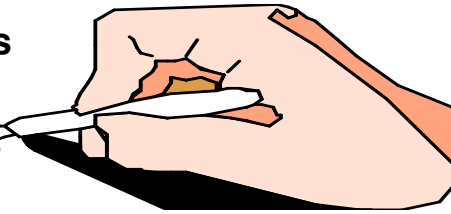


## Three Ways of Looking at Schools and the Implications of All Three\*

• Adapted from Russell Ackoff (1981). *Creating the Corporate Future*. New York: Wiley.



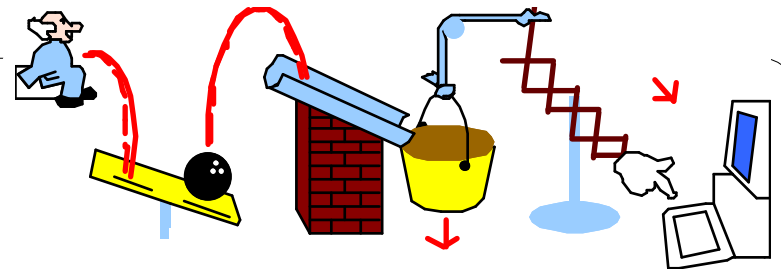
# 1 System as Machine

Metaphors matter. To understand something complex, our minds often compare it to something simpler. Before we know it, we begin to act as though the metaphor were the fact. Metaphors can represent worldviews, those pervasive sets of beliefs about how the world works which can define an age. And they can represent how we view organizations or systems.

The prevailing worldview, for example, from the 17th Century days of Sir Francis Bacon, Renee Descartes, and Sir Isaac Newton until around 1925, was that the world is a giant **machine**. It was presumed to follow precise and discoverable mathematical laws--the laws of nature. It was the job of humans to discover those laws, and their mastery constituted knowledge. This view of the world gave rise to the Industrial Revolution and to bureaucracy as an organization form. Work was subdivided into tasks comprised of three simple motions. Knowledge was subdivided into facts, and facts were organized into disciplines for transmission and inquiry. People in organizations were, by extension, the mechanical parts of a great machine, expected to do as they were told without variation. "Mind" or the ability to choose, lay outside the machine in the person of the engineer or owner. Mechanical systems react to change. The function of the mechanical organization is to serve owners. Education in this system emphasizes *learning to do*.

The school, rising to prominence as a social institution during these centuries, still reflects many of the elements of this worldview.

### School As Machine



## 2 System as Organism

During the second quarter of the Twentieth Century, another view emerged--the organization as organism. In the factories that were the hallmark of the Industrial Revolution, health and safety became an issue. Labor unions rose to prominence (only to decline in the second half of the century with unprecedented speed.) Workers were more valuable, less easy to replace. They were more like the cells and organs of a living organism. Each had his or her own role, and the boundaries between them were inviolable. The liver would not revolt and demand to be the heart! Better to be the best liver going--know your own business and stick to it. If you were a good financial manager (or any other kind, for that matter), you could work anywhere--public or private sector, library or factory. Finance was finance just like a liver is a liver. Viewed as an organism, organizations (including schools) began to take note of their environments and to adapt to them Darwin-fashion. Strategic planning became popular. The main idea was to predict the future and prepare for it. "Mind" resided inside the organization, not outside, in the "head" of the work group. The centralized mind mattered, and that mind made choices and controlled power and resources. Many popular books on "system thinking" use this metaphor. Organic systems adapt to change. Their main functions are survival and growth--increase in size and number, improving standard of living. Education emphasizes the knowledge worker.

Schools reflect many of these characteristics.

### School as Organism



## 3 Social Systems



Funny thing about Rosie the Riveter...she had a mind of her own. She worked a man's job because the men were off to war. She had her own brand of patriotism. And with Rosie came the third way of thinking about systems such as schools and other organizations. Conceptualized by Dr. Russell Ackoff, the notion of a social system is quite different from the other two. In a social system, the people who comprise it individually and collectively play the major role. Contrast this idea with the locus of "mind" in a mechanical or organic system. This means that the people in a social system have minds of their own, *plus* a collective mind or sense of purpose.

In a social system, coordination and integration replace command and control as the primary strategies of top administrators. People have not only the right but the obligation to choose both the ends they want to accomplish and the means of doing so. Democracy is an operating principle. Planning shifts from *predict and prepare* to *design the preferred future*. People in schools (and other organizations) that operate as social systems believe that the future depends heavily (not entirely) on the actions they take in the present. Without a shared understanding of the desired future, how can plans be laid to accomplish it? Rather than being closely guarded, information is shared freely to inform the decision-makers. Learning has a strong active component--always purposefully seeking to understand *why*, not just *how*. Social systems can create change. The basic social unit is the pair, not the individual. Relationships are key. The main function of a social system is to encourage the development of its members or stakeholders--making it possible for individuals to satisfy their own desires and those of others, improving quality of life. Education emphasizes *learning to be*.

Viewing the school as a social system is a relatively new approach. It may help explain the attractiveness of shared governance models, among other things. Social system thinking is the theoretical basis of Interactive Design.

### School as Social System

