

## Pareto Principle: The 80/20 Rule

### Background:

The term Pareto Principle is largely attributed to Vilfredo Pareto (1848-1923), a French born Italian economist, who observed in a paper on the distribution of wealth that eighty percent of Italian land was owned by twenty percent of the people.

In fact the attribution of the 80/20 rule to Pareto was an error made by J.M. Juran, one of the three great quality gurus of the 20<sup>th</sup> Century. In a 1973 article Juran wrote, "...It was during the late 1940s, when I was preparing the manuscript for Quality Control Handbook, First Edition, (published in 1951) that I was faced squarely with the need for giving a short name to the universal [of unequal distribution]. ..... I also noted that Pareto had found wealth to be maldistributed. In addition, I showed examples of the now familiar cumulative curves, one for maldistribution of wealth and the other for maldistribution of quality losses. The caption under these curves reads "Pareto's principle of unequal distribution applied to distribution of wealth and to distribution of quality losses." Although the accompanying text makes clear that Pareto's contributions specialized in the study of wealth, the caption implies that he had generalized the principle of unequal distribution into a universal. This implication is erroneous." "Years ago I gave the name "Pareto" to this principle of the "vital few and trivial many." On subsequent challenge, I was forced to confess that I had mistakenly applied the wrong name to the principle."

The Pareto principle, as a universal, was not original with Pareto. Pareto did make observations related to the "maldistribution of wealth" however, Juran corrected his attribution of the general principle to M. O. Lorenz. Lorenz, who in 1905 observed the maldistribution of wealth, also created the Lorenz Curve (cumulative distribution by rank order, to facilitate study of concentrations,

income distribution), which Juran used in his illustration. Lorenz went on to observe that a large percentage of crime was committed by a small percentage of the total population. Through this statement and others Lorenz moved beyond discussing wealth to more common universal themes, and therefore deserves the attribution. However, after more than 20 years in common at the time of Juran's correction, use the Pareto Principle had become a part of the quality landscape and common terminology.

The Pareto Principle of predictable imbalance has since been applied to almost every aspect of modern life. As originally stated...

**"In any series of elements to be controlled, a selected small fraction in terms of number of elements almost always accounts for a large fraction in terms of effect."**

Simply put, the Pareto Principle, 80-20 Rule, or the "Vital Few and Trivial Many Rule," or Lorenz Principle, by whatever name, this mix of 80%-20% reminds us that the relationship between input and output is rarely balanced. When applied to work, it means that approximately 80 percent of the results are produced by 20 percent of your effort. Learning to recognize and then focus on that 20 percent is the key to making the most effective use of your effort, expense or time.

The principle has been applied to many areas including:

- Productivity. To maximize personal productivity, realize that 80% of one's time is spent on the trivial many activities. Analyze and identify which activities produce the most value to your organization and then shift your focus so that you concentrate your priorities on the vital few (20%). What do you do with

## MAFN 2002 Facilitators Workshop Series

those that are left over? Delegate them, discontinue doing them or, at best, only work them when they become a real problem.

- Meetings: Start meetings on time or when 80% of the participants have arrived. It's best to start work with the 80%, valuing their timeliness, than waiting for the 20%, making them more important than the others. One to two late comers can easily be incorporated in a meeting.
- Results: 80% of your measurable results and progress will come from just 20% of the items on your daily To-Do list. The major problem is that most people are so busy fighting fires that they never get around to the most vital few activities that will lead to the greatest results.

**Applications:** This may come as a surprise, but despite all the talk about life balance, you can benefit tremendously from introducing a little imbalance into your day. I'm referring to the 80/20 rule of time management.

The 80/20 Rule can be summarized as: out of a given group of elements, 20% of them will yield 80% of the results, while the remaining 80% of the elements will yield only 20% of the results. So, as a general rule, you can be most effective by directing your efforts toward completing about 20%, or 2 out of every 10 tasks you have listed [on your To-Do list].

Consistent application of this rule will lead to dramatically improved productivity. While the rule is not absolute, one should use it as a guide and reference point to ask whether or not they are truly focusing on the 20% (the Vital Few), or the 80% (The trivial many). Real progress results from a consistent focus on the 20% most critical objectives.

The 80/20 Rule can be applied in real world situations whenever there is a question of effectiveness versus diminishing returns on effort, expense or time.

The 80/20 Rule has a certain integrity to it. It doesn't have to be valid all the time to be consistent!

### **20/60/20 Corollary to the 80/20 Rule:**

One difference in the 80/20 rule as it applies to marketing groups of people. It has been said that peoples' preferences and opinions follow a bell curve. The 20/60/20 Corollary translates the 80/20 rule into the bell curve condition when it is applied to groups. The corollary says that 20% of the people will be dead set against something while 20% will lead the charge for it. What we need to understand is that we will not convince the 20% at either end of the spectrum to change their minds. The 60% in the middle are waiting to be sold one way or the other. It is to the 60% that we should focus our efforts at selling.

### **References:**

*Juran, J. M., "Pareto. Lorenz, Cournot Bernoulli, Juran and Others," Industrial Quality Control, October 1950, p. 25.*

*Lorenz, M. O., Methods of Measuring the Concentration of Wealth, American Statistical Association Publication, Vol. 9 (1904-1905), pp. 200-219.*

<http://www.juran.com/research/articles/SP7518.html>

<http://library.shu.edu/HafnerAW/awh-th-math-pareto.htm>

<http://www.4hb.com/08jcparetoprinciple.html>

<http://www.aafp.org/fpm/20000900/76the8.html>

This report was compiled from writings of several web-sites related to the Pareto Principle in particular the four above.