

Learning from Siddhartha

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One of Hermann Hesse's masterpieces is *Siddhartha* (1922). Hesse won the Nobel Prize for literature in 1946. This book has nothing to do with science; it is a philosophical essay of the adventures of a man living at the time of the Buddha. Among the numerous extrapolations related to science that one can draw from this book, I selected 2 representative ones (1). The first relates to "wisdom," which in our context of interest can be equated with "imagination." Note that Govinda is Siddhartha's friend.

Siddhartha says: "Wisdom is not expressible. Wisdom, when a wise man tries to express it, it always sounds like foolishness."

"Are you joking?" asked Govinda.

"I am not joking. I am telling you what I have discovered. Knowledge can be expressed, but not wisdom. One can discover it, one can live it, one can be borne along with it, one can do miracles with it, but one cannot express it and teach it. This is what I already sensed as a youth, what drove me away from teachers."

My own comment is that in our field of science, we can teach knowledge, but we cannot teach imagination.

Another aspect we teach our research graduate students is to first develop a hypothesis and then design experiments to prove or disprove the hypothesis. This "scientific method" has many important ramifications, because we all know that disproving a hypothesis is a kind of a disaster because the data would not usually be publishable and the time spent (sometimes years) would be wasted. Audacious hypotheses are attractive to highly successful scientists (who are not going to do the work but will share the glory) and rather dangerous for young investigators, as I have indicated before (2). It is also well known that numerous biology papers are not reproducible, mainly because many of us are obsessed with proving our hypothesis is correct (and publishing it), rather than showing it incorrect (and put-

ting it on the shelf). Here is what Siddhartha says on the subject:

Siddhartha says, "What should I have to tell you, venerable one? Perhaps that you seek overmuch? That you seek so much, you do not find?"

"How is that?" asked Govinda.

"When someone seeks," says Siddhartha, "it can easily happen, but his eyes only see the thing he is seeking and that he is incapable of finding anything, incapable of taking anything in, because he is always only thinking about what he is seeking, because he has an object, a goal, because he is possessed by the goal. Seeking means having a goal, but finding means being free, open, having no goal. Perhaps you, venerable one, are indeed a seeker, for in striving after your goal, there is much you fail to see that is right before your eyes."

Please note the difference here between the words "seeking" and "finding." Perhaps, we should teach our students to "find," not "seek."

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