

Kepler Space Institute Pareto Optimum Principles and Policies

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This essay is provided for the leadership, staff, and scholars of the academics, research, programs, and publications of the Kepler Space Institute (KSI)

The life's work of Vilfredo Pareto (1848-1923), Italian scientist, sociologist, and economist, influenced the direction of management and economic theory. There are two principal concepts that he created which have become classics. The first is the *Pareto Formula*. Pareto observed that 80% of the system results flow from the efforts of 20% of the participants. The pioneers of the Quality Sciences adopted the Pareto Formula, and they created Pareto Charts to capture what was happening in business and management. The 80% to 20% formula continues to be generally validated today. The Pareto Formula was intended to be descriptive of what happens in organizations, not necessarily prescriptive for what should happen.

Vilfredo Pareto's observations and analysis produced another principle, which became known as the *Pareto Optimum* which has more powerful implications than the Pareto Formula. It is a normative, or prescriptive, concept *that should be* adopted by researchers, analysts, and leaders. A Pareto Optimum is achieved when a policy, intervention, plan, or program *makes many people better off and none worse off*. The Pareto Optimum is very difficult to achieve in any public, private, or non-profit organization. It is often impossible to achieve, because of political feasibility barriers. The greatest majority of policies require change that helps some and hurts others. That is often described as a zero-sum game, in contrast to a win-win outcome. Vilfredo Pareto realized the complexity of his concept, and he advised leadership to pursue the Pareto Optimum only as long as it was economically feasible to do.

For the past four decades, I have done organizational strategic planning consulting, and I have taught systems analysis at the university graduate level. I consider the Pareto Optimum a *golden strategic rule* for policymaking. To the degree that the quality of your policymaking or strategic planning approaches a Pareto Optimum, the following will occur:

1. the feasibility of acceptance of your recommendations will rise;
2. because, with many benefiting, consensus for approval of those recommendations has a higher probability;
3. and, no or few people will perceive themselves as worse off,

Objections and opposition to your recommendations will be small – occasionally even zero, which has happened in the US Congress.

Philosophically, sociologically, politically, psychologically, and theologically, the Pareto Optimum is consistent with some long-advocated views of preferable communities and societies. Many people being better off matches the political theory of *the general good*. It fits the values of *inclusion*, of *anti-discrimination*, and of *community in diversity*. The

theology of most religions depicts heaven as a place where everyone is better off than they were under the uncertainties, injustices, sins, and pains of life on earth.

What are some Pareto Optimums? Being an educator, I believe that education, done right, is a Pareto Optimum. Individuals improve their knowledge and professional capabilities. Their families and organizations benefit. When they apply their learning in the service of others, groups, their country, or toward global or Space needs, many are better off.

Time is a variable in validating whether a policy, plan, program, or new paradigm is a Pareto Optimum. Those of us who are professionals in the Quality Management, Quality Sciences, and Space Sciences area will design principles and policies as close to achieving a Pareto Optimum as possible. The truth is that few achievements of leadership throughout history have achieved the Pareto Optimum. Those organizations, nations, and societies that fail to achieve it are losing out competitively, and their people are relatively worse off to the more developed corporations and governments of the world. The Quality Sciences has been a variable in the increasing thriving of societies worldwide. Joseph Juran, in his final career addresses and publications, said that “The 21st century will be the century of quality.” I predict that most reading this essay will support Dr. Juran’s vision.

But the truth is that there is still much to be done, both nationally and globally. KSI has in its vision for the 21st century future maintaining the goal for our academics, research, and publications an ever-expanding scope of progress toward the Pareto Optimum as Space abundance is captured to meet humanity’s needs.

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Editors’ Notes: The Pareto Optimum should be our constant target in both study and the application of study. It is a principle we should always keep in mind. For more details on the vision, principles, and practice of KSI, see www.keplerspaceinstitute.com. **Gordon Arthur.**