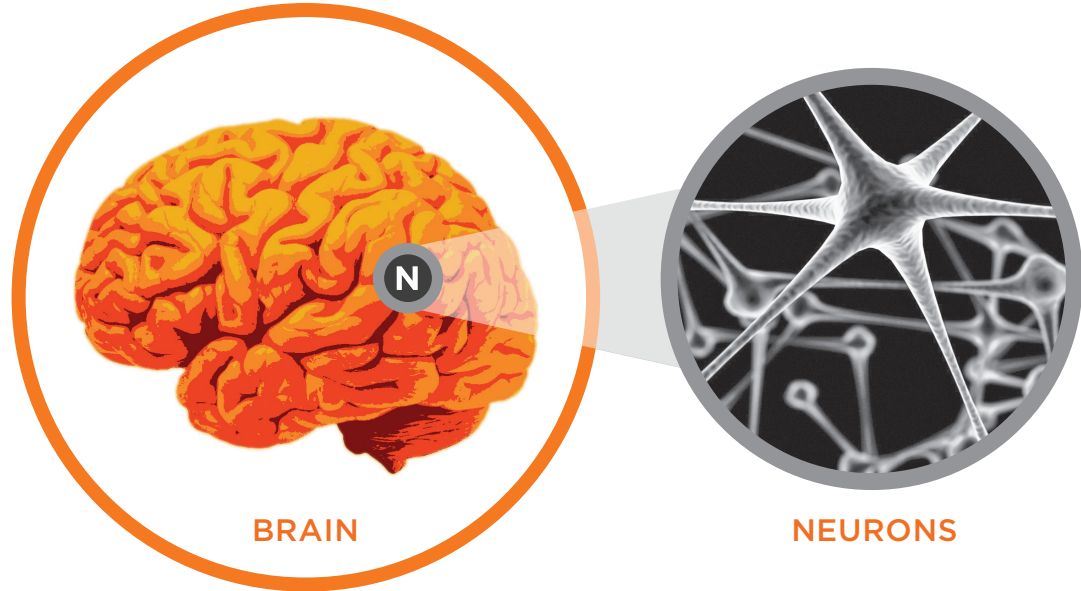# THREE THINGS SYSTEMS THINKERS DO

BRAIN

NEURONS

1. THEY ARE METACOGNITIVE

YOUR BRAIN —3 lbs., 100 billion neurons
100 quadrillion connections — processes information.

Everything on Google. Everything in books. Everything people say or do. Everything around us is information. The great thing about your brain is, any stuff you give it, it will process into a mental model (organized information that affects how we see the world). Organized stuff becomes useable knowledge. Structuring information is the same as thinking or "cognition." That word is related to metacognition, which means "thinking about your thinking" or "neurons looking at neurons," and systems thinkers do it all the time. Metacognition means knowing the various ways your brain structures or builds stuff, and recognizing that we perceive information through mental models. This calls into question accepted ideas and perspectives, and makes clear that mental models evolve and are approximations. Systems thinkers search out the often invisible mental models that drive behavior.

2. THEY USE THE 4 BUILDING BLOCKS (DSRP)

Our mind structures informational stuff (builds mental models) in four ways.

DISTINCTIONS (IDENTITY-OTHER)

They make DISTINCTIONS (identity-other) between and among things and ideas. How we draw or define the boundaries of an idea or a system of ideas is an essential aspect of understanding. Whenever we draw a boundary to define a thing, that same boundary defines what is not the thing (the "other"). Systems thinkers consciously use distinctions to challenge existing norms, labels, and definitions and to identify biases in the way information is structured.

RELATIONSHIPS (ACTION-REACTION)

They identify RELATIONSHIPS (action-reaction) between and among things and ideas. We cannot understand much about anything, including a system, without understanding how parts and wholes are related. Relationships come in all types: causal, correlation, direct/indirect, etc. Systems thinkers use relationships to show dynamical interactions between things and ideas, including feedback loops to show reciprocal relations.

SYSTEMS (PART-WHOLE)

They organize things and ideas into part-whole SYSTEMS to make meaning. Systems thinkers know that changing the way ideas are organized changes meaning itself. The act of thinking is defined by splitting things up or lumping them together. Systems thinkers constantly consider context by asking "what is this a part of?" in order to see how things fit into larger wholes than is the norm.

PERSPECTIVES (POINT-VIEW)

They look at ideas from different PERSPECTIVES (point-view) and understand that every time we make a distinction (including identifying relationships and systems), we are always doing so from a particular perspective. Systems thinkers use perspectives to rethink distinctions, relationships, and/or systems. They move beyond human or animal perspectives (i.e., "perspectives with eyes") by taking conceptual perspectives (i.e., seeing a phenomenon from the perspective of an idea or thing).

3. THEY MIX & MATCH THE BUILDING BLOCKS

Even though the four patterns (DSRP) are very simple, the brain is very complex so it can do these four things simultaneously and in combinations that create amazing patterns of thought. Systems thinkers mix and match as follows:
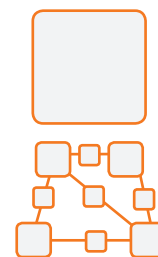
• **Mix R and D:** make a relationship a distinction, which means to define relationships as ideas or things rather than just noting connections between objects
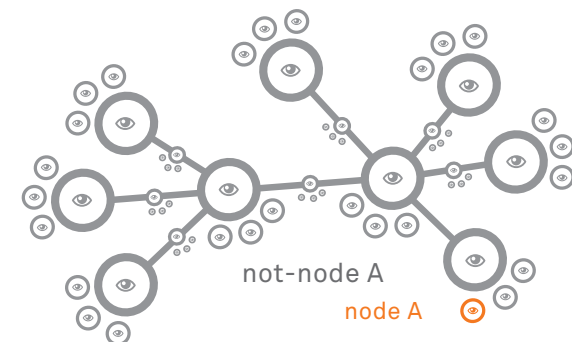
The relationship between 2 ideas

idea — idea — idea

The relationship defined
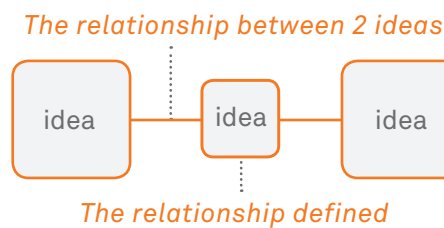
• **Mix R, D, and S:** after identifying relationships, "zoom into them" by deconstructing them into part-whole systems

Parts of the relationship defined
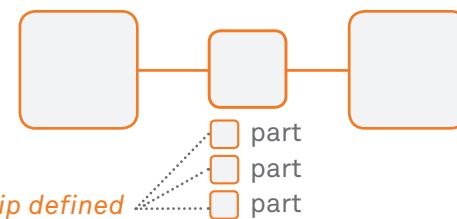
part
part
part

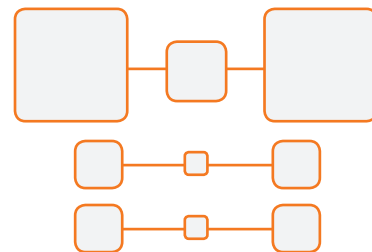• **Mix S and R:** see the organization of parts and the relationships between them in novel ways

• **Mix S and R:** compare the relationship between two wholes by comparing the relationships between their parts (i.e., a "Relationship Channel" or "R-channel")

• **Mix P and S:** Break down perspectives into sub-perspectives in order to avoid the homogenous perspective thinking error (i.e., assuming any group is characterized by a single perspective)

• **Mix P, S, R, and D:** see that distinct objects and ideas can be grouped/related in various ways according to a perspective, thereby avoiding thinking errors brought about by categorizing
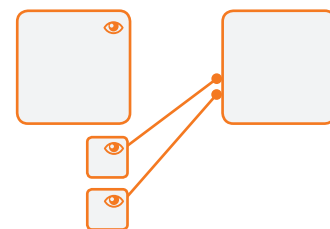
• **Mix P, S, R, and D:** realize every complex topic or phenomenon is a massively relational, perspectival network where: (A) every relationship can be made a distinction; and (B) where every element: must be made a distinction, could be a system in and of itself, could be a perspective (point or view), and could be related to or the relationship between other elements

not-node A

node A