

## **Socialism, Variance and Scalability**

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The June 3, 2019 issue of National Review cited example after example of the failure of Socialism. But, what about the communes of the 60s? Stories abound of groups farming and sharing everything in blissful harmony-axes, plows and rock and roll. Some of the stories are surely apocryphal but some are undoubtedly true and it is not difficult to imagine a group of like-minded folks forming such a society.

Socialism does indeed seem to work in some cases and the common factor is a particular variable that attends population size, namely, variance. In other words, Socialism does not scale well and this lack of scalability is due to a concomitant increase in variance as the population gets larger. Thus, Socialism may be workable in a relatively small group but becomes unworkable as the group gets larger and variance increases.

Variance has a technical definition but the colloquial definition of variability or “one of these things is not like the other” is close enough and will serve us here. The relation between group size and variance is tricky statistically\*; however, an armchair example is helpful. Pick a variable, e.g., height or favorite author and compare the variance of the variable in a group of, say, ten people versus 50. Though not statistically necessary, in many cases there will be more variance in the larger group.

This increase in variance does not bode well for Socialism. Take the example of Helen Raleigh’s parents waiting in a long line to buy a refrigerator in Communist China (National Review, May 20, 2019). If they didn’t like the size or color, their only option was no refrigerator.

Another example is from an interview I saw years ago with a sales manager for Ben and Jerry’s Ice Cream. By company policy, the highest paid employee could not earn more than some function of the lowest paid. This policy worked until they began to expand and variance in the sales force increased and included people such as the sales manager who wanted no part of a policy that stifled their earning potential.

Socialism must somehow contain this variance. In practice the containment may not only involve denial of choices or service but also more oppressive means.

In contrast to Socialism, variance is the friend of Capitalism. In fact, Capitalism depends on it as a source of new markets and an impetus to innovation.

\*Do not confuse variance of the individual data points with variance of the mean of the data points. As group size increases the variance of the mean decreases even though the variance of the individual data points is increasing. Think of it as size increases there is more likely to be a large value for each small value; hence, they average in calculation of the mean value.