Chapter 1 – The Evolution of Psychology

What are your thoughts of psychology?
   It is practical – applies to everyone and nearly every situation.
   It relates to a way of thinking – use critical thinking to pose questions that must be solved through a scientific method to generate facts to create answers.
   Covers a diversity of subjects – seemingly endless list of subjects from fear, to language development to eating.

From Speculation to Science – How Psychology Developed

The history of psychology is one that has its origins in the philosophers of old to the science of the last few centuries.
   The term stems from the Greek (like everything else) meaning the study of the soul but by the 1700s, it came to refer to a study of the mind.

A New Science is Born – The Contributions of Wundt and Hall

The study of psychology was the product of philosophers and physiologists seeking answers to questions that touched on each group’s discipline.
   What is the connection between bodily sensations and one’s awareness of the outside world? How does the mind and body interact?
German Wilhelm Wundt sought to make psychology an independent focus rather than an offshoot of philosophy and physiology.
   Physiology informs us about those life phenomena that we perceive by our external senses. In psychology, the person looks upon himself as from within and tries to explain the interrelations of those processes that this internal observation discloses.
   Wilhelm Wundt, German psychologist

Germany of the 1800s was a place that encouraged and supported intellectual creativity and study.
   Wundt set up his first lab at the University of Leipzig (1879); Wundt set up the first psychology journal (1881).
   Today, 1879 and Wundt himself are seen as the founding and founder of the discipline.
   Wundt pushed the idea that psychology should be a science with a primary focus of consciousness – awareness of immediate experience.
   This led to psychology being related to the mind and its processes but doing so in a scientific manner.

As Wundt’s career developed and matured, his interests expanded and ergo, so did the concerned areas of psychologists – including language and culture.
   Wundt’s career was also seen in the spread and influence of his students who spread his message and the discipline’s impact far and wide – most quickly expanding in the United States.

In the U.S., it was G. Stanley Hall who would make the biggest contributions in the field of psychology.
   He set up the first U.S. psychology lab (Johns Hopkins in 1883), first American psych journal and set up the American Psychological Association.
   Psychology was born in Germany but it grew up in America.
The Battle of the “Schools” Begins: Structuralism Versus Functionalism

Like most sciences, psychology divided into schools: structuralism and functionalism. Englishman Edward Titchener emigrated to the U.S. and headed up the Cornell department of psychology, a self-proclaimed disciple of Wundt but going his own way.

**Structuralism** – method of analyzing consciousness into basic elements and researching how these elements are connected. Structuralists wanted to examine the core components of consciousness and initially, stuck with the sensation and perception as it relates to the senses. To understand awareness, structuralists used introspection or self-observation as they went under various exposures to stimuli.

**Functionalism** – psychology should investigate the function or purpose of consciousness, instead of its structure. American William James, who began in medicine, became famous with this seminal work *Principles of Psychology* (1890), which has been the benchmark of psychological study. Heavily influenced by Charles Darwin, James figured that any characteristic that still exists within humans, through natural selection, must serve a purpose. The discovery of that function, according to James, should be the focus of psychology. James felt consciousness was a flow of information and thoughts and the structuralists were only studying static points along what James called a “stream of consciousness.”

*It is just this free water of consciousness that psychologists resolutely overlook.*

William James, American psychologist and philosopher

Functionalists took their efforts out of the lab and looked at people in their natural environment, expanding psychology to include mental testing, a child’s pattern of development, educational practices and behavioral differences between the sexes.

Scientists such as James McKeen Cattell and John Dewey were large forces in this new thought. Historians and psychologists say that functionalism, as a discipline, prevailed over structuralism but the latter played a large role in bringing scientific techniques into the field.

Watson Alters Psychology’s Course as Behaviorism Makes Its Debut

In the early 1900s, another school of psychological thought emerged known as behaviorism.

**Behaviorism** – founded by John B. Watson, an approach that says that only the observable should be studied as part of scientific psychology. This was shocking because, in essence, Watson was saying that research and study on consciousness was not valid because its processes could not be observed.

Watson was attacking the previous efforts on the basis of science – the scientific method was based on what can be verified and since mental processes could not be, it could also not be scientific. If psychology was to be treated as a science, it must stick to only what can be
observed.

*The time seems to have come when psychology must discard all references to consciousness.*

John B. Watson, American psychologist

**Behavior** – any observable response or activity by a living being.

Watson said that psychology, to be a science, must stick to what can be verified and should leave behind things such as thoughts and feelings.

Watson also uniquely attacked the age old question of “nature versus nurture.”

Watson dismissed heredity and said that one’s environment holds the largest key to the development of a person and their skills – debunking Aristotle’s *tabula rasa* theory.

He said, given his own world, he could raise a child from birth and turn him into any vocation he wished.

Consequently, behaviorists have since been influenced by Watson’s speculations of the nature versus nurture debate.

Behaviorists set out to state that psychologists should attempt to correlate overt behaviors (responses) with observable events in the environment (stimuli).

**Stimulus** – any observable input from the environment.

As a result, behaviorism is often referred to as *stimulus-response (S-R) psychology*.

Behaviorism was brought to the fore but it was a gradual process that had begun with the work of Russian physiologist Ivan Pavlov who demonstrated the training of a dog’s saliva glands to activate at the sound of a bell.

It was an obvious example of the stimulus-response connection that behaviorists had been championing.

One impact of Pavlov’s study was that behaviorists began going more exclusively to animal subjects for a couple of reasons, namely that animals were easier to control and it was more appropriate to do so.

An approach that began with a focus on the mind transformed itself to measuring simple responses by animals.

By the 1920s, Watson was out of the profession, brought down by a public and messy divorce that led to his dismissal from Johns Hopkins.

While his influence and importance is unquestioned, it was not without opposition.

As we will later discuss, a focus on perception rather than the overt behavior was pushed in Germany by those devotees of *Gestalt psychology* while a physician in Austria named Sigmund Freud and his ideas on the unconsciousness would soon revolutionize the field.

*Freud Brings the Unconscious into the Picture*

Sigmund Freud, an Austrian physician, and his ideas would become one of the more well-known if not controversial intellectual figures of his time.

Freud’s theories and ideas stemmed from his attempts to deal with the mental problems of his patients, including obsession, irrational fears and anxiety.

His approach, later known as psychoanalysis, came out of decades of trying to probe reasons for his patients’ problems, as well as considering his own.

Freud’s efforts convinced him of the presence of the *unconscious* – that which contains thoughts, memories and desires that are below conscious
awareness but still exerts influence.

*The unconscious is the true psychical reality; in its innermost nature it is as much unknown to us as the reality of the external world.*

Sigmund Freud, Austrian neurologist

Proof of the unconscious lay with slips of the tongue revealing true feelings and the content of dreams that reflect internal conflict that caused most psychological issues.

**Psychoanalytic theory** – explanations of personality, motivation and mental disorders by looking at unconscious factors determining behavior.

Freud’s theories were extremely controversial for several reasons:

One, it suggested, contrary to the prevailing thought of the day that people were not aware or in control of those things which determines behavior.

Second, he also proclaimed that people’s ability or inability to deal with sexual urges to be at the root of many psychological issues – this at a time when discussion of sexual issues to be taboo and lasciviousness.

*(Freud) had a sharp vision; no illusions lulled him to sleep except for an exaggerated faith in his own ideas.*

Albert Einstein, German physicist

While his fame and respect grew slowly, he earned the support of followers like Carl Jung and Alfred Adler; supported by American G. Stanley Hall.

Psychologists continued to resist as psychoanalytic practice grew mainly for its focus on the unobservable.

Still trying to shake its earlier focus on the conscious, psychologists felt that the focus on the unconscious was unscientific speculation that would soon fade away.

As their efforts against Freud’s theories threatened to overtake them, psychologists began incorporating efforts to figure out, in a scientific way, topics like personality, motivation and abnormal behavior.

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**Skinner Questions Free Will as Behaviorism Flourishes**

*Man can do what he wills but he cannot will what he wills.*

Arthur Schopenhauer, German philosopher

Just as it seemed that behaviorists were giving ground to the psychoanalytic forces, a failed writer emerged to radically reverse that named B.F. Skinner.

Without rejecting the possibility and impact of internal forces, Skinner re-injected Watson’s idea of focusing on the observable.

If the stimulus of food is followed by eating, you don’t have to do too much guess work to figure out the levels of hunger being experienced by an organism.

Skinner felt that an organism’s environment was the greater determinant of behavior and while the internal had its influences, one did not have to go into such hazy area to explain such actions.

His driving philosophy is that behavior will repeat when it creates positive outcomes and will diminish if it creates negative ones.

He did much work with animals, even teaching pigeons to play ping pong, under the auspices that organisms can be convinced to do much to hear positive consequences.
His work is frequently used in schools, factories, prisons and mental hospitals, among other settings.

Skinner’s work was controversial because of its implications. In his book, *Beyond Freedom and Dignity* (1971), Skinner said that behavior is solely the product of external stimuli and its governed by principles. In short, there is no free will – it is an illusion.

*I submit that what we call the behavior of the human organism is no more free than its digestion.*

B.F. Skinner, American psychologist

*The book itself is like Boris Karloff’s embodiment of Frankenstein's monster: a corpse patched with nuts, bolts and screws from the junkyard of philosophy….The book’s voice, like Karloff’s, is an emission of inarticulate, moaning growls – directed at a special enemy: “Autonomous Man.”*

Ayn Rand, Russian-born novelist and philosopher

Critics lashed out at Skinner, much like Freud before him, over his ideas on free will or the lack thereof. Most were based on misconceptions of Skinner’s thesis, including that he was suggesting he was attacking a “free society” and that he was promoting a “police state.”

Still, behaviorism as a discipline grew and dominated the field of psychology throughout the 1950s and 1960s.

*The Humanists Revolt*  

By the 1960s, some scientists and theorists were attacking psychoanalysis and behaviorism as dehumanizing saying the former focused only on primal, sexual urges and the latter’s emphasis on simple animal behavior. Neither looked at the unique qualities of human behavior.

**Humanism** – emphasizes the unique qualities of humans, especially their freedom and their potential for personal growth.

Taking an optimistic view point, humanists declared that people were not at the mercy of biology or the environment and are so advanced and unique, studying animals is no clear indicator to the behavior of humans.

The two biggest figures in the humanist movement were Carl Rogers and Abraham Maslow.

Rogers put forth that human behavior is connected to a person’s “self-concept” which animals lack.

*It seems to me that…each person is asking, “Who am I, really? How can I get in touch with this real self, underlying all my surface behavior? How can I become myself?*

Carl Rogers, American psychologist

Rogers and Maslow argued that the human drive for personal growth explains behavior and that psychological issues stem from interference of this motivation.

While humanism has faded in importance and relevance, its long-lasting impact lies in how they treated those with psychological problems and disorders.
Psychology Comes of Age as a Profession

By the 1950s and 1960s, psychology was maturing as a profession and with it, a more practical side of the science emerged.

**Applied psychology** – branch of psychology concerned with everyday, practical problems.

Stemming from World War I with mental testing of recruits, intelligence tests as developed first by French psychologist Alfred Binet became a standard towards placing people in the most applicable area.

The primary and traditional approach (though few did it) was to be **clinical psychology** – concerned with the diagnosis and treatment of psychological problems and disorders.

It would be a second world war that would bring more psychologists into the clinical and applied arenas.

Post-war, agencies like the Veterans Administration funded the training of clinical psychologists to deal with trauma and emotional scarring with which many returning veterans struggled.

Finding the work rewarding and challenging, by the 1950s, more than half of newly minted psychology doctors went into the clinical field.

*War has given applied psychology a tremendous impulse. This will, on the whole, do good, for psychology, which is the largest and last of the sciences, must not try to be too pure.*

G. Stanley Hall, American psychologist

The growth of the “professionalization” of the science worried and irritated those in the research side of the science.

That controversy continues today – in 1988, the APA lost its research-oriented members to create a new American Psychological Society (APS) to focus on the scientific aspect of the discipline.

Despite the push back by researchers, the clinical aspect of psychology has grown into specialties like school, industrial/organizational and counseling psychology.

Psychology Returns to its Roots: Renewed Interest in Cognition and Physiology

On the research side of the ledger, psychology has turned the clock back and re-focused on studies of the consciousness, now called cognition, and the physiological basis for behavior.

**Cognition** – mental processes involved in acquiring knowledge.

Where once psychologists were not interested in the unobservable, a new crop of scientists began wading into these mental processes.

Swiss psychologist Jean Piaget focused on children’s development while American Noam Chomsky looked at the development of language.

American Herbert Simon and his colleagues did ground breaking research on problem solving that led to a Nobel Prize.

These men sparked a renewed interest in the cognitive processes.

In recent decades, those holding to the cognitive perspective have put forth that looking only at the observable paints an incomplete picture on why people behave.

Additionally, with studies on decision making, reasoning and problem solving have shown that there are now methods not seen or possible earlier that can be
observed.
The 1950s and 60s saw fascinating and ground breaking studies that stoked interest:
  - Canadian James Olds work on how electrical stimulation of the brain can produce pleasure and rage.
  - American Roger Sperry demonstrated that each hemisphere of the brain specialize in differing tasks.
  - American David Hubel and Swede Torsten Wiesel proved how visual signals are processed by the brain – it led to a Nobel Prize for the two.

The increased focus on the biological perspective of behavior returned psychology to some of its earlier efforts that had lost favor to behaviorists.

**Psychology Broadens its Horizons: Increased Interest in Cultural Diversity**

Throughout the history of psychology, the pursuit to understand the principles of behavior has been done middle to upper-class white westerners and little was done to understand if or how it related to the same in non-westerners or ethnic minorities in the west. There are a couple of reasons for this:
  - One, it is more expensive and time-consuming to not just work with those around you – who tended/s to be white middle to upper-class folks.
  - Two, psychology is an individual concern, not group-oriented.
  - Third, the concern that cultural comparison could create stereotypes.
  - Fourth, ethnocentrism – a view that one group is superior to others and used to judge other groups – may have been part of psychological decision making.

Recently, this trend has reversed for two possible reasons:
  - One, cross-cultural communication and interaction is easier in the modern age.
  - Two, populations in the west have grown more diverse.

With culture so much easier and accessible to psychologists, understanding how it impacts thoughts, behaviors and how people differently look at the world and at discrimination are just some of the angles that psychologists are considering.

**Psychology Adapts: The Emergence of Evolutionary Psychology**

Led by American psychologist David Buss, evolutionary psychology is a new theoretical perspective that could be prevalent for years to come.

Evolutionary psychology – examines behavioral processes with relation to its adaptive value for members of a species over the course of many generations.

This is the focus on the traits that have survived evolutionary change and studying the same – an aggressive group of people clearly has something in their biology that passes on this mode of behavior.

The human mind was sculpted by natural selection, and it is this evolved organ that constitutes the subject matter of psychology.

Peggy la Cerra and Robert O. Kurzban, American psychologists

Recent efforts have shown differences between women and men with regards to visual-spatial ability.

Given historical characteristics that men have hunted and women gathered, studies have shown that men are better than women with spatial tasks (reading a map, mental manipulation of images, maze learning) while
while women excel in gathering-oriented tasks (remembering where things).

Evolutionary psychologists, therefore, explain gender differences that has evolved due to pressures faced historically by our ancestors.

We’ve seen this approach before with William James and his infusion of Darwinian principles of natural selection with human behavior.

By the 1980s, a group of psychologists began making remarkable breakthroughs within the evolutionary perspective:
- David Buss
- Martin Daly
- Margo Wilson
- Leda Cosmides
- John Tooby

They began looking at all matters of topics including mating preferences, jealousy, aggression, sexual behavior, language, decision making and personality.

Major criticisms of the new school of thought suggest that evolutionary stimuli are untestable and its explanations post hoc.

*Psychology has a long past but only a short history.*
- Herman Ebbinghaus, German psychologist

Psychology’s history, as a science, is rich and diverse in approach and allows the student to look at almost any aspect of their behavior through several lenses.

**Psychology Today – Vigorous and Diversified**

**Psychology** – science that studies behavior and the physiological and cognitive processes that underlie it, and it is the profession that applies the accumulated knowledge of this science to practical problems.

One clear sign of the growth of the field of psychology is the growth of membership within the American Psychological Association (APA).

It is the second most popular undergraduate degree and makes up the direction of 10% of all doctoral degrees in the humanities.

Worldwide, some 1,100 journals publish articles related to psychology.

Today, only a small portion of psychologists work exclusively within academia while the rest of the field are in various fields from education, the military to hospitals.

**Research Areas in Psychology**

Like most medical fields, psychology is not a general endeavor but rather, one that requires specialization as one progresses in their studies.

There are seven major research areas in psychology today (percentage of research psychologists who claim this area as their major interest):
- Developmental psychology (24.6)
- Social psychology (21.6)
- Experimental psychology (14.1)
- Physiological psychology (9.9)
- Cognitive psychology (8.0)
- Personality (4.8)
- Psychometrics (5.5)

**Professional Specialties in Psychology**

Within applied psychology, there are four clear specializations (percentage working in area):
- Clinical psychology (67.5)
- Counseling psychology (15.0)
- Educational/School psychology (8.8)
- Industrial/organization psychology (5.5)

Though the above percentages are sound, it does not mean that there are not many crossovers
by psychologists – research scientists delving into the applied arena and vice versa. Psychiatry is not the same as what clinical psychologists do.

**Psychiatry** – branch of medicine concerned with diagnosing and treating psychological problems and disorders.

*Television has done much for psychiatry by spreading information about it, as well as contributing to the need for it.*

Alfred Hitchcock, American film maker

### Putting it in Perspective – Seven Key Themes

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<tr>
<th>Themes Related to Psychology as a Field of Study</th>
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<td><strong>Theme 1 – Psychology is Empirical</strong></td>
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<td>We all have our theories about why people are the way they are but with psychology, it is <strong>empirical</strong> – premise that knowledge should be acquired through observation. Psychologists do not approach their jobs with reasoning, speculation or common sense. They must propose questions, in the spirit of the scientific method, and test through observation as to its validity. Trained to be skeptical, psychologists would attack with questions even the most repeated speculations such as the idea that people get more depressed over the holidays. How many people get depressed? From what social or economic classes? How is depression defined? How long does depression last?</td>
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<td><strong>Skepticism, like chastity, should not be relinquished too readily.</strong> George Santayana, Spanish philosopher and writer</td>
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<td><strong>Few men speak humbly of humility, chastely of chastity, skeptically of skepticism.</strong> Blaise Pascal, French mathematician and philosopher</td>
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<td><strong>Theme 2 – Psychology is Theoretically Diverse</strong></td>
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<td>Observation is not done just for its own sake but for the purpose of formulating theories. <strong>Theory</strong> – system of interrelated ideas used to explain a set of observations. Freud made individual observations about slips of the tongue, dreams and psychological issues but coalesced these observations to propose the theory of the unconscious. The diversity within psychology is proof that this more than one way to look at the same type of behavior – people and life are not that simple.</td>
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<td><strong>Theme 3 – Psychology Evolves in a Sociohistorical Context</strong></td>
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<td>It might be easy to suggest that psychology is a pursuit done in ivory towers but the science has changed as our society has changed over the last century. Indeed, psychology and society are interconnected making the science develop within a historical and social context – or sociohistorical. If psychology had emerged as a science two centuries earlier, it might have taken a more philosophical approach but that it happened in the 19th century, at the height of scientific and technological breakthroughs, psychology was born in the laboratory. Freud’s ideas were a product of his living in a time of extreme sexual suppression.</td>
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The explosion of practice and popularity of psychology has a direct connection to the role psychologists played during World War II.

The fact that you have been bombarded with, and will be later in your career, with aptitude and other standardize tests is a product of psychology and its emphasis of mental processes.

Additionally, think of how psychology has impacted child rearing with the works of John B. Watson, B.F. Skinner, Carl Rogers and Françoise Dolto.

Themes Related to Psychology’s Subject Matter

Theme 4 – Behavior is Determined by Multiple Causes
As psychology has developed, it has become increasingly clear that behavior is a complex construct with multiple causes.
While we may understand this intellectually, we seldom use this to diagnose behavior around us – “she failed because she is lazy”; “he became director because he was lucky”.
Whether you pass this class or not, it will not be just one factor that will determine your fate but likely a multitude of reasons.

Theme 5 – Behavior is Shaped by Cultural Heritage

Culture – widely shared customs, beliefs, values, norms, institutions and other products of a community that are transmitted socially across generations.
Culture differentiates not just different peoples but also groups within larger groups or non-ethnic groups (deaf or homosexual cultures).
Culture is so pervasive but often, we don’t think about its full consequences because much of it we take it as par for course and therefore, don’t consider it when evaluation behavior.
Some psychologists have gone so far as to say it would be rare for a person to act without some cultural consideration – be it overt or subconsciously.

Theme 6 – Heredity and Environment Jointly Influence Behavior
One of the big questions that psychology has wrestled with has been one that man has attempted to answer since the time of ancient man – are we a product of our biology or our environment?
Typically, it has been put forth as an all or nothing proposition but psychologists have determined that both have a substantial impact on people and their behavior.

Theme 7 – People’s Experience of the World is Highly Subjective
Perception tends to personalize and subjective because we all take in stimuli differently.
Two fans of opposing teams are going to see different things while watching a match between their favorite sides.
When you meet another person, what you pay attention to might be completely different than what another person would.