The many different ways of using process behavior charts (formerly called control charts) in both service and manufacturing applications may be summarized under five major headings. These five categories are arranged below in order of increasing sophistication.

**Report Card Charts:**
These charts are kept for the files. They may occasionally be used for information about how things are going or for verification that something has or has not occurred, but they are not used in real time for operating or improving the processes and systems present.

**Process Adjustment Charts:**
Some product characteristics may be plotted on a control chart and used in a feedback loop for making process adjustments, or some input characteristic may be tracked and used in a feed-forward loop for the same purpose.

In many cases, these process adjustment charts will result in substantially more consistent operations than was the case prior to the use of control charts. (This assumes that someone will know how to properly adjust the process. In some cases, such knowledge can only be gained by some of the following uses of control charts.) However, once this initial improvement has been achieved, process adjustment charts simply strive to preserve the new status quo.

The potential for dynamic and continual improvement is missing from this usage of the charts. Unfortunately, this seems to be the only usage considered in most of the articles recently published in trade journals.

**Process Trial Charts:**
These charts analyze the data from simple experiments performed upon the process.

This short-term usage of control charts is a simple and easy-to-understand alternative to the use of ANOVA and other statistical techniques. This usage is often found in conjunction with the next category.

**Extended Monitoring Charts:**
This is the use of multiple control charts to simultaneously tract several related characteristics in order to discover just which charts provide the best predictors of process or product performance.

This usage will generally involve a project team with a specific mission. It is one of the preliminary steps for both the effective utilization of control charts and the effective use of process experiments. Without the constancy of purpose evidenced by extended monitoring and without the process stability obtained by getting the process into statistical control, it is doubtful that designed experiments will be of any long-term benefit.

**The Use of Control Charts for Continual Improvement:**
It is rare to begin with this usage of the charts. In many cases, progress to this last category comes only after extended monitoring and, possibly, process trials run.

The control chart becomes a powerful tool for continual improvement only as those involved with the process learn how to use the chart to identify and remove assignable causes of uncontrolled variation. Every out-of-control point is an opportunity. But these opportunities can be utilized only by those who have prepared themselves in advance. SPC is ultimately a way of thinking, with the charts acting as a catalyst for this thought process.
Lloyd Nelson calls a control chart a “when to fix it” chart. Ed Halteman calls it a “has a change occurred?” chart. Sophronia Ward calls it a “process behavior” chart. All of these alternative names emphasize the interaction between the user and the chart, which is the secret of how the simple control chart can be the catalyst for continual improvement.

The only limitation on the use of Shewhart’s charts is your imagination. And the way to stimulate your imagination is to begin using this powerful technique yourself.

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Statistical Process Controls, Inc.
5908 Toole Drive, Suite C
Knoxville, Tennessee 37919 USA
Phone: 865-584-5005 • Fax: 865-588-9440 • Web Site: www.spcpress.com
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