's work performance are located in the upper right-hand quadrant of the climate field. Factors in that quadrant are both **important** and **positive**. It is clear that job satisfaction for these employees came primarily from four factors; Ⓠ **Staff I supervise**, Ⓕ **Themselves**, Ⓙ **Patients**, and Ⓝ **Nursing staff**. Two factors, Ⓞ **Salary and benefits** and Ⓓ **People**

they work with also contributed to their work enjoyment and productivity but less positively than the other four.

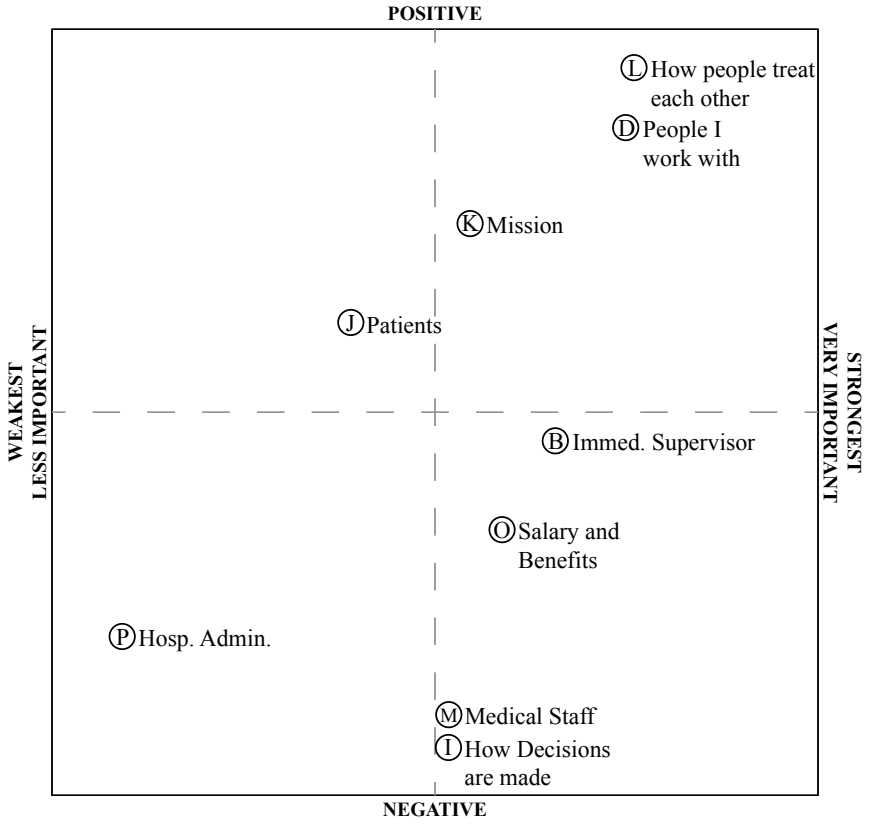
All work forces rated "**important**" in their job are located toward the right side of the climate chart. In this case, the most important work factors are factors close to the individual employee: Ⓕ **I myself**, Ⓠ **Staff I supervise**, and Ⓓ **People I work with**. The three "**least important**" cluster of factors identified by this group of employees were Ⓒ **Employees in other departments**, Ⓗ **Hospital policies**, and Ⓟ **Hospital administration**. The "**most negative**" were Ⓘ **How decisions are made**, Ⓜ **Medical staff** and their Ⓑ **Immediate supervisor**. Factors located in the lower right quadrant of the climate field are critical. These are influences are "**important**" but "**negative**."

The positions of other factors also explain the work climate for these employees: Ⓒ **Employees in other departments**, was rated relatively unimportant. This may be understandable and, in fact desirable for institutions where departments must be relatively independent and non-interactive. In hospitals, however, inter-department cooperation is necessary, and the position of factor Ⓒ is disturbing. Further, the location of factor Ⓖ **Training I receive**, may indicate that in-service educational opportunities may be less effective than desired.

More detailed and useful information of organizational climate is obtained when the data is broken down and analyzed by meaningful organizational units or job classifications. For example, Figure 2. shows separate climate plots for two different employee groups, non-nursing personnel and nursing personnel.



A. Non-Nursing (n=21)



B. Nursing (n=29)

Figure 2. Work Climate plots for A, non-nursing and B, nursing employees

For demonstration, only selective forces are plotted in figure 2. Several interesting findings surfaced between these two classifications of employees. Both groups were similar on the relative influences of Ⓚ **The Hospital Mission** and Ⓘ **How Decisions are made**, the two groups differ considerably on how many of the other forces affect their job such as Ⓞ **Salary and Benefits**, Ⓛ **How people treat each other**, and Ⓜ **Medical Staff**.

Briefly, these plots show that non-nursing employees were very patient oriented and were satisfied with their salary and benefits. They seemed to have problems with the supervisors and with people they worked with, especially with how people treated each other.

From their plot, nursing personnel work well together, with their supervisor and are positive about the hospitals mission. They are less positive about their salary and benefits and are negatively influenced by the medical staff and how decisions are made.

These separate plots demonstrate the clarity and usefulness of plots made of different biographic and demographic groups. They show how any staff development or organizational programs designed to solve pending problems, to improve work climate, or to effect change can be targeted.

Using other biographic information, asked for on the questionnaire demonstrates how additional analysis can zero in on within-group differences. The questionnaire asked how long the employees work at the hospital. Using length of work experience as a variable, locations of factors by length of experience could be plotted.

This analysis was done only for nursing personnel for three forces: Ⓟ **Hospital administration training**, Ⓖ **Training**, and Ⓜ **Medical staff**. Three categories of work experience offered logical grouping: less than one year, one to two years or three to seven years.

Figure 3 shows the locations of each of the three factors for each of the three groups of nurses who differed on length of employment.

As shown in Figure 3, nurses who have been at the hospital bill longest (3 to 7 years) are more positive toward Ⓟ **Hospital Administration** and less positive toward the Ⓜ **Medical Staff**. It is also clear that Ⓖ **In-service training** is not a very important activity for the three groups regardless of their length of employment. These rather dramatic differences for employees who differ on length of employment can provide important information to the human resource department as new programs are designed to target pockets of stress and possible conflict.

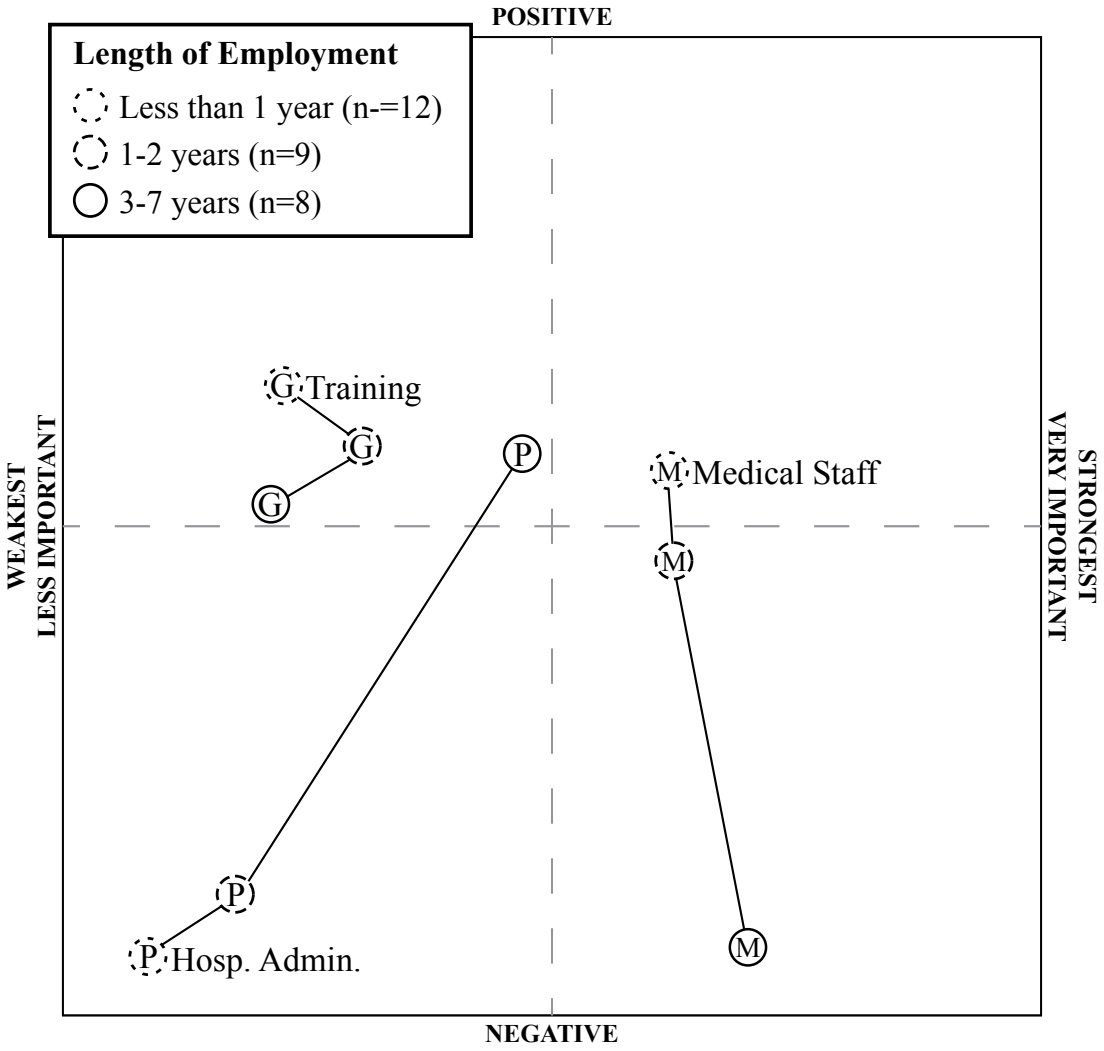


Figure 3. Three forces plotted for three levels of experience for exiting nurses.

With repeated administrations of the Work Climate Questionnaire, personnel can evaluate the contribution of any in-service training or other change strategy that is introduced.

It is important to note that the relative position of how each force is rated by the employee is not changed by transforming the rating to a z or "standard" scores. The transformation to z scores allows the researcher to compare the relative positions of the employee rated forces on the same base scale (a normal distribution). This allows the positions of each force to be plotted on a two-way grid as shown.

Another unique feature of the "force-field" plots in this approach is that no numbers appear on the display charts. While the positions of each force are numerically determined, the visual plot of their position provides the researcher with a "gestalt", a picture of data. The position of one force can be examined not only on how "**important**"

or "**positive**" it was rated, but also of its relationship to other forces. Also, patterns of how different forces group or cluster together are evident. Further, when the plots of different departments or groups in an organization are compared using across-group norms, considerable insights are possible, like which departments seem to excel at providing a healthy work environment and which don't. Or which supervisors shine in supporting positive work climates.

By charting "force-fields" using the WCQ, the user can develop a multi-dimensional approach to interpreting and "viewing" the data. Plotting data in this way encourages the researcher to use insight and creativity to data interpretation. And, if desired, other statistical indices like correlation, factor analysis, determining significant change on multiple administrators of the WCQ, etc. are always possible.

Much can be learned from these plots of organizational climate. The Work Climate Questionnaire presents plots that accurately represent employees' perception of the degree of stress and conflict, as well as satisfaction that exists in their work environment. Careful interpretation is necessary to understand why a force maybe "**negative**" or "**non-influential**". Maintaining and improving "**positive**" an influential forces also requires skill and effort.

Now, when the WCQ is administered to existing employees at this hospital, a sample of employees are interviewed and asked to explain "Why they rated factors as they did?" This information operationally defines employees' ratings and helps interpret plot locations. When combined with careful analysis of existing conditions within the organization and the extent to which the organization is carrying out its mission, the information from the WCQ can be used to identify sources of climate stress. When use effectively, this process can result in improved work climate for employees and increased satisfaction for customers.

F. Summary

The general inability of organizations to deal creatively with conflict produces stress for employees that, in turn, breeds low morale, low productivity and burnout. While such organizational characteristics as leadership style, communications and supervision are frequently accessed by employer ratings, the constellation of forces contributing to conflict and stress are usually not systematically and reliably measured. Furthermore, a plot or image of the dynamic fields of forces - some enhancing, some inhibiting, always interacting or in a state of flux - is not generally used to aide administrators or human resources personnel to monitor their organization's health or climate.

This article explains the rationale, development and presents some examples of using force-field analysis to evaluate and improve organizational climate. The procedure described uses the Work Climate Questionnaire and its resulting two dimensional plot technique for displaying data. The data displays can be likened to x-rays of the organization's health. These x-rays display the forces in four quadrants: positive and important, important and negative, negative and non-important and positive and non important. Plots can be made that analyze such force-fields by length of experience, job classification, hospital department or any other meaningful variable. With repeated administrations, plots can monitor change and measure that change for statistical significance.

This technique can also be used to generate hypotheses for practical experiments in management, such as predicting employee turnover or to collect baseline data for longitude evaluation.

In short, collecting data and generating climate charts based on the WCQ is a relatively simple, valid and cost effective way an organization can creatively control the stress its climate produces and improve job performance and job satisfaction. At best, the WCQ generated plots provide a way to diagnose and treat an organization's ailments in an effort to maintain the organization's health

When the WCQ is part of a sustained OD effort, organizations record dramatic change. The hospital cited in this paper, for example, reversed a high turnover trend for nursing staff, was nationally recognized as a "best place for nurses to work" and increased the rate of bed usage.(14) These significant achievements occurred over a three-year period in a metropolitan area that has both competitive nurse recruitment and excess hospital beds.

Related work:

I: The Environmental Forces Inventory (EFI), the parent of the WCQ, was developed and used nationally to examine school climate and to assist developers to implement and evaluate new educational programs. The results of this project are reported in references (15, 16, 17).

II: The technique in this paper that plots forces on grids to reflect Kurt Lewin's force field theory have also been applied to individual development, helping individuals identify their life goals and plotting forces that contribute to or detract from achieving them. The resulting "***The Leap of Faith, The Dance of Change***" provides an individual with a process for self-assessment and growth towards their life goals.
Go to: www.TheLeapOfFaithTheDanceOfChange.wordpress.com

I would be pleased to offer guidance to individuals, groups or organizations who desire to implement any of this work in your efforts to improve the human condition.

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References

1 Bureau of National Affairs, Inc. Bull. of Management 1978. In S. H. Appelbaum. *Managerial/Organization Stress: Identification of factors and symptoms.* HCM Review, Winter 1980.

2 Camplbell, J. P., et al. *Productivity in Organizations*, Jossey-Bass, 1988.

3 Gaston, Edward H., *Hospital and community psychiatry*, V 31 #6, June, 1980.

4 Levinson, H., *Management by whose objectives?*, Harvard Bus. Rev. Vol. 48, July-Aug. 1970, p 125-34.

5 Milborne, G. Jr.. *Health services manager*, Aug., 1980.

6 Carey, Raymond G., *Hospital Progress*, Feb., 1975.

7 Szilagyi, A. D., et al., *Hospital and health services administration*, Winter 1977.

8 Lewin, K., *A dynamic theory of personality*, McGraw-Hill, New York, 1935.

9 Lewin, K., *Forces behind food habits and methods of change*, Bulletin of the National Research Council. 1943, 108:3S-6S

10 Bavelas, A., *Morale and the training of leaders,*
In Watson, G. (ed.), Civilian morale, Houghton Mifflin, Boston, 1942.

11 Lewin, K., Lippit, R., and White, R., *Patterns of aggressive behavior in experimentally created "social climates"*, Social Psychology, 10;271-299, 1939.

12 Collingan, M. J., et al., *Occupational incidence rate of mental health disorders*,
Hum, J. Stress. 3:34, Sept. 1977.

13 Calhoun, Gary L., *Hospitals are high-stress employers*, Hospital, June, 1980.

14 Deforrest, C., Guzzardo, M., and Rayder, N. F., *Achieving Excellence Through Organizational Values*, Health Progress, March, 1986.

15 Rayder, N. F. and Body, B., *The Environmental Forces Inventory: Psychometric Properties*,
J. Exp. Educ., Vol. 44, No. 2, 1975.

16 Rayder, N. F. and Body, B., *The EFI: A New Technique or Measuring Influences on the Classroom*, Journal of the Experimental Education. Vol. 44, No. 2, Winter, 1975

17 Rayder, N. F., et al., *The Effects of Socio-Contextual Variables on Achievement*,
J. Teacher Educ., Vol XXIX No. 1, Jan/Feb., 1978.

18 Carey, B., *Learning to See Data*, New York Times, March 28, 2015