$e/k = mc^2$

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"They make it look so easy!" How often do you say that about professionals in sports, public speaking and other human endeavors? Is this just your impression or are they really using less energy or incurring less wasted motion? Is that what the little old lady in New York City meant when the tourist asked her, "How can I get to Carnegie Hall?" and she immediately advised, "Practice, Practice. Practice?"

Which of your peers seem to get certain tasks done quicker and better while other peers excel in yet other tasks? (Gilbert 1996) defined a term, Performance Improvement Potential, PIP, which denotes the ratio of a person's performance at a given task to the performance of an exemplar at that task. Ratio's as high as 15 are often seen, meaning that the subject person has the potential to improve 15 fold.

Is this related to power, the time rate of doing work? Not necessarily. Why does one race car driver lap the course in less time than another, even in the same race car? It isn't because he is peddling harder. It seems that there is a knowledge factor involved.

What does 'work smarter instead of harder" mean to you? Does working smarter mean accomplishing the same work in less time? How about accomplishing less work in less time yet producing the same result? Maybe there is more to be said than $e = mc^2$. Perhaps the real relationship is $e/k = mc^2$ because more knowledge with less energy yields the same result.

Intellectual capital, Human capital, and Knowledge management have been hot topics for two decades. Lots of organizations are paying lots of money to improve the production, sharing and utilization of knowledge. Although Gilbert's PIP indicates that one person can do more than another person can, what indicates that one person knows more than another? A Level of Consciousness scale has been devised by (Hawkins 1995) along with a questionnaire that has located several thousand persons on this scale. It seems that the higher the level of consciousness the less has to be communicated to impart meaning, especially about complicated, ambiguous subjects.

It has been almost 500 years since Machiavelli wrote, "Knowledge is power." What branch of science has described the interchangeability of knowledge and power? What branch of engineering has shown how to make such tradeoffs when designing systems? Maybe we could do systems engineering Better, Faster, and Cheaper if we just learned how to think and used a higher level of language to express ourselves.

Gilbert, Thomas, Human Competence, Engineering Worthy Performance, HRD Press, 1996.
Hawkins, David, Power vs. Force, Hay House, 1995.