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*Every month **Attractors** shares tips and tools from human systems dynamics.*

*In this month's edition, Glenda Eoyang reflects on*

***DESCRIBE VS EXPLAIN***

Click and Clack know the power of explanation. Every Saturday morning on NPR, Tom and Ray Magliozzi (known by their friends as Click and Clack the Tappert Brothers) talk about cars on Car Talk. Mr. Helpless Driver calls to DESCRIBE how his pile of junk is behaving badly. Tom and Ray EXPLAIN what might be causing the problem and recommend (not too gently) what Helpless should do to get back on the road.

With practice and sufficient attention, anybody can describe a problem, but an explanation requires more. To generate an explanation, Tom and Ray depend on background knowledge, a set of assumptions about how cars work, hypotheses about why they work, practical experiences about what is likely to go wrong, and how broken cars can be fixed. Explanation requires a mental model that is coherent and consistent with experience.

One of our HSD lessons is:  
Move beyond description to explanation that informs action.

Description isn't bad, but it can be limiting. I met with Herman (not his real name) last week. He described the problem of his team, "We just don't know how to communicate with each other." This was a description of a problem, but it was not an explanation. What is the real difference?

<b>Description</b>	<b>Explanation</b>
Perception	World view
Looking back	Looking forward
Measures of change	Reasons for change
To name	To act
On the surface	Under the surface
Categories	Mechanisms
What is?	Why is?

When Herman chose to describe his situation as a failure to communicate, he was looking back and naming his superficial perception of "what was" (at least in his view). The description wasn't a bad thing, but, depending on the power and clarity of the perception, it can limit options for action. From this description, his only choice was to improve communications. What that meant and how to go about it was still a mystery.

Herman went even a bit farther to give what he considered to be an explanation. "We're all stars in our own right, and we don't know how to work as a team." Certainly this includes reasons and looks beneath the surface behavior, searching for a "why?" It is an explanation, but it is not an explanation that informs action. Why? Because there is no

way that Herman can undo the star-studded history of his team and convince them they are not individual winners. This explanation gives him no options for action.

As many of us (and certainly our clients) do, Herman had chosen a description and an explanation that gave him absolutely no choices for action. He presented the problem to himself and to me in a way that made it completely intractable. He was stuck.

The purpose of HSD methods, models, and tools, is to get people out of such sticky places by helping them move beyond mere descriptions into explanations that open options for action. What did this mean for Herman?

I asked some questions:

- When do you notice the bad communication most?
- Is the bad communication always the same?
- If it changes, what makes it better or worse?
- What happens when someone new joins the group?
- What happens when someone leaves?

I didn't know what specific questions to ask because I didn't know this particular pattern. But I did know that it would have something to do with habitual similarities, differences, and relationships because that is what a pattern is.<sup>1</sup> [ 1 ] As Herman answered my questions he began to focus on team meetings, where people didn't listen to each other because they were all talking at the same time. (Now we are getting to an explanation that leads to action.) Maybe, if we could get them to talk one at a time, they'd be able to share information more effectively. I suggested that they practice using a talking piece—whoever holds the talking piece can talk, and everyone else must listen. (This action is pretty obvious, once the explanation emerges.)

Is this the only description and situation Herman might have focused on? No, the team demonstrated many non-productive behaviors. Herman could have described any other as a starting place.

Is "talking all at the same time" the only explanation for their inability to communicate? No, the team practiced many equally non-productive behaviors. Herman could have explained it as coming unprepared, having unstructured agendas, competing priorities, or any other reasonable cause. Any of these explanations would have suggested a reasonable—though different—course of action.

Does it matter which description and which explanation is the focus? No, as long as the description is one that leads to an explanation that leads to action AND as long as Herman doesn't stop testing his explanations against reality by doing the action and watching the reaction. If the talking piece doesn't work, then another action generated by the same explanation might. If that explanation doesn't seem to hold, perhaps there's another explanation for the description. If none of the explanations for a description works, then perhaps another description will be better.

It is significant to remember that explanations of complex phenomena do not imply predictions. Complex systems are radically unpredictable, but thoughtful explanations can suggest actions that influence the future, and careful observation completes the learning loop. As long as Herman engages in a process—by himself or with a colleague—to move beyond description to explanation that informs action, he will eventually influence the patterns of interaction to shift them from incoherent and unproductive to coherent and productive.

Click and Clack play with descriptions and possible explanations. They tease their callers into seeing and saying what feeds into their automotive expertise. The process is fun, and it usually ends up with a clear and satisfying answer. Sometimes, though, time and/or patience runs out and they have to send the caller to a local garage. There, the driver will find someone who specializes in describing, explaining, and taking action to repair cars. What the auto mechanic does is not a mystery. She is simply working in a world where her explanations have repeatedly proven to inform effective action. She understands that success depends on a constant cycle of observation (description), meaning making (explanation), and action. The same can be said for HSD Practitioners.

Other people who apply complexity to human systems often use the ideas just to describe phenomena. Fractals, attractor patterns, tipping points can be used merely as descriptive applications of complexity. HSD's deeper reliance

on the science and math, however, lead to explanations that open more naturally into options for action. Conditions for self-organizing, emerging patterns, degrees of constraint are explanations of underlying complex dynamics, and each one of them can inform simple and powerful action.

Join us to learn more about how to see and influence patterns in your crazy and chaotic environment! Next month we'll explore the distinctions between *complex* and *complicated* patterns. Have a great month.

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