# Measuring Group Styles to Improve Team Outcomes

**Meghan K. Oliver**
Human Synergistics, Inc.
**with Tom Smith**

## THE CHALLENGE

Today's competitive economy presents unique challenges for organizations of all kinds. This is particularly true for organizations concerned with safety management: It has become even more critical that managers have the ability to manage for continual improvement. Unfortunately, safety managers have been slow to recognize that most safety problems, especially employee injuries, occur not because of carelessness but because of interactions of faults in the system. Dr. W. Edwards Deming called these *common causes* and estimated that 99 percent of all accidents come from the system itself.[1]

Work systems, even simple ones, are too complex for one person to understand, manage, correct, and improve. In addition to complexity, common causes of safety problems are often deep in the system, hidden from view, with causes and effects not closely related in time and space. Finding and fixing the cause is almost always beyond the capabilities of one person and requires an effective problem-solving team. Companies are fairly proficient at the technical or "hard" side of training, but evaluating and teaching the soft skills required for effective team problem solving remains the holy grail of a learning organization.

## SAFETY AND SYSTEMS THINKING

Tom Smith, a Safety Management Consultant with Mocal, Inc., has done extensive work with teams, leaders, and organizations to emphasize continual improvement and safety management. He has experienced firsthand the difficulty faced by teams whose members have not developed team problem-solving and decision-making skills.

"Most of us have been lucky enough to have worked on a team that produced outstanding results," said Smith. "Everyone worked together fluidly and constructively. People cooperated and examined solutions for a problem by building on each other's ideas. They experienced pride and joy when working with each other. The team looked forward to examining and learning more about the problem and developing an innovative, elegant solution. In the end, the team produced synergy."

Unfortunately, this kind of team experience is not the norm. "For every time this happened, you can probably cite numerous others where teams developed low-quality solutions subtly rejected by team members," Smith continued. "Dysergy was obvious and palpable; people showed up late for meetings or didn't show up at all. When team members talked to each other, telltale non-verbal signs revealed an obvious lack of communication. Team members ignored these symptoms and did the best they could. They became disengaged from the process and vowed never to work on a team again."

One of the biggest obstacles to teaching team skills is a managerial lack of commitment to development. Decades of research on human performance show that exceptional performance of any skill set

[1] Deming, W. E. (1986). *Out of the Crisis.* Cambridge, MA: Massachusetts Institute of Technology.

requires four hours per day of deliberate practice over a 10-year period.[2] When a team trainer at a Toyota plant was asked about his experience with the company's training program, he stated, "It takes seven years to train someone from the shop floor to be a good problem solver."

In spite of the documented importance of team building, many organizations do not make team development a priority. This is especially true in today's economy: When money is tight, training and development often fall by the wayside in favor of programs viewed as more critical. Training and development often takes an even bigger hit in safety management, where many managers mistakenly believe that individual worker behavior, and not system flaws, is the primary cause of work-related accidents.

Guided by this theory, many safety managers expend a lot of time and energy trying to change and control worker behavior. Their goal is to ensure that people comply with safety rules, regulations, and standard safety practices. Systems thinking would instead have managers ask, "How can we stop employees from being injured while working in the system?" Systems thinking will result in managers seeking answers to what is wrong in the system and then working to ensure people won't be harmed while working in it.

"This a much more complex problem than management assumes," Smith said. "Management's attitude is that safety problems can be handled merely by implementing the more mundane activities such as minimal safety training, inspections, investigating every single accident, close supervision, and incentive programs. None of these provides answers to systemic problems, which are responsible for the majority of injuries."

Safety managers face a threefold challenge in developing teams for effective systems thinking:

- how to evaluate people's soft skills for effective team participation;
- how to teach and enhance these skills so people can work effectively on a team; and
- how to ensure that teams will function constructively in the new systems-based model.

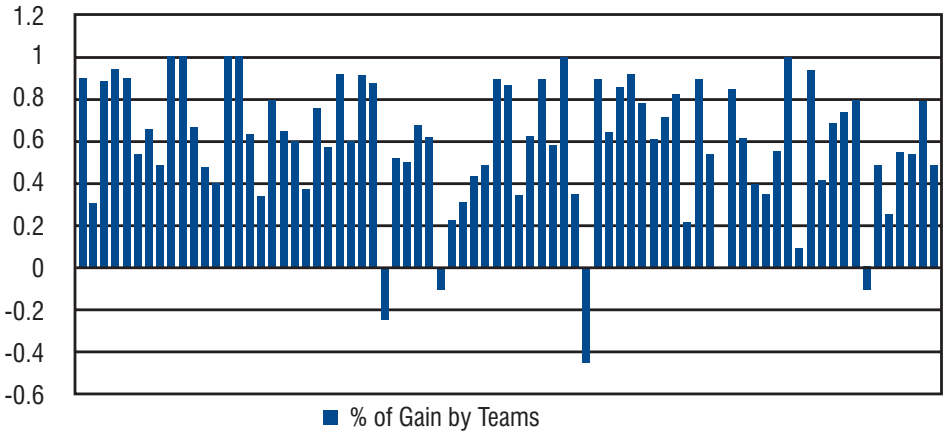
The ability to work both as an independent, self-disciplined worker and an effective team member is an extremely valuable skill. If companies can successfully train people for this soft skill, everyone wins: people become engaged in their work; quality, productivity, and safety outcomes will continually improve; and ultimately, customers will benefit.

## TEAMWORK: THE KNOWING-DOING GAP

Safety training changed in the 1980s with the development of a team-building simulation developed by the late Dr. J. Clayton Lafferty of Human Synergistics International. He was asked to help a Fortune 500 company create interest in its safety program. The company had all the elements of a traditional safety program, but the workers were not serious about safety. When Dr. Lafferty studied safety programs, he learned that employees viewed safety meetings at best as a time to get away from their jobs and at worst a time to catch up on their sleep. They even referred to them as "the great sleep inducer." Supervisors saw safety meetings as a net loss because they cut production time.[3]

[2] Pfeffer, J. & Sutton, R. (2006). *Hard Facts, Dangerous Half Truths and Total Nonsense.* Boston, MA: Harvard Business Review Press.
[3] Lafferty, J.C. A Personal Development Strategy. *Canadian Safety.*

**Figure 1: Percent of Gains by Teams on the *Fire Safety Situation*™**




After studying how safety programs were administered by management and perceived by workers, Dr. Lafferty came to an insightful conclusion: Workers felt little or no connection to safety programs, not because they didn't care about safety, but because of how it was managed. When it came to safety, management treated workers like children while expecting them to act as mature adults. To address this challenge and counter the culture it created, Dr. Lafferty developed a simple team-building simulation for a safety meeting. Believing in the intelligence of the average worker, the *Fire Safety Situation*™ required people to select and sequence a number of activities they might carry out to get three children and a puppy safely out of a burning house in the middle of the night.[4] People were asked to record their individual sequencing of each choice. Then they were assigned to a team, given some basic instructions on team dynamics, and asked to sequence the choices as a team.

The first benefit from the exercise was that employees willfully participated. Instead of a typical safety meeting, where they were lectured or told how to perform a job safely, for the first time they were asked what they thought. They had lively, interesting, and intense discussions about the problem. Employees consistently reported it as the best safety meeting they had ever attended. "Until this exercise, [the employees] were never given an opportunity to practice any kind of team skills," Smith noted. "That was always reserved for supervisors and managers, as if they were the only ones capable of solving problems. The simulations got everyone involved in a positive way."

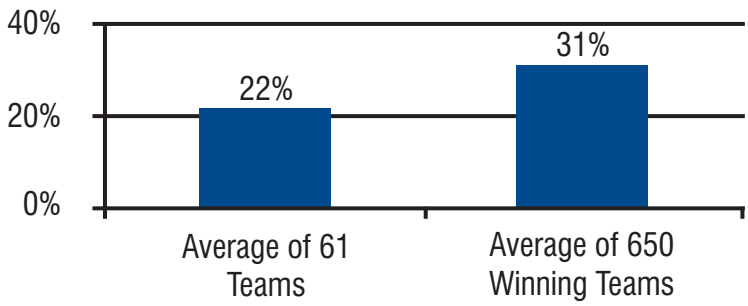
The second benefit was the ability to collect data about the teams' performance. Human Synergistics' team-building simulations generate valid numbers about the ability of team members and provide them with important feedback about their performance. These data were previously unknown and unknowable. The data allowed management to compare the team solutions to the individual solutions. The graph in Figure 1 displays results from an actual session. It shows the percent of gain or loss achieved by each team. The vast majority of the teams achieved gains and outperformed their individual members.

## GROUP STYLES: PRODUCING RELIABLE NUMBERS FOR MENTAL PROCESSES

While Smith's teams did achieve synergy, data on team building from Human Synergistics prompted him to dig deeper

[4] Lafferty, J.C. (1980). *Fire Safety Situation.* Plymouth, MI: Human Synergistics International.

**Figure 2: Average Percent of Gains by 61 Teams vs. 650 Winning Teams**




into the performance of those teams (Figure 2). "Dr. Lafferty's research had a database of 802 teams on one particular simulation," he said. "It showed that the average gain for 650 winning teams was 31 percent. The average percent of gain for 61 winning teams in my database was 22 percent. Although the data I had for the percent of gain by the safety teams was positive compared to the larger database, it revealed that they were not reaching their full potential."

In his search to determine why his teams were not performing at their full capacity, Smith again reached out to Human Synergistics and discovered the *Group Styles Inventory*™ (GSI).[5] Current Human Synergistics CEO Dr. Robert A. Cooke worked with Dr. Lafferty's Life Styles Circumplex to develop the GSI, a self-report paper and pencil survey, to help people better understand how group styles impact the performance of teams. They found that a solution is not effective without the support of those who must implement it. The formula for this is ED = Q x A: Effective Decisions equal the product of Quality times Acceptance. [6]

Teams can use the GSI to identify not only their group styles but the level of acceptance of the solution developed by those styles as well. The GSI gives individual members the ability to describe how they interacted with one another. The aggregate of the members' responses provides an overall picture of the group styles. The GSI gives people a tool to measure, visualize, and compare a group's thinking style to what has been determined to be an "effective group style" for solving problems. The GSI is based on solid research, and a number of studies have been conducted to ensure its reliability, validity, and relation of the thinking styles it measures to how teams perform.

The GSI is used to measure three general types, or clusters, of group behavior: Constructive, Passive/Defensive, and Aggressive/Defensive. Before the GSI was developed, most studies of group behavior focused on only one or two styles and how they related to problem solving. With the GSI, it was found that Constructive styles produce positive outcomes relative to the quality and acceptance of solutions developed by groups. Passive/Defensive styles are negatively related to the effectiveness of the group solutions. Aggressive/Defensive styles are unrelated to the quality of the solution but affect the acceptance of the solution negatively.

[5] Cooke, R.A. & Lafferty, J.C. (1989). *Group Styles Inventory*. Plymouth, MI: Human Synergistics International.
[6] Maier, N.R.F. (1973). *Psychology in industrial organizations* (4th ed.). Boston, MA: Houghton Mifflin..

Using the GSI, feedback about how people perceive their group process is translated and displayed on a circular graph known as a circumplex. The circumplex provides a highly visual representation of the group style. Figure 3 displays an effective group's circumplex. This is a composite of 10 groups that achieved a high percentage of gain on problem-solving simulations with a high commitment to their solution. An effective group is defined as a one with a high percentage of gain and high commitment to and acceptance of its outcome.

Applying hard data to the behavioral styles present in team problem solving provided Smith with information about team development he had never had before. "Using [the GSI] lets teams compare their styles to the effective styles and discover similarities and differences," he said. "This gives people information to ask if the group could perform better by thinking differently. Each person in the group can determine how his or her effort can contribute in a constructive way on future projects."

## LINKING THE GSI WITH TEAM PERFORMANCE

The real power of measuring the soft skills of teams is realized when the data from group performance on team-building simulations is combined with the GSI. The bar graph in Figure 4 represents the performance of three teams on two different problem-solving simulations.

It shows the percent gain compared with the average of the individual scores. The GSI profiles of each team are displayed above the graph. The GSI was completed immediately after the teams completed the team portion of the first simulation and before they were given the expert ranking. The blue bars on the graph represent a simulation on which 650 winning teams averaged a 31 percent gain. Team 1 barely exceeded that and the other two teams were well below it. The gray bars represent a simulation on which 244 winning teams averaged a 54 percent gain. All three teams were well below that average.

**Team 1** This team's GSI shows its dominant style is in the Aggressive/Defensive cluster. Its highest extensions are in the 8 o'clock Power and 10 o'clock Perfectionistic styles. The team has above-average extensions in the Passive/Defensive cluster and below-average extensions in the Constructive areas. This can accentuate the dysfunction of how the members work: Aggressive/Defensive team members may have pushed for their solutions while Passive/Defensive team members went along with the decisions but privately rejected them.

The team did achieve a 32 percent gain on the first problem-solving simulation, which is about average. But the members reported only a medium level of regard for the quality and acceptance of the solution they developed. Groups with this style fail to reap the benefits of the

**Figure 3: Composite Profile of 10 Effective Groups**

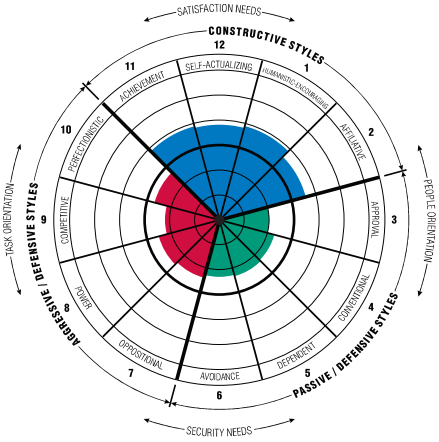
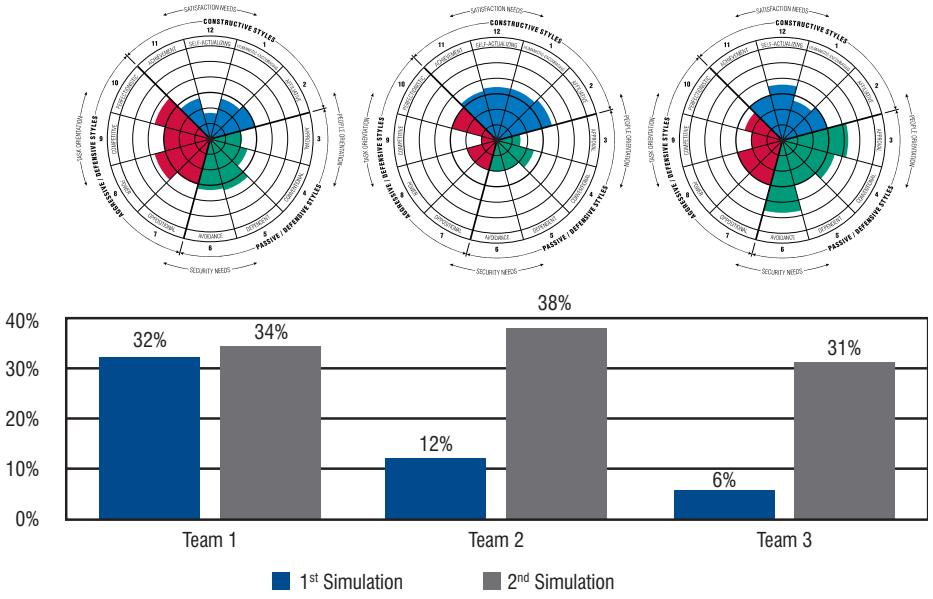





**Figure 4: Percent of Gain by Teams vs. Average of Individual Results**



knowledge of group members and tend to perform only as well as the most powerful members (who may or may not have a good solution). The team worked on a second simulation and achieved a 34 percent gain—well below the average gain on that particular exercise.

**Team 2** The GSI for this team shows the dominant styles are in the Constructive cluster. Groups with this style blend the interpersonal and rational abilities of its members. They achieve a balance between the concerns of the group members and the task at hand. They do a good job of getting all the issues and choices examined and keep sight of the goal they are working toward. Members build on each other's ideas and strive to have a dialogue, not just a discussion. The interaction between members is collaborative and leads to a positive outcome.

Although the team posted only a 12 percent gain, the team members reported a high level of commitment to its solution. On the second simulation, the team improved by 26 percent and achieved a 38 percent gain. The team also exceeded the best individual score by four points, allowing it to achieve synergy.

**Team 3** This team's GSI shows the dominant style is in the Passive/Defensive cluster. Teams with this style operate by choosing "safe" solutions so people will be in agreement. Members worry more about pleasing one another than building a solid solution. When this happens, the team may avoid conflict at the expense of honest examination of ideas. The team members become so concerned with everyone getting along that they don't share or question ideas.

This group gained 6 percent on the first simulation and reported only a medium commitment to the solution. On the second simulation, the team achieved a 31 percent gain. Without the GSI, the individual team members would not have known what they needed to work on to improve their team's outcomes.

The GSI provides much more information about the thinking and behavioral styles of the groups and outcomes as a result of these styles. "Linking the two sets of data provides powerful insight about the ability of the teams to apply their mental labor effectively," Smith said. "After [the teams] completed the first simulation, they filled out a GSI prior to being given the expert opinion. The GSI was explained to the teams and they completed the second simulation the next day. This gave the teams only a day to think about the feedback from their GSI."

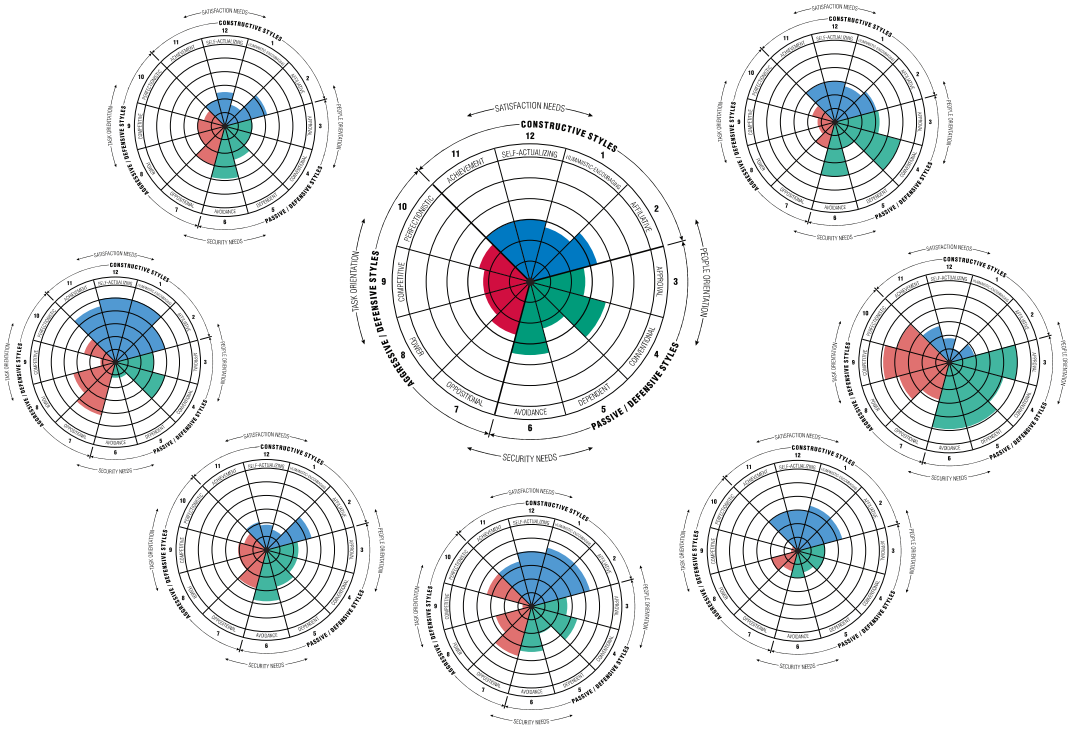
## VARIATION AND ITS EFFECT ON TEAM PERFORMANCE

Because the GSI uses the perceptions of individual members to complete an aggregate profile, there is generally variation in the individual team members' profiles. Figure 5 on the next page shows the GSI profile of one team surrounded by the GSI profiles of its individual members. The dominant style in the group profile is in the Passive/Defensive cluster, but there is significant influence from the Constructive cluster. Viewing the individual and group GSI profiles together shows a lot of variation relative to how individual team members perceived the experience.

"People from different functions have different viewpoints, which can be a blessing and a curse, and teams reflect the culture of the organization," Smith noted. "If an organization's management team is not committed to continual improvement, their thinking will affect the style of the team, and the GSI can expose it."

The individual profiles of five of the seven people in the group have high extensions in the Constructive cluster. But the two member profiles on the top right show dominant extensions in the Passive/Defensive cluster. This team performed above average on both problem-solving simulations with a 55 percent gain on the first and a 64 percent gain on the second.

**Figure 5: Team and Individual GSI Profiles**






On the first exercise the team matched the lowest individual's score of 28. (Remember that the lower the score on the simulation, the better the decision.) The team also reported high acceptance of the solution. On the second simulation, the team achieved a group score of 16, which exceeded the lowest individual score on the team by 47 percent. This is an excellent example of how a team working together effectively can outperform its individual members and achieve synergy.

This team went on to apply their problem-solving skills in actual business operations, according to Smith. "They took on a project and developed an idea to improve the safety, quality, and productivity of a welding operation," he said. "There was nothing wrong with the operation—they just believed they could make it better. It was estimated their idea would improve safety, quality, and productivity and produce a hard costs savings of at least $225,000 in one year!"

## TURNING DATA INTO KNOWLEDGE

Combining data from team-building simulations with the GSI provides valuable information about mental effort. Synthesizing the data presents valuable feedback about the quality of a team's outcome and what makes a team tick. Effective team problem solving is dependent on how people listen, support, and differ with each other, as well as integrating rational skills into the conversation to set a goal and determine the best alternatives for reaching it. This process requires discipline, but when done well teams achieve amazing results.

"The GSI gets the voice of the team members into the voice of the process," Smith said. "In this case the process is people getting together to work on dissolving everyday problems on the job. The GSI provides an operational definition of an

effective team so people on a team can gauge where the team is at and what it should do to improve. It gives a team a valid method to determine how it functioned. Without the GSI, team members are forced to analyze their group's performance without data or benchmarks."

Team problem-solving simulations coupled with the GSI give team members a way to practice their team skills in a low-pressure environment, without any "real" consequences for poor team performance. In addition, the circumplex and other graphs provide a highly visual representation of thoughts and behaviors that are often perceived as too abstract to measure. These graphs give people the ability to complete a critical analysis of the group outcome. They identify the group styles and how they impact the quality and acceptance of a team's solution.

Team performance and effectiveness have huge implications for organizations because most of the problems and challenges and problems they face will be systemic as opposed to local. Work systems, even simple ones, are always dynamic and changing. It takes people working together as a team to study, analyze, and then synthesize and dissolve system problems of quality, productivity, and safety. With the corrective feedback system of simulations and the GSI, organizations have a reliable method for turning data into knowledge and harnessing the true mental power of teams.

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*Tom Smith of Mocal, Inc. helps organizations increase the effectiveness of their management teams through continual improvement. For more information, visit the Mocal, Inc. website at http://www.mocalinc.com.*