

Nygaard Notes

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Concepts of Systems Thinking

It was nearly ten years ago that I first attempted to come up with a list of rules, or characteristics, of Systems thinking. I call it a Systems Orientation. I've been thinking lately about the power of Systems thinking, and plan to write more about it and how it relates to the current highly-volatile, highly-stressful political environment in which we find ourselves walking, talking, breathing, and thinking.

Since this issue of the Notes is all about recognizing the power of Systems, I thought it would be a good idea to revise and re-publish the list. Because it is so different from the Dominant Thought System—to which it is a challenge and a threat—I present the following features in a “compare and contrast” format. I'll be contrasting the Dominant Thought System, or DTS, with a Systems Orientation, or SO.

Concept #1: Holistic

SO says that understanding is only possible by viewing the whole. DTS thinking tells us that we understand things by getting up close and examining the details.

Concept #2: Function Over Appearance

SO is based on function: What does a thing or an action do? What is it supposed to do? How does it interact with and affect its surroundings, and vice versa? DTS is based largely on description: Where is it? How big is it? What color is it? Et cetera.

Concept #3: Outcomes Over Intentions

SO is interested in outcomes rather than motivations or intentions. Actions and policies are judged not by what the actors were trying to do; rather we look at what actually happens when an action or policy plays out in the real political, social, and biological worlds. DTS is highly individualized. That is, things happen because individuals *make* them happen, and they make them happen because they *want* them to happen. DTS is more concerned with what someone was *trying* to do than what happened when they did it.

Concept #4: Conditions Over Cause

DTS believes in simple causation. It's a world in which “Action A” leads directly to “Outcome B.” The SO world is a more complex place, a place in which things change due to changes in conditions that then give rise to new outcomes. There is no single “cause” of the things we see. Things change little by little until something comes along and adds to existing, ready-to-change mixes of things and tips them over into transformation. When conditions change, some things become more likely to occur and other things less likely.

Concept #5: Everyone's Responsible, But No One's to Blame

This is a sort-of corollary of Concept #4. SO tells us that big changes cannot be caused by any one person. Yet, big changes happen all the time. How to make sense of this? The answer presents itself when we introduce the idea of *collective responsibility*. That is, when we see something changing, we know that many individual actions created the conditions that led to that change, but can't know which *specific* action triggered it. All of our actions, combined, lead to the world we see.

Keep these concepts in mind as you read the rest of this issue of Nygaard Notes. ◆

Greetings,

It was nearly ten years ago that I first attempted to come up with a list of rules, or characteristics, of Systems thinking. I call it a Systems Orientation. I've been thinking lately about the power of Systems thinking, and I've been thinking that the increasing acceptance, and adoption, of this different way of understanding the world poses a challenge to the Powers That Be.

How big a challenge, I don't know. But my guess is that it's a very big challenge. Time will tell.

This issue of the Notes looks at several areas where the influence of Systems thinking is quite prominent. Since almost nobody *says* they are using Systems thinking as they go about their business, I thought I'd use this issue, and maybe the next, to point out what it is that we're seeing when a new way of thinking starts shaking things up.

Systematically yours,
Nygaard

Attribution Science and Systems Thinking

In Nygaard Notes #695 I talked about a relatively new discipline in the world of meteorology known as Attribution Science. It's a good example of the increasing adoption of Systems thinking in U.S. culture.

I had noticed that, more and more often when an extreme weather event—a heat wave, a drought, a wildfire, hurricane, tornado or flood—shows up in the news, people want to know if “climate change” caused it.

But, I said, the question “Did Climate Change cause today's weather?” is the wrong question to ask. I called on The Union of Concerned Scientists (UCS) to explain why:

“When scientists investigate climate change's effects on extreme events, *they are not asking whether climate change caused an event.* Instead, they attempt to

determine whether and by how much climate change *has affected the likelihood or intensity of an event.*”

Recall Systems Concept #4. That's the one that says that there is no single “cause” of the things we see, because the world is a complex place in which things change due to changes in conditions that then give rise to new outcomes. And that, when conditions change, some things become more likely to occur and other things less likely. Just like Attribution Science says.

I was fortunate enough to be exposed to Systems thinking in my studies of family systems many years ago. But the basic Systems orientation, which can be thought of as the “operating system” of environmental science, had been around for many years before that. Attribution Science is a logical outgrowth of that biological/ecological approach. ♦

Linguistic Pragmatics and Systems Thinking

Another example of the increasing adoption of Systems thinking in U.S. culture is a linguistic sub-specialty known as Linguistic Pragmatics, or LP. I can't imagine that many people have heard of this academic concept, so allow me a humorous anecdote to begin to explain it.

For health reasons I exercise a lot, and sometimes I go to a gym to work out. After the snow started falling a few months ago, a sign appeared just inside the entrance to my gym. In bold letters it said: “Wipe your feet!” So I

went up to the service desk and asked, “Do you really want us to take off our shoes and socks and wipe our feet when we come in?” Everybody thought that was pretty funny—or at least I did—and nobody needed to know that I was relying on one of the principles of an academic discipline known as Linguistic Pragmatics to generate a bit of levity.

Linguistic Pragmatics looks beyond the literal words we



→→ use to communicate, aiming to understand why it is that what we say is often different than what we mean, and what we mean is not necessarily what our listener understood. In the above example, I knew perfectly well that they wanted us to wipe our shoes, even though they said “feet”. I just thought it would be funny to pretend that I didn’t. (Not everyone will think this is funny, of course. That is also funny to me! But I digress...)

The MasterClass website succinctly describes LP like this: “Pragmatics is a field of linguistics concerned with what a speaker implies and a listener infers based on contributing factors like the situational context, the individuals’ mental states, the preceding dialogue, and other elements.”

In other words, LP looks at how we use language to communicate in the real world. It emphasizes context. Four types of context, specifically. Namely:

- * Physical Context: Where does the conversation take place? What else was is going on as the conversation takes place?
- * Epistemic Context: This is the stuff that you know or believe, and that your listener knows or believes, before you say anything.
- * Linguistic Context: What else is being said? How are you saying it?
- * Social Context: Who are you, and who is your audience? Are you talking to your best friend, or your boss? Are you in the locker room, or outside your church?

Let’s take a look at Donald Trump’s infamous speech of January 6th 2021, using Linguistic Pragmatics to help us understand what was happening at the nation’s Capitol that day.

It’s highly unlikely that The President has heard the term, but in his speech he was relying on Linguistic Pragmatics to not only incite the crowd to wreak havoc, but to avoid being held accountable for doing so.

Recall that the Dominant Thought System is linear, emphasizing simple one-way Causation. For people who think like this, Mr. Trump could only be guilty of inciting violence if he directly told the crowd to riot. But Linguistic Pragmatics, reflecting the thought

processes of a Systems Orientation, tells us something different.

It tells us to back up and look not only at the words, but at the context in which his words were uttered. The Physical Context: He was speaking in the Ellipse, just south of the White House. The Epistemic Context: Before the President said a word, the crowd believed that he, and they, were victims of a system rigged against them. The Linguistic Context: The President said, “If you don’t fight like hell, you’re not going to have a country anymore.” The Social Context: Trump has said “I am the chosen one.” And some, if not most, of his followers in the Ellipse that day appeared to believe him.

For people whose thinking is based on the Dominant Thought System, it’s easy to get caught up in the role of the individual actors that day. More than 1,000 people have now been charged in relation to the insurrection. And the fate of the most prominent among them—President Trump—remains to be seen.

But if our thinking is oriented to Systems, the guilt or innocence of these individuals is of less importance than the questions that present themselves when we look at the context in which the President spoke. Questions like:

- * What actually attracted these people to the Capitol that day?
- * What leads them to believe that “the system” is rigged?
- * What do they think it means to “have” a country?
- * What exactly is it that they are willing to “fight like hell” to keep?

Remember the words of the scholar and activist John A. Powell of the Othering and Belonging Institute, who tells us “When societies experience big and rapid change, a frequent response is for people to narrowly define who qualifies as a full member of society.”

Almost every word that comes out of the mouth of Donald Trump is understood—by nearly everyone, I think—as contributing to narrowing the definition of who should be considered Us, and to expanding the definition of who should be considered the nefarious and threatening Them. An understanding of Linguistic Pragmatics helps us to understand this. ♦

Public Health and Systems Thinking

We've looked at two examples of the increasing adoption of Systems thinking in U.S. culture: Attribution Science and Linguistic Pragmatics. Another, more well-known example is Public Health.

The recent (ongoing?) pandemic got a lot of people thinking about public health. Including me. I wrote a piece in May of 2020 headlined, "What Is Public Health?" And I began with a good basic definition from The National Conference of State Legislators:

"Public health is the science and systems designed to create community, statewide and nationwide conditions that promote health, prevent disease and encourage healthy behaviors across the entire population. Good health results not only from proper medical care but also from efforts to craft and implement public policies and programs to protect and improve the health of all people. Examples of public health efforts include educating the public about healthier choices, promoting physical activity and fitness, preventing disease outbreaks and the spread of infectious diseases, ensuring safe food and water in communities, preparing for emergency, preventing injury, treating water with fluoride for oral and dental health, and creating smoke-free environments and discouraging tobacco use. Legislators have policy options at their disposal that can promote healthy behaviors and change conditions—social, economic, and environmental—to improve the health of the entire population."

Public health workers talk about what they call the Social Determinants of Health, which are defined as "the conditions in which people are born, grow, live, work and age that shape health." The Kaiser Family Foundation points out that "Addressing social determinants of health is not only important for improving overall health, but also for reducing health disparities that are often rooted in social and economic disadvantages." That's the beauty of Public Health: It focuses on *conditions*, which leads us to look at how people are living, which leads us to look at social justice as fundamental to the health of a community.

In contrast with the Dominant Thought System, which is narrowly-focused and individualistic, public health thinking is broad-based and social. It's holistic, seeking to understand the nature of the conditions that make people sick. It focuses on how to prevent illness rather than on who to blame for already-occurring illness. It relies on collective responsibility for illness, and collective action to prevent it.

An individualized health system offers much to those who can access its wonders. A Systems-oriented health system offers those wonders to us all. By taking a "We First" rather than a "Me First" approach to disease and trauma, Public Health expands the number of people considered to be Us and reduces those considered Them. That's the power of a Systems Orientation. ♦

"Quote" of the Week: *"The Proactive Repair of Racial Subordination"*

The California Law Review last year published a remarkable paper by Stanford Law professor Shirin Sinnar entitled "Hate Crimes, Terrorism, and the Framing of White Supremacist Violence." It's an amazing piece, as it discusses how we talk and think about... well, about exactly what the title says. Which is exactly what I've been talking and thinking about lately in Nygaard Notes! I'll have more to say on Sinnar's paper before too long, but for now I'll just offer as our "Quote" of the Week this simple sentence, found on page 49 of the 77-page work:

I adopt a conception of racial justice as including not simply the provision of formal legal equality but also the proactive repair of racial subordination and the promotion of structural reforms that enable all racial communities to thrive.

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