In the late 1960s, I worked for Electronic Data Systems Corporation. At the ripe old age of 23, working for H. Ross Perot in Manhattan was a heady learning experience. Facilities management (FM) was an exciting place to be during the emergence of the computer industry.

The technology had moved from the 1401 to the 360. Companies, especially those in transaction, paper-bound businesses, were beginning to see the need (even if they did not understand the implications) for automation. The computer manufacturers were having a field day telling clients exactly what to do. RCA, Burroughs, NCR — and, of course, IBM — were looked to for guidance by what has now come to be referred to as end-user organizations.

Perhaps it was IBM, along with its subsidiary SRI, that held the high ground in understanding what aptitudes one should possess, if one were to be successful in computing. In oversimplified terms, these aptitudes boiled down to a strong mathematical capability. That was it. It mattered little whether one was to work for a computer manufacturer or an end user, and there was no perceived difference in what was required in applications programming vs. systems programming.

I recall taking the battery of personality assessment tests at EDS. The embarrassing fact was that I did not fall within the targeted range for programmer training at EDS. And this was in spite of the fact that I prided

**PAYOFF IDEA**

When making the decision to hire one of several, equally qualified candidates, IS managers fall back on their instincts and choose the candidate that “feels right.” They rely on personal chemistry, which is one of the variables in the hiring equation. Other equally important elements are aptitude, attitude, and motivational factors.
myself in having done a reasonable job in getting my Bachelor of Science
degree at Boston College — with a minor in statistic. The EDS training
program was, and is to this day, known as the systems engineering de-
development (SED) program. It is judged by many to be one of the better
programs in the industry. Unfortunately, I was relegated to the closest
thing that EDS had to human resources — technical recruiting. (This
made perfect sense to me: if I lack the aptitude to do the job, then who
better to select those who can do it.) Besides, I fancied myself a student
of human nature, a “people person,” and recruiting seemed like a good
idea at the time.

In retrospect, this was the ideal learning opportunity — to be able to
work among the half-dozen accounts in Manhattan and observe what
seemed to work and what did not. There was no scientifically validated
procedure for our technical recruiting and, like many companies, we re-
lied on the ever popular “gut feel.” Platitudes ruled supreme: “he’s our
kind of guy,” “best athlete,” “a winner.” What the company did that was
somewhat innovative was to subject all candidates to a “team interview.”

This was a procedure whereby the candidate would interview with
three employees, all at the same time. I likened it to “rushing” a fraterni-
yty. The interviewers attempted to identify the behaviors the interviewee
possessed and then observe those behaviors under stress. What occurred
to me at the time was that the behaviors or traits that the individual ex-
hibited served as an overlay on top of the functional skills.

Over time, I noted that in fact, there were three elements to the hiring
equation:

1. Personal chemistry (how well do you like me?)
2. Traits (what behaviors do you observe that lead you to believe that I
   will fit into the “style” of the organization?)
3. Functional skills (can I actually do the job?)

Although I may not have been 100 percent happy with the EDS phi-
losophy, I must admit that H. Ross Perot and the company always knew
who they were and what they stood for. In this particular model, they
placed a high premium on attitude rather than aptitude. And attitude was
more easily perceived than aptitude.

ATTITUDE VERSUS APTITUDE
Having worked with hundreds of companies over the years, I have come
to recognize that every successful company knows exactly what it stands
for and has reduced the profile for new hires to a shorthand language
that all the hiring managers agree on. Once past the shorthand, what may
take place during the screening process may be significantly more com-
plex than initially suspected. But where aptitude as well as attitude is
needed, perception, in the absence of what is known as “self-report” (testing), will simply not carry the day.

The Study
While doing graduate work at Harvard University in the mid-1990s, I thought I would attempt to determine the relationship between how interviewers perceive candidates in the interviewing process compared with how they perceive themselves. Although one likes to approach such a study in an unbiased frame of mind, I had seen too much in industry to be unbiased. I was very sure of the validity of perception (especially to the keenly trained eye of a professional interviewer).

The study took place during the winter and spring of 1994. The specific intake methodology used was the triaxial “soft factors analysis,” which contains the elements of personal chemistry, traits, and functional skills. Personal chemistry refers to “how well do you like me?”; traits to “what behaviors lead you to believe that I fit the style of this organization?”; and functional skills refers to, “by the way, can I actually do this job?”

We also investigated the effects of social expectancy — that is, the “I believe thus and so about this candidate; therefore the scores I give him or her will reflect these beliefs” effect. Finally, the pattern of motivation was investigated, and through statistical analysis three clear motivational patterns or profiles emerged. They are discussed in a later section that deals with motivational mapping.

The interview sample size was 113 people (106 men and 7 women), all from the IT profession. They had all either responded to employment advertisements or been put forward by a search firm, and had been interviewed by me and my clients no longer than 18 months prior to the survey. They all were in supervisory or junior executive positions and were pursuing a job change. Their areas of residence included 31 from the New York City area, 30 from Atlanta, 15 from Dallas, 13 from Chicago, 13 from northern California, and 11 from southern California.

Summary of Results
We found that there was an extremely low correlation between the self-perceptions of the subject and the perceptions of the interviewer. As to social expectancy, the study showed a high correlation (i.e., the scores given by the interviewer reflected the interviewer’s beliefs about the interviewee). There were also the aforementioned three sets of motivations, to be addressed subsequently. These results are consistent with the metaanalysis (many studies merged into one) of Rosenthal of Harvard and Rosnow of Temple University. They are known for their social research and in 1991 merged 345 studies by various authors and organizations. (Rosenthal and Rubin, both of Harvard, had also done work in this discipline as far back as 1978.) These studies cross virtually all job categories.
and most industries, whereas our research concentrated solely on the IS/IT industry.

Based on our research results, one could argue that companies short-change themselves and the candidates by not insisting that every individual complete an assessment instrument that is based on the actual profile of successful incumbents. Failing to take such an approach denies candidates the objectivity that we would all like to believe we maintain as we hire.

**Current Thinking and Object-Oriented Technology**

Given the history of the industry and our research results, we believe that aptitudes should play the predominant role in who is selected for what training. In speaking with numerous IT executives, however, it is clear that organizations continue to use training for reward purposes rather than as a discipline-driven reskilling strategy.

In a 1997 study, we assessed the entire object technology population of a major insurance company. During our initial meetings, we noted that the success of the company in selecting, training, and retaining was far more stable — and successful — than any organization that we had encountered to date. Having discussed this issue with many major end-user organizations around the country and with the IBM OO (object oriented) Training Center, we had become hardened to the low success rate that most companies were experiencing. We suspected that the insurance company was using sophisticated aptitude assessment prior to hiring (and subsequently, training) the individual.

What we discovered was remarkable. Although the company did not use aptitude assessment, it did have a “gatekeeper” who culled out the applicant pool by way of a personal interview. And although this person could not express what the aptitudes were by name, he intuitively sensed someone who did not fit. Our job was to assess the entire group of OO professionals to determine what those specific aptitudes were. The ambitious OO initiative would be impeded if the gatekeeper were not available.

Clearly, this example is an anomaly. The CIO recognized that it was in his best interest to let “good science” take over, before his luck ran out. The executive team agreed that aptitude was 80 percent of the success equation and attitude 20 percent. In this instance, the decision to hire goes hand in hand with the financial commitment to train. (Most companies spend $20,000 to $40,000 per individual for object-oriented training. This particular company immerses individuals in a combination of work and classroom training for six months, thus investing well in excess of the $40,000 level.)

What we have learned from this process of assessment is that much of the reason for success can usually be attributed to two to three “core” ap-
Aptitudes. The aptitudes that emerged as markers for success for this particular discipline include cognitive style, parallel thought, and associative orientation. Each of these aptitudes is somewhat complex.

Customarily in a perceptional selection process (defined as follows) everyone agrees that individuals should possess — let us say — 15 attributes. An interviewer may determine that a candidate has 12 of the 15 attributes and move the person forward in the process. In reality, the three attributes that the candidate lacks may account for as much as 90 percent of the success factor — if these happen to be the core aptitudes. In other words, it would be far more appropriate to qualify or disqualify the candidate based on these three core aptitudes.

It should be understood that the two or three aptitudes that are the “core aptitudes” or “success indicators” change from position to position and can be determined only by statistical analyses of the current sample of individuals who are being successful, right now, in that particular discipline. The three noted previously are specifically for object-oriented technology.

**If I Like You, You Get High Marks**

Our research revealed that the candidate’s attitude strongly influences the personal chemistry score in an employment interview. Armed with that as a given, we cannot help but wonder what influence, therefore, attitude has on our trait and functional scores in the interview.

For the sample that we analyzed in our Harvard study, there was a stunning 62 percent probability that personal chemistry was influencing the scores that were given by the interviewer in the trait axis. Equally disturbing, there was a 63 percent probability that personal chemistry scores influence functional scores. It follows then, that attitude — by influencing personal chemistry — has an enormous effect on how candidates are graded in both hiring as well as training situations.

How then can we rationalize attitude as the dominant influence behind hiring and training in the face of the revelation that two to three key “success indicators” — aptitudes — if lacking, would leave candidates with roughly only a ten percent probability of succeeding?

**Too Much Information?**

Is there a downside to the ability to use the tools of “good science” in the hiring and reskilling process? The honest yet naive comment of one CIO is indicative. “Too much information,” he said, as though our taking the information back would somehow lessen his burden of being well informed. What he was suggesting was that he was happier taking a random walk-in, hiring and training people that he liked, rather than those who had the ability and in all probability would be successful.
It is critical that IT organizations find and train the most well-qualified resources available. Although we cannot ignore attitude, neither can we ignore aptitude. Of the two, aptitude is most often weighed carefully by successful companies — and successful individuals. Although attitude and aptitude both influence success, aptitude does not wax and wane with one’s emotions. Aptitude is constant and is the “brainpower” that we bring to our tasks.

**Aptitude Versus Attitude: Action Planning**

The industry has changed significantly since the days of the 1401 and the limited knowledge that was available. Contrary to “too much information,” we still understand far too little about what contributes to human performance. Only through continuing assessments and reassessments can we hope to enlighten ourselves and facilitate lifelong learning.

Successful organizations know the “horsepower” they have under the hood. They have assessed the actual success factors, by position, that are required in their environment. They understand the strengths and weaknesses of their management style, and their corporate culture.

CIOs often ask us how they might get started. Given that no two companies are the same and, therefore, may require somewhat different action steps, here are some guidelines that should help:

- All programs and initiatives must come from the top. If they are not supported at the highest level, they will probably not be successful.
- Programs must be well communicated throughout the organization. If there has been a recent merger or consolidation, employees will suspect that this is another strategy to “sort out” the workforce. Communication is the key to minimizing this false suspicion. Employees need to embrace these initiatives and understand the benefits of training that will come as an outgrowth of the assessment process.
- There are two beneficiaries to the output from assessment: the individual and the organization. Individuals are able to use their personal information to drive their own career planning. Organizations will have the macroinformation (if not the individual reports). This information will reveal the actual cultural profile of the company; it should also yield the variance of actual organizational capability that can be compared with required capability. The difference becomes the “shortfall” of the organization that should drive its recruitment and training strategies.
- The human resources department should be involved to ensure that there are no legal impediments to implementation. (For example: if I as a participant do not want my personal information to be available to my manager, what are my options?)
- Investigate your assessment options before you leap. There are many fine companies that can assist with the assessment process. Some
specialize in the “hard” skills, (e.g., actual programming competen-
cy), while others emphasize “soft” skills (e.g., aptitudes for leader-
ship, managerial style). In the soft-skills area, ensure that the
instrument is both valid and reliable. Validity refers to the instrument
actually measuring what it claims to measure. Reliability refers to con-
sistency over time. (I should test out pretty much the same way next
week as I tested today.) Ask if there are any Ph.D.-level psychologists
on staff. If not, you may be using an untried assessment instrument.

• Get started now. Aptitude assessment is an activity that is easy to put
off. As you progress, you will be amazed at the results: more effec-
tive recruitment and less expensive but more exacting training pro-
grams. Over time, the performance of the organization will improve
significantly.

MOTIVATION’S ROLE IN HIRING
Before one can appreciate the significance of motivation in hiring deci-
sions, one must first understand what “motivate” means. The Microsoft
Word Dictionary tells us that “to motivate” means “to provide an incen-
tive, to move to action, to impel.” And the encyclopedia Encarta 96 says
that “motivation is the cause of an organism’s behavior or the reason that
the organism carries out certain activity.”

In human psychology, individual human beings are studied, along
with what motivates their behaviors. In organizational psychology, the
concern is with motivations that affect on-the-job performance. For the
past 30 years, my research has been dedicated to discovering and under-
standing the motivations that affect individual IS/IT professionals and
their relationships in the workplace.

Sheehan’s Theory of Motivation (STM)
To develop a valid theory, one must have access to an exceptionally large
sample of people to observe. I began interviewing candidates for my re-
search in 1968. They were drawn from a wide cross-section of the com-
puter industry, including end-user organizations, and hardware, software,
and services vendors. Initially, 10 to 15 candidates a day would suffer un-
der my halting, awkward style. Over time, however, I learned how to en-
courage candidates to “open up” and discuss their motivations for being
in the IS/IT industry. Soon, patterns began to emerge, a common map-
ning of motivations that began to constitute an underlying system.

Within two years, Sheehan’s Theory of Motivation (STM, so named by
my co-workers) took shape. In summary, it was observed that at any
point in our careers, we seemed to have four to six dominant motiva-
tions. As our lives progress, three to four motivations remain constant
while one or two motivations change. STM holds that those motivations
that do not change over time are “trait” driven, and represent the innate
personality of the individual. Those motivations that do change are “state” driven and represent the changes driven by the circumstances of one’s life. Specific motivations do not fit neatly into one category or the other. While the need to learn may be a lifelong motivation for one individual, it may be only a current or state-caused motivation for another person.

A map of this model (Exhibit 1) is included. Entitled Sheehan’s Theory of Motivation, Sample Motivational Map, it details that each individual will, on average, have a unique set of motivations, three to four that are stable over time and two that change.

### IS/IT Based

This approach to understanding motivation is experientially based — that is, from interviewing experience with approximately 500 IS/IT people per year, over a 30-year period, for a total of approximately 15,000 people. It has been applied in the hiring, performance review, and performance management process as Sheehan’s Theory of Motivation (during the 1970s), Motivational Interviewing (early to mid-1980s), and The Soft Factors Analysis (mid-1980s to early 1990s). We rely upon the same underlying process — STM — for the three differentiated processes.

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**EXHIBIT 1 — Sheehan's Theory of Motivation**

Sample Motivational Map

<table>
<thead>
<tr>
<th>Type</th>
<th>Motivation</th>
<th>Company 1</th>
<th>Company 2</th>
<th>Company 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Work for a Mentor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait</td>
<td>Challenge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait</td>
<td>Growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait</td>
<td>Money</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Travel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Work for a Mentor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait</td>
<td>Challenge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait</td>
<td>Growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait</td>
<td>Money</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Travel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Managing Others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Contribute</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait</td>
<td>Challenge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait</td>
<td>Growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait</td>
<td>Money</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>No Travel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

08/01

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Companies including Manufacturers Hanover Bank, Chemical Bank, and Chase Manhattan Bank were among those that applied Sheehan’s Theory of Motivation. Motivational Interviewing was the methodology that enabled such companies as Interactive Data, Chase Econometrics, and Ross Systems to identify the right people for the right jobs and thus grow with cultural harmony. The list of companies trained in The Soft Factors Analysis includes INSCI, Rath & Strong, Cullinet, Pansophic, and Lotus One Source. Large end-user organizations that have used either The Soft Factors Analysis or its more recent version, The Cambridge Assessment Method, include Panasonic, AlliedSignal, Digital Equipment Company, First of Chicago, W.W. Grainger, and Chubb Insurance, among many others.

Colleges and universities have also benefited from the methodology, including Babson College, Radcliffe College at Harvard, Boston University, and the University of Hawaii at Maui. Their students, especially those returning for an M.B.A., have all felt that the theory of motivation realistically reflected their own professional drives.

**Academic Disconnect**

In the early 1990s, I was doing graduate work in psychology at Harvard University. With a bit of trepidation, I acknowledged that such an experientially based theory should be able to stand up to the rigors of academic scrutiny. Erik Erikson was then Harvard’s most prestigious and revered psychologist. Although I had the privilege of meeting him, I did not have the opportunity to present a detailed description of Sheehan’s Theory of Motivation. I was, however, a student of George Goethals, a protégé of Erikson. Goethals not only examined the theory but encouraged me to compare it with the theories of Erikson.

**Erikson’s Theory of Motivation**

Erik Erikson argued that our main theme in life is the quest for identity. He defined identity as a stable picture of the relationship between ourselves and the social world, extending throughout one’s life. Erikson observed that there seem to be eight critical stages of personal development:

1. Trust versus mistrust
2. Autonomy versus shame and doubt
3. Initiative versus guilt
4. Industry versus inferiority
5. Identity versus role confusion
6. Intimacy versus isolation
7. Generativity versus stagnation
8. Integrity versus despair
One may ask, “How can a theory developed in the IS/IT industry stand up to the work of Erikson?” I must confess that I had my doubts. But during the past 30 years, thousands of interviews have been incorporated into our database. It has been consistently observed that maturing individuals seem constantly to be asking, “Who am I?” While Erikson focused on the eight stages listed, he believed that individuals must resolve each stage before progressing to the next. In our defense of STM at Harvard, we found that, for IS/IT professionals, there is a mapping of motivations that everyone follows, with the timing and motivations unique to the individual. We were hard pressed to find people to whom this does not apply; we also could not confirm the set pattern of Erikson’s stages.

There are two observations to be made. The first has to do with the motivation to put something back: the sense that we are contributing to the betterment of our family, the community, or humankind. Erikson referred to this as “generativity versus stagnation” and believes that it is more common in middle age. It can be reported that 66 percent of the participants mentioned this factor. We believe — but it is more intuitive than scientific — that there is a success factor as well as a self respect that is closely tied to this motivation.

The other motivation that deserves attention is money. Most people suspect that money plays a major role in motivation. A qualitative analysis of the study revealed that money was a motivation at some point in the subject’s life in 73 percent of the cases, and was clearly the most mentioned motivational factor.

**In the Face of Herzberg’s Theory of Money**

It should be recognized that this is controversial. Herzberg (1987) has shown in his summary of 12 studies, that salary was significant in only about eight percent of his subjects. In contrast, a detailed qualitative analysis of our participants showed that 41 percent were primarily driven by money. In 24 percent of the cases it was clear that this was a lifelong motivation. In ten percent of the other subjects money was a motivation, but only in the face of stability. One case began as money motivation but moved to survival. Another began as money and is now control. The final case in the money category was categorized as money but only in the presence of achievement. It can be explained that Herzberg’s subjects were not in the contemporary IS/IT workforce. The pressures associated with today’s world are far more severe than they were 20 years ago. Today, one’s sense of security is often tied to the amount of money one has to fall back on. The connection of money to security is relevant in the face of downsizing, acquisitions, and the constant pressure of reskilling.

We were also able to categorize lifelong themes of motivation in the following categories:
Proof of the Pudding
A substantial 66 percent of the subjects reported a motivation distribution that confirmed our theory of three to four motivations remaining stable throughout life, with one or two changing.

Erikson’s theory that individuals must resolve each stage before they may move comfortably to the next is, in our experience, valid — perhaps. What is known, however, is that one cannot agree that the stages come in the prescribed order for each person. It has been observed that as individuals relate the chronicle of their lives, the object of the ego satisfaction — that which allows individuals to maintain their self-respect — is sought after, attained, or not attained. It is then reordered in the set of priorities or goals. The implication of this concept is that companies that understand the motivations of their people, and are able to satisfy those motivations, keep their people. Those that do not satisfy the motivations of their people will lose them. Individuals invariably recognize their longing for challenge, autonomy, structure, or whatever motivation is closely associated with their self-respect and move on. Astute individuals seek out an environment where the four to six motivations that are the drivers (trait and state) will be satisfied.

Relevance to IS
What is the relevance of this research to how CIOs and senior IS/IT managers conduct their professional lives?

Every organization has its own unique culture. One reads about the culture on plaques in the organization’s lobby and in inserts in orientation packets. Human resource managers proudly tell new employees about the culture and its contributions. Organizational cultures embody the style of the organization. They reward and punish certain behaviors and they therefore satisfy — or frustrate — certain motivations.

Here is an example of individual motivation clashing with organizational culture. Let us suppose there is an individual motivated by autonomy. One would never envision such a person being happy in — as an extreme example — the Post Office. Nor would Post Office management be very happy with the individual. So rather than the proverbial win–win, we clearly have the basis for a lose–lose.

In these times of scarce talent, management can get excited about candidates who even come close to possessing the skills ideally desired in
prospective hires. And, during an interview, the talk focuses on the positions in terms of those skills and how they will facilitate the candidate’s success. What should be done, however, is to concentrate on the cultural “goodness of fit” that will facilitate the candidates’ very survival in the environment.

Do not think that candidates are not thinking about this issue, as well. Savvy candidates with hard-to-find skill sets are being wooed by many companies. The key critical success factor is the candidate’s level of comfort with the management style and cultural fit of the organization. As mentioned previously, this will be a function of how well the environment satisfies the motivational needs of each individual.

What Can IS Managers Do?

One knows from experience as an interviewer that identifying the needs of the interviewees is only the first step. Having identified the needs, the candidates need to be shown that the environment will satisfy their needs. It has to be made clear that the behaviors that spring from the candidates’ motivations will be rewarded.

To cite a specific example: if a candidate’s prime motivations are autonomy, financial rewards, rapid advancement, continuous learning, and working with bright people, then a team-oriented position in a large bank where the candidate will not have a financial review for 18 months will probably result in a mismatch. The fact that the candidate has the functional skills that the hiring manager needs can be frustrating, and to many hiring managers it becomes too great a temptation. Hiring managers then often throw money at the candidate until he — often against his better judgment — accepts.

These are usually the circumstances under which the positions are again open six months to a year later. Individuals are hired, quickly figure out the mismatch, and just as quickly depart. Worse still, an employee, although not a bad person, can be so disruptive to the team that the individual has to be forcibly removed.

Hiring mistakes will continue. Organizations can never be 100 percent sure of anyone they hire. But it is possible to minimize errors by paying attention to candidates’ motivations to ensure that these motivational needs can be satisfied in a specific environment.

Here are eight specific action steps that can be taken to prevent motivational mismatches and increase the probability that there will be a close fit between the needs of the organization and its environment and the needs of candidates.

1. Understand the stated corporate culture. Be able to convey this to the candidate in a succinct but clear manner.
2. Understand the actual corporate culture and be able to articulate the differences. There is usually some variance between what is stated and what is real. Discuss the variance(s) with team members and get their perceptions. After all, it is the team members who will have to accept the new hire(s) into their ranks.

3. Fine-tune interviewing skills. It is one thing to be able to conduct a functional, skills-based interview. It is quite another challenge to be able to help candidates become comfortable enough that they will share their motivational needs.

4. Be able to sketch the motivational map and explain it. Candidates will find the interviewer to be a stimulating and interesting person, and worthwhile discussions around motivational stimulation will most likely follow.

5. If it is intended to pursue a particular candidate, be prepared to describe the company in terms that will demonstrate to the candidate that the company can satisfy the candidate's motivations. This may well become a personal competitive advantage if the individual is being hotly pursued by other companies. Most companies only know how to throw money at candidates during the recruiting process.

6. If it is not intended to pursue a particular candidate, there is a wonderful opportunity to point out the divergence between the candidate's needs and the philosophy of the company. This will provide a smooth turn-off, especially with a persistent candidate.

7. Manage to the motivations. Once individuals have been hired whose motivations are understood, they will be better able to be managed. Managers like to think that all of their direct reports can be managed in the same way. The reality is that everyone needs to be managed a bit differently.

8. Use this motivational technique with current staff. When conducting performance review and planning sessions, capture the motivation information. Help the individuals understand the motivational map. It will not only serve as a basis for discussions, but individuals may want to adapt it to their skill set.

Analysis of Example Motivational Map

In the example (see Exhibit 1), an individual is considered who consistently refers to six motivations and who has been with only three companies during the past 18 years. In the person's earlier years he traveled, but something has happened in the life situation and traveling is no longer desirable. This was caused by an external influence; therefore, “travel” or “no travel” is considered to be a “state” motivation. (For the sake of this example, elderly parents can be considered as the cause requiring the help of this individual; thus, the designation of a “state” motivation.)
It can also be surmised that this person valued learning, as it was a motivation for the initial 14 years. The person then felt that the need to take that learning and put something back into the system (as exhibited by “manage” and “contribute”). Those motivations connect to the motivation of working for a mentor, initially seeking mentoring, and more recently becoming a mentor.

The “trait” designation applies to this person’s lifelong need of a challenge. And, in meeting the challenge, this person must see growth. (When discussing growth, the key is to understand what the person defines as “growth”. One individual may define it as advancement every year, while another may define it as a promotion every 18 months.)

As far as the motivation of money is concerned, in the example, money is a lifelong or “trait” motivation.

**PERSONAL CHEMISTRY: HOW IT AFFECTS HIRING, TRAINING, AND PROMOTING**

As mentioned previously, we know that people are judged on three factors: functional skill, personal chemistry, and traits. This section examines the least quantifiable of the three — personal chemistry. What is the intangible that so profoundly affects team members and their interaction? What intangible also affects our hiring selections and our decisions about whom to train and whom to promote? And if these effects were not enough, what intangible also moves us from rational and objective points of view and opinions to those that may be less mature and more subjective?

Is this intangible an insidious disease? Does it marginalize our actions and render us ineffective? Frankly, no. This intangible is the sixth sense that we all possess and use, day in and day out. This attribute has saved us many a time from making personnel decisions that we were somehow convinced would be to the detriment of the team and, indeed, to the organization.

We have all had the experience of making a judgment or decision about someone that we have later been hard-pressed to explain. When questioned about the choice, we hem and haw and finally defend ourselves by declaring, “gut feel!” “No, I didn’t want to hire … . I know that … has the functional skills we need. Yes, … also has a stable job history, and isn’t a job hopper. Has good references, too. I don’t know… I just didn’t feel comfortable about…..”

Under such circumstances, we are prepared to abandon what our eyes and ears are telling us. We are prepared to refute logic. We have a belief, one that unfortunately is founded on not-so-solid ground. But beliefs are what people are prepared to go to war over. We know from world history that people are prepared to die for their beliefs. In the corporate world, we do not quite go to war (nor should we be prepared to die) so much as we stake our authority, our reputations, our very corporate survival on an intangible. And we write all this all off to “gut feel.” Do we ever stop
and think that perhaps we should try to learn more about this phenomenon so that we can better understand it and, perhaps, avoid relying on it?

The Basis of All Action
The phenomenon thus described above is common and quite normal in our everyday work environments. I am not sure that we could defend its existence from a legal standpoint or that everyone will admit to its being an influence. But, like it or not, the very fact that we are human beings with feelings and emotions dictates that we fall victim to what may be described as “gut feel.”

We need to understand, however, that the beliefs we arrive at emanate from the interaction of two people. Whenever there is an interaction between people, we have a relationship. It may be a good or a not-so-good relationship. It may be a brief, even a fleeting relationship. Or it may be a lengthy relationship. The driver, however, the predetermined influence, is what we have all come to call “personal chemistry.”

What Is Personal Chemistry?
Personal chemistry is what determines who our friends are. It determines whom we will marry or, perhaps, whom we will divorce. Have you ever met someone whom you always felt obliged to oppose, no matter what the subject? We all have. We recognize this as a “personality clash.” It is the extreme absence of compatible personal chemistry.

We will come to understand personal chemistry when we identify the factors or subparts that make up personal chemistry. And when we define and understand it, we will then be able to examine the degree of influence that it has in selection, training, and promotion decisions. We might also consider if or how we would want to use this information in our interaction with our peers and superiors as well as with our subordinates.

Analyzing Personal Chemistry
The genesis of this work dates from the late 1960s as the IS/IT industry flourished. The longitudinal study (one that goes out over an extended period of time, working with the same subjects) on which it is based examined the influences on the hiring, training, and promotion processes. Thousands of subjects participated, and the conclusions were iterative (the results from each phase were continually factored into the next phase of the study). All of the subjects were in the IS/IT industry, and although it included subjects from most of the major cities in the United States, the study was heavily populated with participants from the Northeast.

The study concluded that three predominant factors influence human interaction in the work environment:
1. Functional skills are defined as those skills that the individual apparently possesses.
2. Traits are defined in this context to be the apparent characteristics of individuals that emanate from their behavior.
3. Personal chemistry is somewhat elusive, but it clearly influences not only transactions (hiring, training, and promotion) but also the ratings that are given to the subjects in the other two categories, functional skills and traits. Personal chemistry is, therefore, determined to be a powerful predictor of the individual's success within this specific set of circumstances (be it hiring, training, or promotion).

In 1994, I reported the results of a study I conducted while at Harvard University (Evaluation & Defense of the “Soft Factors” Assessment Methodology, Sheehan, 1994) to examine and quantify these phenomena. The study determined that personal chemistry was as we mentioned previously, a powerful predictor of the individual’s success in this specific set of circumstances (hiring, training, or promotion). In plain English, this means that we consciously or unconsciously allow our compatibility with an individual (i.e., personal chemistry) to influence the ratings that we give him or her. Consider an example in which an individual is interviewing for a position as a Lotus Notes administrator. The candidate has only minimal experience with Lotus Notes; however, there is a high mutual personal chemistry strength. The interviewer will give the candidate higher marks than he or she deserves — consistently, across all three axes. On the other hand, if the candidate has or exceeds the functional skills required, but the relationship has low or no mutual personal chemistry strength, the candidate will receive lower than deserved marks — again, consistently across all three axes.

Agreement on the Elements of Personal Chemistry
We defined and fine-tuned the elements of personal chemistry that will be described below through the work of as many as 50 focus groups conducted in both corporate and academic environments. The focus group format included having key members of an organization meet with a facilitator to reach consensus on the elements of personal chemistry. The specific technique used was to allow members of the group to express what they personally had observed as elements of personal chemistry. These elements were written down as a list of factors. To remain on the list, the element had to survive in-depth discussion and was subject to veto by any member of the group. The resulting list, therefore, always represented a consensus of the group. The elements identified as influencing personal chemistry are empathy, openness, flexibility, decisiveness, assertiveness, logical ability, communication, intelligence, image, attitude, and energy level.
Definition of the Elements

Empathy includes the ability to perceive and understand intuitively the feelings, inner drives, and needs of another person. Empathy requires a sensitivity to the subtle clues and suggestions that all of us emit every moment about our priorities, our strongest and most urgent desires. People who are empathetic can take these factors into account in their actions and conversations and thus find it easier to establish rapport with others. Those who lack empathy often find the behavior of others strange and inexplicable, motivated by hidden, ineffable factors. Empathetic people have a “feel” for other people, a sensitivity that enables them to understand and assess others’ character and personality. Empathetic people are able to “read” others and thus establish rapport.

Openness refers to people’s ability to be themselves, to present themselves in a natural, unhesitating manner. “Honest” and “sincere” are the words heard most often to describe those who possess openness. The lack of ability or desire to be open often results in an individual’s being perceived with suspicion and mistrust. There is, of course, a marked difference between a person’s desire to be open and his or her ability to be so.

Flexibility in work environments refers to individuals’ ability to be yielding when necessary. Growing organizations usually possess rapidly changing environments in which people must adjust quickly and often. Those who lack flexibility are less capable of doing things someone else’s way; they can become emotionally distressed when planned activities are accelerated, altered, or canceled, and they are often more opinionated and subjective than is helpful in team environments.

Decisiveness refers to one’s ability to come to a conclusion based on sufficient input. Subjective individuals may form opinions too quickly, while procrastinators (at the opposite end of the spectrum) may avoid making decisions, regardless of volume and quality of input.

Assertiveness refers to an individual’s tendency or disposition to express a point of view, make a statement, deliver information, and communicate conclusions in a positive and confident manner. Overly assertive people not only have the tendency to express their points of view, but may do so without sufficient information about the topic being discussed. The term opinionated is often used to describe them. At the other extreme, nonassertive people have a tendency to avoid expressing a point of view, regardless of whether or not they have arrived at that point of view through a logical thought process.

Logical ability is defined as the ability to perceive in accordance with inferences reasonably drawn from events or circumstances. Sound reasoning is not an absolute; two individuals, each with solid logical ability, may both observe the same events or circumstances and each arrive at different conclusions. What is important is that the conclusion be reached in a sound, logical manner.
Communication refers to an individual’s ability and desire to convey ideas, concepts, and knowledge to others. This element includes being a good listener as well as possessing verbal and written abilities necessary for clear expression. Verbal skills are needed to establish and sustain effective dialogue with others, including the ability to encourage others to participate and close the feedback loop.

Intelligence refers to one’s aptitude to comprehend. Contemporary theory argues that there are several forms of intelligence, including artistic, musical, spatial, mathematical, and so forth. Intelligence is usually demonstrated by one’s success in dealing with situations through the behavioral adjustments necessary to obtain the desired results, or goal. All of us possess varying degrees of aptitude for comprehending information in specific categories of knowledge. Some of us may lack aptitude for understanding particular subject matter. (This explains why, for example, a brilliant mathematician may have no aptitude for understanding computer operating systems, or why a successful computer software salesman may lack the aptitude to sell hardware.) For our purposes in work environments, intelligence refers to employees’ abilities to demonstrate their aptitude to comprehend relevant subject matter. Realistically, we do form opinions (conscious or subconscious) regarding the overall mental capacities of employees relative to the other individuals in the group.

Image refers to the likeness or representation of a person, and much of our initial impression of an individual hinges largely on visual image. (I suggest we be careful, however, not to be either favorably or unfavorably impressed by clothing or hairstyles.) True image is more correctly perceived through increased exposure to individuals, and reflects such factors as their (apparent) ethics, ability to communicate, confidence, and, most important, consistency of behavior.

Attitude can be defined as one’s philosophy or state of feeling, including one’s work ethic. In any endeavor in which accomplishment is the goal, one must possess ability, skill, and desire. Desire tends to be reflected in one’s attitude not only toward the job but also to how that job fits into a career and how that career fits into one’s life. An attitude reflecting a low ego need to succeed can result in low motivation in the work environment. Highly motivated individuals possess a positive attitude toward job and career where success in both job and career is driven by innate ego need.

Energy level is defined as one’s capacity for performing. In the work environment, certain positions require a high energy level, while others do not. Energy level is often confused or combined with enthusiasm. Enthusiasm is defined as eagerness or excitement. One’s enthusiasm, however, may vary according to the subject matter, while one’s energy level is more uniform and is suspected to be a function of metabolism.
CONCLUSION

As a practical matter, personal chemistry becomes entrenched over time. When we are unimpressed with a new employee, we will either change our opinion over time as we come to know more about the individual, or our view will become a self-fulfilling prophecy. When we are positively impressed when we first meet a person, it is rare that we will alter our view. In fact, in this instance, self-fulfilling prophecies often come to pass.

The implications for training, development, and promotions are profound. By its very nature, promotion is a reward. However, many managers use development activities not only as rewards, but also as not-so-subtle ways of showing the rest of the employee population the type of person who moves ahead in that specific environment.

Such corporate behavior impedes — or halts — the forward progress of individuals who are at odds with the boss. This may seem to be an “over-the-top” conclusion. However, when correlated with the staggering 60 to 70 percent of people who change jobs because of discomfort with the personality or style of the boss, such a conclusion becomes much more credible.

Conversely, those who “get along well” with the boss and have at least average functional skills will in all likelihood:

- Do well in that specific work environment
- Be a highly probable candidate for training, education, and professional development opportunities
- Be a likely candidate for promotions and raises

Managers involved in the hiring process should keep in mind the following guidelines:

- When you are hiring, make sure that you and the candidate have a good “all-around fit” including competencies and traits, and that you are not just reacting to good personal chemistry.
- When you are interviewing for a new position, be certain that you have a strong personal chemistry fit with your prospective boss. If you think you are going to have a problem with this person, you will.
- When managing a group or team, do not rush to judgment. Allow each person to demonstrate consistency of behavior over time.
- When reviewing performance evaluations from your project managers or department heads, try to screen out the personal chemistry effect. Educate your managers to the existence of this phenomenon and its impact.
- When selecting employees for training and professional development, look beyond your personal chemistry and comfort level with
them. Every organization needs a diversity of personalities if it is to survive, grow, and flourish.

- Guard against negative self-fulfilling prophecies. They can lead to litigation.
- Guard against positive self-fulfilling prophecies. You do need to have the best people win.
- Now that you understand the elements of personal chemistry and their sometimes illogical intervention, stop and question your decisions. Ask, “Am I doing this because of personal chemistry or is this the right thing to do?”

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