Personality, Perception, and Paradigm Shifts:
Dynamic Connections for Industrial Safety and Health

My recent "safety and personality" presentation at the professional development conference for the American Society of Safety Engineers was well attended and activated a number of questions and follow-up commentary. Several participants were concerned that the "Big Five" personality traits, as described in my *ISHN* article last month, were inherited and unchangeable; while others wondered how personality relates to person-based factors like perception and attitude, and to actual safety-relevant behaviors, such as "actively caring." These provocative questions warrant one more entry in this *ISHN* series on personality and safety.

Can Personality Traits Be Changed?

Theoretically, a personality *trait* is a permanent characteristic of an individual that markedly influences behavior, especially in ambiguous or nonrestrictive and open environments in which behavioral directives or expectations are broad or nonexistent. In other words, when the environment does not prescribe a certain behavioral protocol, our personality has a powerful influence on what we do.

But, a critical question remains: Can personality and its impact on behavior be changed? As discussed in my *ISHN* article last month, most personality researchers and scholars claim certain personality characteristics (termed "traits") are essentially immutable, and can not be targeted for intervention tactics. These include the "Big Five" traits: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism.

Thus, many personality researchers suggest we must accept the reality that people are born with some degree of propensity to express certain personality characteristics. However, we should realize that situations, contingencies, and interpersonal intervention can also influence the extent a particular personality trait is manifested in behavior. Thus, a person who is naturally low on a Big Five trait can be activated to show this characteristic through an environmental condition, a behavior-change intervention, or interpersonal dialogue. For example, the students in my large university classes, as well as the participants in my professional development workshops, often inspire me to transition from my natural tendency to be shy and introverted to behave in an outgoing and extraverted manner.

To understand the potential flexibility of personality traits, I find it useful to consider handedness. While most of us have a clear preference to use one hand over the other for specific activities, we can use the other hand when situations call for this change. It feels awkward, but we can do it. And with practice we can get quite good with our nondominant hand. Likewise, practice can make it feel natural to behave contrary to a personality trait.

From Personality to Paradigm Shifts

So, what is the mechanism or process by which a personality quality affects behavior? Simply put, our personality influences our readiness to perform in certain ways. It makes us naturally aware or unaware of certain aspects of our life space. It influences how we interpret the various happenings in our daily lives. And, personality affects how we respond to environmental stimuli, biasing

our perceptions such that we selectively attend to some things and not others. And again, environmental and social circumstances interact with our personality traits to enhance, neutralize, or inhibit them.

To illustrate the interaction of person and environmental factors, let's consider two paradigm shifts I believe are needed to improve the human dynamics of a work culture. Some readers may recall from my early *ISHN* article on paradigm shifts (September, 1993) that a paradigm is considered a perception or perspective that influences both attitude and behavior. How do personality traits fit into this mix?

Paradigm Shift 1: From Behavior-Based to People-Based Safety™

Many of my recent contributions to *ISHN*, including this one, reflect my conviction that we need to consider person-based factors relevant to safety performance. For years, I have used the term "people-based safety" to reflect the combination of behavior-based and person-based factors. How might personality influence a transition to becoming more people oriented when addressing safety issues?

Narrowing our focus to only the Big Five, it's intuitive that people who score higher on Extraversion and Agreeableness should be more likely to understand and commit to this paradigm shift. These individuals are more people- and relationship-oriented by nature, and therefore are more comfortable with procedures that involve interpersonal interaction and influence. Also, those more open to experience should be more likely to consider any paradigm shift, and will be less likely to resist change.

Paradigm Shift 2: From Other-Directed to Self-Directed Accountability

My prior *ISHN* articles on responsibility versus accountability (June, July, & August, 1998) distinguished between "other-directed" behaviors that occur because people are held accountable by observers, supervisors, or coworkers, and "self-directed" behaviors that occur because the performers are holding themselves accountable. In an ideal, safety-mature organization, employees don't need outside accountability systems to motivate them to follow safety-relevant procedures. Rather, these employees hold themselves accountable to perform safe work practices. They stick to the safety protocol when working alone, even in their backyards, when no one else is there to hold them accountable.

What personality types are more apt to work toward this paradigm shift? From the Big Five, it's obvious that Conscientiousness is most aligned with acquiring a self-accountability perspective with regard to industrial safety. But I also expect Neuroticism to be related, as reflected in my *ISHN* article last April. More specifically, I think some degree of ongoing anxiety contributes to the self-motivation needed to keep a person doing the right thing for safety when an external accountability system is unavailable. I'm not talking about extreme neuroticism, but a level somewhere between "completely calm, relaxed, and unemotional" about an injury possibility and "nervous, emotional, insecure, and distressed" about safety issues.

In Conclusion

This final article in the *ISHN* series on personality and safety attempted to clarify the role of person traits in influencing industrial safety. First, the interactive influence of person-based and environment-based factors was explained. It's important to understand that one's internal natural tendency to behave in a certain way can be facilitated or inhibited by external factors. Thus, situational states can overcome the biases in awareness, perception, and interpretation caused by dispositional traits; and they can promote more safety-oriented perceptions and support behaviors which are not automatically activated by certain personality characteristics.

To illustrate connections between personality, perception, and behavioral predisposition, two paradigm shifts were discussed. I entertained particular ways certain Big Five personality traits could influence understanding, acceptance, and commitment to these paradigm shifts, which I deem necessary to improve the human dynamics of a workplace. These are only intuitive hypotheses about a sample of numerous personality characteristics identified through psychological research. Actual relationships between personality traits and industrial safety have not yet been systematically studied.

I hope this four-article series will serve two functions: a) to increase awareness and understanding of the role personality can play in injury proneness and injury control, and b) to stimulate the systematic empirical study of relationships between personality predispositions and voluntary participation in efforts to prevent unintentional injury.

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Dr. Geller and his partners at Safety Performance Solutions (SPS) help people develop, refine, and implement interventions that prevent workplace injuries. SPS is offering a series of seminars throughout 2004. For more information about these seminars, related books, training programs, video and audiotapes, and customized consulting and training options, please visit safety@safetyperformance.com or call us at 540-951-7233.

Note: If you are interested in participating in our ongoing research to study personality determinants of occupational safety, please contact Douglas M. Wiegand at dwiegand@vt.edu or (540) 231-8145. Or, log on to www.safetyperformance.com and view the link to the Safety Identity Questionnaire (SIQ) under "related links".