



## Pre-Scientific vs. Scientific Thinking (summarized from Wendell Johnson's *PIQ*)

1.

Pre-Scientific	Scientific
Static, assumes constancy, similarities	Process, ever-changing, individual
Rigid, tradition,	Adaptable, ready to change, challenge
Problem solving: Authoritarian	Observations, Test, Revise
Language to control behavior, don't ask questions	Leads to understanding, clarity, answers derived not dictated
Vague, meaningless questions and speculations, rhetorical questions	Well-formulated questions lead to answers, understanding
No sense of individuality, "to-me-ness"	Self-aware, observer-observed
"Ventriloquizing" VOICE OF ____	Individuals speak for themselves
Traditions, practices, customs, do not regard predictability	Objective is to make accurate predictions

**Starting Point: To apply more of a scientific *attitude* in whatever we do.**