

**COMMUNICATION COMPLEX:
AN APPLIED ELABORATION OF THE COMMUNICATION PERSPECTIVE**

John Parrish-Sprowl, PhD
Global Health Communication Center
Communication Studies
Indiana University Purdue University Indianapolis

Susan Parrish-Sprowl, PhD
Parrish-Sprowl and Associates, Inc.

Three issues are important to all CMM practitioners: accessibility, buy in, and utility. In other words, the question is: how do we enable people to understand CMM without teaching a full blown course, get them to believe in its power to help us craft better processes, and do so in a way that is satisfying for all involved? In our work, we have found this to be a persistent challenge. When in conversation with others who also practice a communication perspective, we find that we are not alone in facing these issues. Our approach to navigating these three concerns emerged from an ongoing attempt by each of us, in our respective spheres of practice, to find functional conversational resources that enable others to engage in practices that help build better social worlds. This journey has produced a name, Communication Complex, a restorying of a communication perspective (without losing earlier versions), and a thorough integration of Interpersonal Neurobiology (IPNB) and neuroscience with the communication perspective. We have found this framing effective in facilitating accessibility and buy in with a wide array of audiences, and we regularly receive positive feedback regarding its utility. We offer it up for discussion in hopes that it sparks some good stories among us this weekend.

This conversation will be structured in three parts. First, we will offer a brief history of the name along with an alternative story of intellectual framing. Both have been done expressly to address issues related to accessibility and buy in. After some discussion of this, we will turn our attention to the IPNB and neuroscience aspects of ComComplex to foster a discussion of what we label embodied social construction. Finally, we will highlight some of our engagement in projects as a way of launching a discussion on utility. We expect others to share their stories here as well.

Communication Complex: An Accidental Name

In December of 2009, John was invited to participate in what WHO refers to as an informal consultation regarding aspects of communication and health. To begin the meeting, Mike Ryan, the Director of the Global Alert and Response (GAR) unit of WHO at that time, made the observation in his presentation that “Our approach to communication has been too simplistic.” His remarks were designed to frame our consultation as we explored WHO approaches to persuading people to behave in ways that are both healthy and helpful, with the aim of preventing and/or mitigating the impact of disease outbreaks.

Three months later, John was invited to participate in a meeting at the European Center for Disease Prevention and Control (ECDC) focused on developing a research agenda for health communication and communicable diseases. In addition, he was asked to provide one of 5 formal presentations that would frame the meeting. Now he had a practical problem: How could he move the conversation regarding health communication into a more CMMish direction, given the need for a more robust understanding of communication as expressed a few months earlier in Geneva? His talk (with PowerPoint, of course) was restricted to 15 minutes and was to be presented to an audience that included very few people with a background in communication theory and research (most were MDs). To address this need, he created a slide that juxtaposed the quote from Mike Ryan with one from Barnett Pearce from *Communication and the Human Condition*: “Communication: More Complex Than We Had Thought.” This phrasing so resonated with the audience that they included it in the executive summary of the report:

http://www.ecdc.europa.eu/en/publications/Publications/1012_MER_Developing_health_communication.pdf

As a result, we have continued to use the term to title our approach to an embodied communication perspective.

Restorying a Communication Perspective: Quantum Science

Barnett cast CMM as an interpretive and a critical theory. Both stories are good and we like them and use them. However, in the past few years both of us have worked in some area of the health care industry. In that sector, the story of science is nearly always the preferred story. We believe that CMM can be told as a story that emerges from scientific thinking. To do so, we turn away from classical or Newtonian physics to the story of quantum. From this perspective, the story of social science as it has been practiced, ironically, turns out to be a less robust scientific explanation for communication than CMM. In turn, a communication perspective makes a much better quantum science story when enmeshed with neuroscience in what we term embodied social construction. This is ComComplex and it has enabled buy in with people who favor stories of science over interpretation.

In this story, communication complex grows out of the movement towards quantum explanations for the physical world and is part of the intellectual history that emerges in the work of Max Planck and Albert Einstein. Communication, as a function of the electrical and chemical processes in embodied brains, occurs at the quantum level, not simply at the macroscopic level that we see when we talk with each other. This is why communication theory that is derived from the macroscopic view, much like classical physics, cannot account for actions in the same way as quantum explanations. As such, macroscopic explanations struggle to reconcile the logic of that approach (linear, systematic analysis) with communication phenomena that function in a nonlinear manner that defies such logic (much like quarks).

Quantum physics posits that all things in the universe are systemic and always in motion. While much of the process of the physical world operates in patterns, new emergent possibilities are constantly happening. Such perturbations have the ability to lead

to small changes that can have the potential for large systemic effects (think of relatively new diseases in humans such as HIV or Ebola). Communication, as conceptualized in CMM, exhibits quantum properties. Quarks can be in two places at once and can move from one place to another without traveling the space in between. In conversational space, a person can be in two or more conversations at the same time. For example, I can be engaged with the TV and talking about a different topic with a person in the room, and in yet a different conversation with another person in the room, and in yet another conversation in my mind with someone thousands of miles away. We can be in a current conversational episode where we are age 15 or 50 and a traumatic conversational episode where we are age 7 at the same time. In conversational space, we can talk about a person taking up too much space, or have the experience of an awkward conversation slowing time down and a great conversation speeding time up (e.g. where did the time go?). We can go from a happy exchange to an argument and back again seemingly without transition. These are just a few examples of how we might think about communication from a quantum perspective.

IPNB & Neuroscience: Affordances and Constraints

As human beings, we cherish our individuality yet we know that we live in constant relationship to others, and that other people play a significant part in regulating our emotional and social behavior. Although this interdependence is a reality of our existence, we are just beginning to understand that we have evolved as social creatures with interwoven brains and biologies. The human brain itself is a social organ and to truly understand being human, we must understand not only how we as whole people exist with others, but how our brains, themselves, exist in relationship to other brains.

-Cozolino, L. (2014). *The neuroscience of human relationships: Attachment and the developing social brain*. 2nd Ed. New York: W.W. Norton. (book jacket)

To put it simply, human connections shape neural connections, and each contributes to the mind.

-Siegel, D. J. (2012). *The developing mind: How relationships and the brain interact to shape who we are*. 2nd Ed. New York: Guilford Press. (p. 3)

Historically, the communication perspective has maintained focus on the dynamics between people but not as much on what happens within people. In the past two decades, research in the neurosciences has revolutionized our thinking about how the embodied brain functions. In particular, it affords us an understanding of the reflexive relationship between communication and biological processes. More specifically, Daniel Siegel's Interpersonal Neurobiology (IPNB) posits that there are three primes in human functioning: brain, mind, and relationships. The three elements reflexively work together to create our experience of the world. This research both bolsters the story of a communication perspective as science, and adds resources to our practices that enable us

to make better social worlds. However, the neuroscience story, like all stories, has strengths and limitations. We will overview some affordances and constraints that emerge as we consider neuroscience theory and research in general and IPNB in particular.

Affordances of integrating neuroscience into our conversation include the following:

-Neuroscience theory and research continues to validate the social nature of the brain. For example, a rapidly growing body of research confirms the potential of neuroplasticity across the lifespan, the importance of social interaction on epigenetics across generations, and the critical role of implicit memories in our understanding of communication phenomena. Polyvagal theory continues to be embraced as a way to understand how fear shapes our interactions and, importantly, how we can manage situations intentionally to shift to more productive patterns. While still the subject of some controversy, a growing number of neuroscientists are talking about mirror neurons as part of the resonance circuitry of the brain and their role in social processes such as empathy.

-It enables us to incorporate the internal experience of the embodied self into our work as part of an integrative understanding of human experience.

-It enables us to have a better understanding of the somatosensory sequelae of traumatic experience. Research continues to elaborate our understanding of the potential impact of trauma on the embodied brain. It is important to not only consider events that we typically think of as traumatic (e.g. sexual assault, domestic violence, natural disasters, wars, etc.), but also to attend to the cumulative and long-term impact of persisting life stressors, particularly although not exclusively, in early childhood. We believe this is an important but often ignored aspect of explanations of everyday social interaction outside of the therapy suite.

-It offers an opportunity for us to elaborate theory and research on the integrative capacity of dialogic communication.

Constraints of integrating neuroscience into our conversation include the following:

-There is a risk of perpetuating the primacy of the biological over the social.

-It lends itself to oversimplified stories of the relationship between the brain and behavior.

-The material can be difficult to grasp. It is important to note that while CMM is sufficiently challenging on its own, adding neuroscience to the mix can be daunting. Learning the biological parts and processes is a bit of work for those of us without a background in anatomy, and it is not easy to keep up with the explosive growth of work in this area. We believe it is necessary, however, because the work is consilient with a communication perspective in some powerfully heuristic ways, and its influence is only going to grow.

Projects

To discuss the application of ComComplex, we will draw on the following projects.

Susan

Therapy as embodied social construction

John

Sexual Assault Study

Risk Communication

Vaccination

Susan & John

-Mental and Social Health Education

-Workshops for organizations

-Sri Lanka project

Brief Bibliography

- Cozolino, L. (2014). *The neuroscience of human relationships: Attachment and the developing social brain*. 2nd Ed. New York: W.W. Norton.
- Cozolino, L. (2006). *The neuroscience of human relationships: Attachment and the developing social brain*. New York: W.W. Norton.
- Doidge, N. (2007). *The brain that changes itself*. New York: Penguin books.
- Gutchess, A. H., R., Welsh, R. C., Boduroglu A., and Park, D. C. (2006). Cultural differences in neural function associated with object processing. *Cognitive, Affective, & Behavioral Neuroscience*, (6) 102-109.
- Hasson, U., Ghazanfar, A.A., Galantucci, B., Garrod, S. and Keysers, C. (2012). Brain-to-brain coupling: A mechanism for creating and sharing a social world. *Trends in Cognitive Sciences*. 16(2). 114-121.
- Kumar, M. (2008). *Quantum: Einstein, Bohr, and the great debate about the nature of reality*. New York: Norton.
- Marrs, P. (2012). Taming the lizard: Transforming conversations-gone-bad. In C. Creede, B. Fisher-Yoshida, & P. Gallegos (Eds.), *The reflective, facilitative, and interpretive practices of the coordinated management of meaning* (pp. 77-93). Lanham, Maryland: Fairleigh Dickinson University Press.
- Porges, S.W. (in press). Music Therapy & Trauma: Insights from the Polyvagal Theory. K. Stewart (Ed.), *Symposium on Music Therapy & Trauma: Bridging Theory and Clinical Practice*. New York: Satchnote Press.
- Porges, S.W. (2009). Music Therapy & Trauma: Insights from the Polyvagal Theory. *Connections & reflections: The GAINS quarterly*, 4(1) 1-60.
- Porges, S. W. (2009). The polyvagal theory: New insights into adaptive reactions of the autonomic nervous system. *Cleveland Clinic Journal of Medicine*. 76(suppl 2): s86-S90.
- Porges, S.W. (2007). The Polyvagal perspective. *Biological Psychology*. 74(2). 116-143.
- Porges, S. W. (2003). Social engagement and attachment: A phylogenetic perspective. *Annals of New York Academy of Sciences*. 1008: 31-47.
- Porges, S. W. (1997). Emotion: An Evolutionary By-Product of the Neural Regulation of the Autonomic Nervous System. *Annals of the New York Academy of Sciences*, Volume 807, Integrative Neurobiology of Affiliation, The Pages 62-77
- Ramachandran, V. S. (2011). *The tell-tale brain: A neuroscientist's quest for what makes us human*. New York: W.W. Norton.
- Rossi, K. L. Ed. (2012). *Creating consciousness: How therapists can facilitate wonder, wisdom, truth, & beauty: Selected papers of Ernest Lawrence Rossi, Volume 2, 2006-2012*. Phoenix, AZ: Milton Erikson Foundation Press.
- Siegel, D.J. (2010). *Mindsight: The new science of personal transformation*. New York: Bantam Books.
- Siegel, D. J. (2012). *The developing mind: How relationships and the brain interact to shape who we are*. 2nd Ed. New York: Guilford Press.
- Siegel, D.J. (2012). *Pocket guide to interpersonal neurobiology*. New York: W.W. Norton.
- Siegel, D.J. & Bryson, T.P. (2011). *The whole-brain child: twelve revolutionary strategies to nurture your child's developing mind*. New York: Random House.