Seeing Differently: Welcome to my OCD World

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I teach in the OBC (Organizational Behavior & Creativity) group in the Foisie School of Business at Worcester Polytechnic Institute (WPI). The majority of my teaching consists of leadership and interpersonal skills classes for MBA students. At WPI, those students are mostly STEM (Science, Technology, Engineering, Math) professionals. Over the years I have come to think that a large part of what I do is to help them see the world differently. Allowing us to see the world differently is also one of my ambitions as an artist, but because I teach in a professional school, for my students the way of seeing differently must also translate into acting differently. So not just any difference will do, it is a particular way of seeing the world differently.

My STEM students have a way of making sense of the world that is based in the primacy of rational analytic thinking, and is in often dominated by a hidden model of the world that is based in static equilibrium models – a Newtonian physics understanding of the world if you will. However, the social world tends to behave more like over-determined, context-dependent, dynamical (non-linear, & adaptive) systems. When the very rational analytic thinker applies their tacit assumptions about how systems work, they tend to be very disappointed because their models are wrong and over-determined, context-dependent, dynamical (OCD) systems don't behave like they expect it to behave. This makes them both not very good at successfully acting within those systems, and very frustrated. To leverage all of their analytic talent and become more successful in the social world, they need to shift their underlying (and generally completely implicit) model of what sort of system it is.

As an example, consider the organizational behavior literature on decision making. There are many prescriptive models of rational decision making that offer a process that objectively uses logical reasoning to consider evidence and reach a rational decision. This is often contrasted with the subjectivity and bias of when we act based upon intuition and gut instinct. However, we also recognize that the garbage can model (Cohen, March, & Olsen, 1972) of decision model does a much better job of describing how decisions are actually made in organizations. The rational decision making model is based in a Newtonian world. It doesn’t change during the time we engage in the decision-making process. Our observation of it doesn’t change it. It is like a set of balls on a billiard table and after we carefully consider what shot to take, we can then step up and strike the ball, which will then behave in the exact way we have predicted if we execute our shot perfectly. And while billiards is a good example of a Newtonian model, organizations are not. The problem is that our students expect and to some large degree deeply desire that organizations and the people who constitute them will behave like a game of billiards. Of course, if we are to extend our analogy, in the billiards game that organizations really look like, the table is not flat, the game is taking place on a ship pitching wilding in a turbulent ocean, and everyone is striking
the balls at the same time as often as they please, each with their own particular goals in mind. In this world, our poor analytic rationalist has been blindfolded and given “a cloth untrue, a twisted cue, and elliptical billiard balls” (William S. Gilbert). It is no wonder that they are not successful and frustrated.

The desire to find models that describe the social world is understandable. (I would also suggest Isaac Asimov’s *Foundation* series as a cautionary tale of what that might look like.) I would argue that we tell stories about our world for that very reason – they offer a narrative model of how some aspect of the social world works. But those stories also recognize that the causes are over-determined, the story occurs within a given context, and a good story includes the sort of non-linear, unexpected twists and turns of a dynamical system. Given the incredible advances brought about by sciences and engineering creating models of physical systems, it is no surprise that we would look to do the same for the social world. In the late 19th century, a variety of scholars worked to create a mathematical foundation for economics and they used the tools available at the time which were primarily based in Newtonian style static equilibrium models (Beinhocker, 2007; Mirowski, 1991). This idea spread throughout the social sciences, but largely without incorporating the more recent modern mathematics that might better model the OCD social world.

To some this would imply that social science should adopt and adapt the modern mathematics of complexity, stochastic processes, and other recent advances. Although I think that is an interesting academic goal, I also find it problematic for two primary reasons. The first is that we simply don’t have the quantity or quality of data needed for the models, nor do we even have any agreement on what that right data is or how we might possibly capture it (the real problem with big data social science in my view). The second is that the really important thing is our intuition about the model and even my STEM professional students have not internalized the mathematics that might describe OCD system to the degree that they have any sort of reliable intuition about such systems. If you’d like a small example, spend some time with simulations of self-organizing systems (e.g. Resnick, 1994) and see just how non-intuitive the behavior of the system can be and how long it takes you to develop any sort of reasonable intuition about how changing parameters will effect the results.

We might also turn to the humanities and arts that have a long tradition of working with the complexity, paradox, and contradictions of the OCD social world. The humanities and arts teach us to complexify rather than simplify, to look at a multiplicity of perspectives including looking at emergent systemic issues and the historical and contextual factors involved. The underlying models are multiple and diverse, even within individual disciplines. The issue that I see with turning to the humanities and arts is the tendency to focus on analysis and understanding and often minimize or even ignore the implications for action. Teaching within a professional school, I feel an obligation to give action equal if not more emphasis. We might also turn to design approaches, which can do an admirable job of balancing analysis of an OCD world with action. However, bringing design approaches to organizations is still in its early days and many important issues have yet to be addressed. How does one design an organizational culture? (Is that even possible?) What does it mean to design leadership? How is designing organizational strategy different from how organizations currently make strategy?

Making the shift to having a better underlying model of our OCD world is fundamentally difficult. The thing that makes it difficult is that we have to let go of our existing mental model of the world and for most of us, we are our mental models – so letting go of those models means letting go of an essential aspect of our identity (cf Taylor, 2015 chapter 7). This is especially true for my STEM professionals who tend to have a large part of their identity wrapped up in conceptions of rational analytics and technical expertise. Making it
even harder, my colleagues in other disciplines within the business school are re-enforcing the underlying Newtonian model of the world as they teach the analytic tools of the business world such as being a six sigma ninja, classic economics, and consumer behavior. All of which is not to say that those analytic techniques are not useful – they have proven their usefulness in the way these modern analytic techniques have dominated so much of our world (McGilchrist, 2009).

The world of art and aesthetics is not usually very interested in mathematical models of systems. After all, humans used art to make sense of our world long before anyone attempted to model it. There are cave paintings that date back tens of thousands of years, while Newton and Leibniz only invented modern calculus less than four hundred years ago. Why should the established master pay attention to the feisty young newcomer? Because, I – and maybe you do, too – live in that feisty young newcomer’s world. I live in a world of rational analytics based in a Newtonian model of reality. But, I also live in an OCD social world and I think we all need all the help we can get with that.

References