Science and Psychology

Introduction to the Science of Psychology

Assumptions

There are things I think I know, things I think I might know, and things I know I don't know. I have learned that it is important to be able to tell the difference. In this book, I am trying to share some of the most important things I think I know about psychology. What I mean by important is that I think you will find many of these things interesting and some helpful in contemplating human potential and living your life under your unique human conditions.

I don't know you personally but I am going to try to communicate based on certain assumptions. My assumptions are usually inferences based on things I think I know. I think I know that you just completed reading this sentence. Another thing I think I know (but am not as certain of), is that you are a student (probably a freshman) at a two- or four-year college or university or someone interested in psychology. Accordingly, I will try to relate the
material to college’s and life’s usual demands (e.g., passing objective and essay examinations; time management, problem-solving, health and weight control, etc.).

Mighty oaks from tiny acorns grow.

In their attempt to understand their world and the meaning of their existence, humans increasingly rely on the scientific method to understand nature. All sciences are interested in establishing cause and effect relationships that apply under natural conditions. Over the past 400 years, there have been enormous advances in the physical, chemical, and biological sciences. This has resulted in applied technologies that have transformed the planet and the human condition.

This book describes the results of application of the scientific method to understanding the behavior of individual animals including humans. As a science, psychology studies how genetics (i.e. heredity or nature) and the environment (i.e. experience or nurture) influence covert (i.e. thinking and feeling) and overt behavior. That is, psychology assumes that the same principles that apply to acorns and oaks apply to human beings. Exposure to sunlight, water, and fertilizer determine the development of acorns. Throughout subsequent chapters we will see how different
environmental variables influence human development. Traditionally, psychology has been broken down and introductory textbooks organized according to distinct content areas. In this book, these content areas are separated into those heavily influenced by genetics (biological psychology, sensation, motivation); those heavily influenced by experience (learning and cognition); and those emphasizing nature/nurture interactions (lifespan development, personality, social psychology, and maladaptive behavior). As will be observed as you advance through these content areas, the scientific method has been successfully applied to complex and important behavioral phenomena. Just as with other sciences, the establishment of cause and effect relationships has enabled the development of applied strategies.

The idea of potential is a paradox. It implies absolute limits and enormous possibilities. It is simultaneously pessimistic and optimistic. Potential can result in good or harm, creation or destruction. To consider psychology the science of human potential requires recognizing and accepting these contradictions. Every acorn has the potential to become a mighty oak but not every acorn will achieve that potential. Every healthy human child has enormous potential but not every child will achieve their potential.

The first paragraph of the serenity prayer, usually attributed to Reinhold Niebuhr, states:

God grant me the serenity
To accept the things I cannot change;  
Courage to change the things I can;  
And wisdom to know the difference.

The college experience can be described as encouraging students to consider the meaning of their lives within the context of lives that have been lived and lives that could be lived. This requires knowledge of history and culture to inform one regarding the likelihood of accomplishing change and imagination to consider other possibilities. The hope is that such knowledge and imagination will be applied wisely throughout one’s life.

An amusing distinction related to the serenity prayer describes three types of individuals: those that make it happen (i.e. demonstrate courage), those that watch it happen (i.e. are passive), and those that ask “what happened” (i.e. are clueless). The messages conveyed by the serenity prayer and this distinction relate to human potential. Those that are informed and active in considering options and making decisions are more likely to achieve their potential than those less informed or passive.

The Importance of Grades and Performance Standards

Do you think people have traits? Do you think some students are