

## The Jigsaw Puzzle in the Lunchroom

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Over a year ago, members of our Research Department began to bring jigsaw puzzles into the office. Someone would select a puzzle and spread out the pieces on a table in our lunchroom. I watched with interest as our staff began to organize the puzzle. Border pieces were sorted, then assembled. Shapes and colors were aggregated. Some days, nothing changed. Some days, whole images emerged. Sometimes there was progress between Friday night and Monday morning. Each puzzle seemed like a multi-authored scientific paper with unknown contributors—no first author, no senior author, no titles or degrees.

Most researchers are introverts. We sit in offices with closed doors or in cubicles with powerful computers and little other equipment. A good day is one with plenty of uninterrupted time to think, to write, or to analyze data. We emerge for nutrients, caffeine, hydration, and (reluctantly) for meetings. Although we're not averse to working on puzzles with others, we're also content to work alone. As a result, our strategies for solving jigsaw puzzles emerge rarely from direct discussion, but rather from tacit, sequential effort.

As the director of our department, I feel an obligation to lead by example. When I am stuck on a research problem or need a break from meetings, I'll go to the lunchroom and fit in a few pieces. To my surprise, I find that I like assembling boundaries and big splotches of color with few defining images. Some of my colleagues start with borders as I do, creating form but delaying realization. Others start with a striking feature—a mountain, a boat, a face. Some of us cluster similar pieces even if we don't connect them. Others fit a random piece when passing by.

I particularly enjoy the times when I'm staring at the puzzle and someone walks in to heat up their lunch or get a cup of coffee, and begins a conversation. We may talk about research projects, but we also talk about family, home repairs, current events, or movies. Great ideas have emerged from such conversation, and many of them have nothing to do with research.

A puzzle can be a mirror. When all the pieces resemble each other, I get stubborn. I'll stop by for a few minutes after work to fit more pieces before I leave. On the way home, I reflect that this stubbornness is a legacy of my clinical training. When patient after patient was admitted to my service with no end in sight, I would examine each person and their clinical puzzle. If I couldn't solve it in the middle

of the night, at least I could group the pieces and then wait for daylight and other eyes.

Some hard puzzles have pieces that almost fit. This problem only becomes evident when the puzzle is almost complete and we have the right number of pieces but no place to put them. At such times of "crisis," it helps to see the problem from a new perspective. For example, if we squat and look at a puzzle along the top of the table, the image disappears but a subtle bulge may reveal where someone has jammed in a piece. One time I found a misfit piece by closing my eyes and running my fingers over the surface of the puzzle.

Puzzle-building is nonlinear, unlike the assumptions of our statistical models. At the beginning, not much changes as we turn all the pieces right side up, group colors, and find edges. If the puzzle is easy or near completion, the jumble of pieces diminishes rapidly. At this point, someone is always hovering over the puzzle, and the lunchroom conversation is enthusiastic. At other times a puzzle starts quickly, but it bogs down when nothing is left but an expanse of blue sky and hazy clouds. People passing through the lunchroom then start questioning whether we will ever finish the puzzle. The leader in me begins to wonder: what, if anything, should I do to help? Thus far we've never quit on a puzzle, although I suspect we would have much to learn from doing so.

One puzzle in the lunchroom is stored in a plastic bag because the box with the picture was lost. I'm curious to see if we'll ever unpack it. In bleak moments, I worry that this puzzle is a metaphor for the health care system: a jumble of pieces with no coherent image. I worry that all of us inside that system—clinicians, staff, administrators, researchers, and policy makers—are working on entirely different puzzles. I worry that we continually mistake our part for the whole.

Thinking about the jigsaw puzzles in our lunchroom restores my optimism. In health services research, we work on hard problems. We try to understand how people deliver health care, and how people use that care. We try to identify ways to help systems serve their members and patients, improve quality, and contain costs. We have learned that to do our job, even introverts must band together—clinicians, economists, epidemiologists, social scientists, programmers, project managers, statisticians, and administrative staff. When we agree on a question and on a strategy for addressing it, answers emerge like the images on a jigsaw puzzle:

gradually, anonymously, without claims of ownership but with shared satisfaction in the final product.

We have plenty of good, hard problems in health care, but we may not have enough lunchrooms. If we can build learning communities where people with disparate perspectives can bring their puzzles, who knows what new methods we may develop and what new images we may discover? It may not matter which puzzle we start with as long as we work together to develop new strategies for puzzle-solving.

Watching our Research Department solve jigsaw puzzles increases my confidence that there is a big picture in health care, and that all the pieces will fit. If we create the right work

space, we will gravitate to shared puzzles. If our instincts are sharp, we will choose the most promising puzzles to solve. If we are patient and persistent, we will solve them. ❖

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## **Labors**

A witty friend of mine once remarked that the world thinks of the man of science as one who pulls out his watch and exclaims, “Ha! half an hour to spare before dinner: I will just step down to my laboratory and make a discovery.” Who but men of science themselves are to blame for such a misconception? Out of the many memoirs which fill our libraries few recount the labors of investigators, even of those who seek to solve the secrets of the great maladies which annually destroy millions of us—surely a matter of interest to everyone. Our books of science are records of results rather than that sacred passion for discovery which leads to them. Yet many discoveries have really been the climax of an intense drama, full of hopes and despairs, visions seen in darkness, many failures, and a final triumph: in which the protagonists are man and nature, and the issue a decision for all the ages.

— *Memoirs*, Sir Ronald Ross, KCB, KCMG, FRS, FRCS, 1857-1932,  
British physician and 1902 Nobel Prize recipient for Physiology or Medicine