

Understanding Systems, Designing Behavior Change

BY CAMERON D. NORMAN 15 DEC 2014

When you understand a system, you will be able to transform it, explains expert on systems thinking, Cameron D. Norman. This also applies to human systems that are rarely straightforward and predictable. By Cameron D. Norman PhD MDes, Principal, CENSE Research + Design, Senior Researcher, Ivey International Centre for Health Innovation, Ivey Business School, Western University.

Social psychologist Kurt Lewin once said, “There is nothing so practical as a good theory.” It is certainly true that theories help explain why we do things and shape the way we envision behavior change. A look at the literature on behavior change reveals thousands of

case studies and experiments on motivation, persuasion and the art of the “nudge”, reflecting the science of how individuals change.

But for brands hoping to drive behavior change at scale, systems thinking provides a more potent set of not only theories, but also models and tools that help us understand how collective human behavior is shaped by what’s happening around it.

That’s because our individual actions are, to some degree, guided and constrained by the systems in which we find ourselves embedded. Such systems might involve job roles and organizational structures, social norms, technological interfaces and physical architecture.

So if one wishes to motivate change, the best way to see the power of systems at play is to change one key aspect of that otherwise-stable environment. Take the modern school classroom. What happens if you remove desks and straight-back chairs and replace them with beanbag chairs? Or just sit on the floor? Or have the instructor sit on the floor?

Regardless of motivation, skills and abilities, these changes will influence the collective experience in ways that could be profound or subtle, irrespective of a student’s motivation to learn. The change itself produces a change. Systems thinking allows us to contemplate the relationships and structures that shape behavior and experiences within a system. Only then can we design ways to truly make them more useful.

Achieving purpose

Every system has a purpose, and the first step in systems thinking is uncovering what that purpose is. Sometimes the purpose is unclear, or there may be more than one. What we know for sure is that knowing what a system is all about is key to understanding what happens within it. One way to uncover and articulate purpose is to have people visualize their systems. What’s included and emphasized in the visualization (and the relationships that are represented) is instructive and can offer insight into the many ways systems are experienced. Systems are neither “good” nor “bad” – they are just more or less likely to achieve their purpose.

Visualizing a system highlights another key systems concept: boundaries. Boundaries define a system's limits, along with the space in which human activity takes shape and new behaviors emerge. To draw on our classroom example, the boundaries might include questions about who gets to be in that classroom (and who doesn't). Where does learning take place? What roles determine how people interact with one another?

For example, school janitors use the classroom when cleaning and maintaining it, but do they influence the experience of student learning enough to include them in the system? Probably not.

Designing systems through emergence

As one would expect, human systems are rarely straightforward and predictable, and all complex systems have numerous channels of information and activity interacting at multiple levels, with competing demands in a specific context.

Our families, workplaces and marketplaces often reflect these qualities but while we can't control complex systems, we can influence them. Dinner parties provide great examples of complexity in action. We may have no precise idea what will happen at a particular party, but we can create the conditions through which people are more likely to enjoy themselves. We might conclude that food and drink is important, and that a space conducive to conversation would make sense.

But what about the exact mix of food (spicy? vegetarian? small bites?), space (patio? pub? ballroom?) and people (co-workers? family? strangers?) will produce is uncertain. These elements are all called attractors, or artifacts in the system that stimulate activity that organizes behavior. Good hosts pay attention to these attractors and modulate them (adding more food, turning down the music) in a way that makes for good parties.

The same approach can be taken with any system. By mapping it out, determining its purpose, setting the boundaries and stimulating positive attractors, you'll begin to transform it. This is true whether they are lessons learned in a classroom, conversations at a dinner

party or product choices in the marketplace.

SYSTEMS THINKING