

Charlie's Story

By Charlie Pellerin

Note: In the spirit of “there are no accidents,” about a month ago, my colleague, Sharon Gu, came from Beijing to assist me with a workshop in Pasadena for a NASA/Jet Propulsion Laboratory team. On Sunday, Sharon invited me to join her and some “respected consultants” for lunch and an afternoon at the Norton Simon, a wonderful art museum. Near the end of the day, I realized that I knew Harold and Erica as the authors of one of the most influential books in my journey into the overwhelming power of (social) context. Indeed, *Training Ain't Performance* was my first insight into the power of “environment” with the impactful story of “Harry's Diner.” Now, how this all began!

In the summer of 1990, the Chairman of Hubble's Failure Review Board told the US Congress that, after 15 years and billions of dollars, Hubble Space Telescope was useless for its primary objective, cosmology, as it could not image faint objects. Incredibly, he named the root cause as a “leadership failure.” (I think that with today's understanding, it would have been more accurately named a *flawed social context*.) And, I had led the Hubble team for nearly a decade! Interestingly, nobody blamed me, and I did not take this finding too personally, as none of us understood the relationship between social context shortfalls and technical failures. Moreover, I was totally consumed with managing the hostile aftermath of the failed mission.

Soon after, the Chairperson of the Appropriations Committee with oversight of NASA's budget summoned me and the NASA Administrator, Dick Truly, to her office. She was angry with me because about a year earlier she had asked, “Will Hubble telescope work?” What would you say if you were me? Would you say, “Maybe?” Actually I was not sure Hubble would work, because the most important technical requirement, sustained stability of 4 milli-arc-seconds (the angle that a 10mm pearl makes at a distance of 200 miles) could not be tested on the ground. Nevertheless, I said, “Sure,” because at that moment, I did not really have the courage to give any other answer. She then publically associated herself with the telescope.

Needless to say, she was furious with me following the Hubble failure and fully expressed this. As the meeting ended she put her finger to my chest, and stated, “There will never be an appropriated dollar for this telescope ever again,” and adding, “This is a nightmare that must go away.” Administrator Dick Truly reaffirmed her direction to me as we left the meeting.

Despite the adamant directive not to spend one more dollar on this humiliating project, when I returned to my office, I covertly “reprogrammed” \$60M determined to somehow get the telescope to work. Without fanfare, I assembled a team and quietly began work on a fix. This was not an act of courage; I had entered the perception altering state of 100% Commitment. (We teach how to enter this state in our workshops.) Consider this quote from Admiral Bill Halsey, “*There are no great men – just great challenges that ordinary men, out of necessity, are forced by circumstances to meet.*”

When we found a technically promising approach that looked like it would work, I went “public” with what I had done. Thankfully, nobody cared that I had taken an initiative that was only marginally legal, as they were so happy that a fix seemed possible. Wonderful how things work out! I was soon promoted to the top of NASA. (Isn’t it great that one can create a problem, then get rewarded for fixing it?) Truthfully, however, I hated the job as it was all about politics. My joy has always come from leading scientists and engineers in building things. I decided to leave. However, I was at a loss as to what to do. After some soul-searching, I accepted a position at the Business School of the University of Colorado (“CU”) as a Professor of Leadership. I wanted to understand the relationship between leadership and technical risk. I taught classes to undergraduates, MBAs and business executives.

At CU, I wondered how I might contribute to a field so many had already studied. Trained as an experimental physicist, I began to explore “human-physics,” human behaviors as driven by an invisible field, in a social context. The idea of an invisible field was familiar, as physicists work with Mother Nature’s four invisible fields. I thirsted for underlying principles. I began by recording the lists of “things you are supposed to do” that appear in popular “business books” on charts in my office. I then applied coordinate systems that physicists use, hunting for patterns. After a month or more, with no progress, I abandoned the effort.

The next morning, I picked up the newspaper and came across a Dilbert cartoon, saying “Every consultant makes his living with a 2x2 matrix.” I realized that I had been making things too hard for myself. I suddenly understood that what I was working on only required a simple X-Y (Cartesian) coordinate system. At that time, I was reading Jung’s writings (translated into English) on psychological development. He described building one’s personality on *innate* (i.e. present at birth) preferences for *information* and *decisions*. This was a true “eureka” moment for me. Information and decisions, input and output. This system was simple, and physicists love simple. (Einstein once said, “Everything should be made as simple as possible, but not more so.”) I used Jung’s insights to build a basic X-Y coordinate system, and dubbed it the “4-D System.” I began using it to analyze (simplify) otherwise mysterious social constructs into four Dimensions (Cultivating, Including, Visioning, Directing).

Two years later, I left the university and formed 4-D Systems, an organization whose purpose is to enhance team performance and leadership effectiveness, worldwide. Since its launch, we have had more than \$50M in sales, working with more than 1,000 teams. Today, 4-D Processes are used in more than 75 countries and my book has been translated into nearly a dozen languages. These are some applications:

- *Social Context:* Early on, I analyzed the social contexts of projects that were completely successful (e.g. The Hubble-class Gamma Ray Observatory) and failed (e.g. Hubble) and found that successful projects invariably filled all four Dimensions with more elements on the “Personal-side.” Failed projects had one or more unfilled Dimension. This was my earliest insight into the potency of social context, which I now call the Fifth Force.

- *Innate Personality*: We built a simple, 14-question diagnostic so people can find their innate personality foundation – useful to select work one is best suited to perform, and then, using the data, structure effective teams.
- *Culture Diagrams*: We also developed a 7-question diagnostic to diagram (inspired by physicist Richard Feynman’s elementary particle diagrams) and manage cultures, essential in competitions.
- *Project Mindset*: Projects, as they mature, must adopt processes that emphasize performance (Visioning) or cost/schedule (Directing). We have created simple methods that can ensure coherence across all stakeholders. Failure to do this can cause projects to be cancelled and get project managers fired.
- *Why do we say “leaders are born, not made?”* Workshop participants generate lists of great leaders’ attributes and characterize these as “skills” or “attitude.” What do the participants soon discover? That effectiveness is overwhelmingly about attitude. Yet, I remember that when I had attended leadership training, little was said about attitude. I suspect the reason was that they did not know how to deal with such a seemingly fuzzy notion and lacked an organizing structure such as the 4-D System to deal with whatever might emerge. Applying 4-D reveals two learnable, usable components of attitude: Expressed emotions, the core source of human energy, and Story-lines, which direct where this energy goes.
- *Eight Context-setting Behaviors (two per Dimension)*: I cannot fully explain these in this brief article. I can name them, however: Expressing Appreciation, Addressing Shared Interests, Appropriately Including Others, Keeping Your Agreements, Addressing Unfortunate Realities, Being 100% Committed, Avoiding Drama States, and Clarifying Roles, Accountability, and Authority. Everything we do is focused on behavioral change.
- *Multi-day Workshops*: Emphasizing experiential activities that help people habituate the eight behaviors.
- *Context Shifting Worksheet*: Applies all elements of the 4-D System in 60 to 90 minutes – structured creativity. The majority of our 4-D coaching sessions use this process and I demonstrate it “live” in our workshops. New insights on the part of the participants are common.
- *Online Assessment/Accelerators*: These are the most effective team and individual performance-enhancement tools in existence.
- *An Epiphany in 2008*: We discovered that the (fast) team version of the online tool boosted team performance an average of 4% in each use, while benchmarking progress – an incredible and unexpected boost in performance and competitive advantage.

- *Next Actions:* When I saw this result, I immediately took two actions: 1) I made all of our closely-held intellectual property available to all on our website, as this “behavioral change” tool was too important not to share with the world; and 2) I began writing *How NASA Builds Teams* which Wiley published a year later.
- *Unexpected Special Recognition:* I observed the successful Hubble servicing mission while I was at CU. Although I was gone, I was not forgotten. NASA awarded me a very rare second Outstanding Leadership Medal for “Inspiring the Hubble team to overcome the setback of the flawed mirror, and creatively finding the resources for the servicing mission to succeed.”
- *Finally Something I Scarcely Could Have Imagined:* I was recently featured in *National Geographic’s* “Cosmic Discovery,” celebrating Hubble’s 25th anniversary of flight operations! In the end, Hubble’s flawed mirror was not so bad after all. (While I am not at all religious, I am surely blessed.)