

Part I

"It's An Inside Job"

Chapter 1

"Two-faced psychology"

Psychology has always had a lot to do with motives

Like prostitution and war, hasn't "psychology" been around in one form or another forever? Throughout history, human beings have tried to understand one another - whether sympathetically, for practical purposes, or for reasons more akin to conquest. In subtle and not so subtle ways, we have resorted to the most cunning and vile of tactics in high-stake arenas such as the battlefield and the lovers' nest. Put in such terms, psychology seems to have a lot to do with motives.

Linguistic roots

Psychology is a word which has roots in Greek¹ where it is spelt *Ψυχολογία*. Translated it means "the study of the 'mind'" (or 'breath' or 'spirit' or 'soul') and can be compared with another word "physis" (spelt in Greek *φύσις*) which means "nature", implies the emergence of light from darkness², and which spawned the modern word "physics" used to describe the study of the natural world (and universe) today.

Human language spans human psychology

Our capacity for language is a species-specific and fundamental yet mysterious phenomenon. Spanning the duality of modern psychology - the tension between subjective "mind" and objective performance³ - language is clearly an observable and measurable instance of human behaviour on the one hand. Nowadays there are sophisticated theories explaining its development in children, and its reliance on certain (physical) components of the human brain and central nervous system. The sub-discipline of "human cognitive neuropsychology" relies on intelligent interpretation of trauma following injuries. On the other hand, there are still no complete (or better than speculative) accounts of why human beings have this capacity and other species do not (whether this is, in fact, true) and whether language is part of a system of faculties that underpins a species-specific capacity for consciousness, the subjective experience of pain, even "conscience" and mutual love. An accessible philosophical treatise is provided in Euan Macphail's incisive summary of *The Evolution Of Consciousness*⁴.

¹ Ancient Greece spanned the period (approximately) from the "Dorian Invasion" around 1100 BC to the Roman conquest after the Battle of Corinth in 146 BC. The Dorians were one of three Greek tribes inhabiting Crete in Homer's *The Odyssey*. Probably they were responsible for (eliminating the old and) establishing an enduring culture (i.e., a resilient set of traditions and dialects) which informed Classical Greece - vital in history because the developments in language, philosophy, political systems, science and the arts etc which took place during the 5th and 4th centuries BC influenced the later Roman Empire deeply; in turn, shaping significantly the modern (Western) world.

² In *Walden*, Thoreau describes the seasons at Walden Pond (Concord, MA). His depiction of Spring conveys an apocalyptic but existentially optimistic view of nature. Henry David (born David Henry) Thoreau (1817-1862) was an American naturalist, philosopher and writer who famously advocated, in one volume, *Civil Disobedience* against unjust governments and wars, particularly if they supported slavery. The arch-behaviorist Burrhus Frederic Skinner (1904-1990) carried a copy of Thoreau's *Walden* in his youth and was inspired to write during the 1940s *Walden Two* - a fantasy about community living based on behaviorist principles. Although referred to as an "individualist anarchist", Thoreau favoured the improvement rather than the abolition of governments.

³ The prevailing school of psychological thought in modern Western institutions, especially universities, is still "behaviorism" which - focussing only on that which is directly observable and measurable (i.e., what living things actually do), with its predilection for controlled manipulation in the laboratory - somehow separates itself from those who prefer to consider subjective experience - or, if you like, "mind".

⁴ Macphail, E. (1998) *The Evolution Of Consciousness*. Oxford University Press: Oxford

Psychology becomes institutionalised

"Mind" and "behavior(ist)" strands of modern psychology can be traced to Leipzig, in 1870s German Saxony, where Wilhelm Maximilian Wundt (1832-1920) set up what is widely accepted to be the first psychology laboratory. Apparently Wundt, the son of a Lutheran pastor, was most cerebral - disposed to studying over stereotypical boyhood pursuits, and later shunning physicianship in favour of vocational scholarship. Serving an apprenticeship under Hermann Ludwig von Helmholtz (1821-1894)⁵ in Heidelberg, he became well schooled in the practice of observation and experimentation in the laboratory. These principles of approach to acquiring knowledge were highly regarded in their day because of the massive impact that Nicholas Copernicus (1473-1543), Galileo Galilei (1564-1642) and Sir Isaac Newton (1643-1727) had had in generating the "Scientific Revolution" - in which many assumptions about the nature of the world and universe that had been held until then - i.e., throughout all human history - were suddenly overturned.

The psychological impact of the Scientific Revolution

One can barely imagine the psychological nature of this shake-up. Up until the 16th and 17th centuries, and the fresh scrutiny of celestial objects, star-gazing human folks understandably may have presumed - unwittingly (since they had no reason to do otherwise) - that nothing material existed beyond what they could see. Perhaps, moreover, there was (and still is) an instinctual tendency to regard more proximate objects as proportionately meaningful and religiously significant. There are many examples of sun-worship in ancient history⁶ - entirely reasonable then - as anyone needed little evidence to appreciate how light and heat emanated from that solar source, singularly sustaining all living things including crops, domestic animals and humans themselves. By the 15th century, Christianity was well-established in Western thinking and, although it relegated the divinity of the sun, there was nothing in scripture to contradict the supposition that the sun revolved around the centre of the universe, i.e., the earth⁷.

Science and religion are not natural bedfellows

Copernicus was responsible for introducing "heliocentrism" or the notion that the sun (rather than the earth) is the centre of the universe. Galileo famously incurred the displeasure of the Vatican for maintaining that tradition. In those days (and, of course, for centuries and millennia before) it was fashionable to kill people by the most foul means for non-conformity, and the Roman Inquisition was no exception⁸. Galileo, who in early adulthood had contemplated a

⁵ Helmholtz was to become a prolific physiologist, arguably the greatest of all time, developing theories in as broad reaching areas as hearing and vision in physiological psychology; thermodynamics, electrodynamics and the conservation of energy in physics (earning the admiration of Albert Einstein, 1879-1955), and aesthetics in philosophy.

⁶ In Hinduism, the sun god is called "Prati-Aksh Devta" meaning "The Seen Divinity", and in Sanskrit the sun is "Mitra" or "Friend". In Ancient Egypt, a progression from multitheism towards quasi-monotheistic "Atenism" was encouraged by Amenhotep IV (aka Akhenaten) in the 18th dynasty (circa 1350 BC). There are other examples of sun-worship in ancient and not-so-ancient Africa - and in other places, e.g., amongst the Aztecs.

⁷ There are numerous references in the Bible to setting the earth's foundations, the earth's immovability and the sun rising and returning to its ordained place. We do not have to look far for apparent contradictions and anomalies in scripture; however, we might ask ourselves whether in doing so we are seeking out literal truths, a spiritual message or simply seeking to scoff. Is it not our latent motives which are critical?

⁸ Such brutality seems fundamentally at odds with the teachings of the most peaceable figure in history - Jesus Christ - whose followers' own history is one of remarkable received oppression (whether in the form of the personal vendetta of Nero in 67 AD, or the "Great Persecution" by Maximin, Decius and Diocletian in the early 4th century). Even the more "civilised" of their persecutors - such as Pliny The Younger - sought "merely" position and empire - never committing atrocious carnage in the name of God.

religious vocation (as a Catholic priest), was spared execution - being subjected only to permanent house arrest - but others were less fortunate. Persecuted more for their views on religious matters, proponents of heliocentrism such as Giordano Bruno (1548-1600) were burned at the stake for holding a personal view of God akin to "pantheism" (God and nature or the universe are equivalent). By the time Sir Isaac Newton came to publish mathematical laws describing the motion of the planets⁹, his evidence was too incontrovertible to permit charges of heresy and, in any event, the Roman Church had lost its political foothold in England after the reign of Henry VIII.

Newton's humility

The date of Newton's birth (at the hamlet Woolsthorpe-by-Colsterworth in Lincolnshire, England) depends on which calendar is invoked. At the time he was born the "Old-Style" (OS) Julian calendar (introduced by Julius Caesar in 46 BC) located his birth date at 25th December 1642. For some, it is strangely coincidental that Newton was born in the same year that Galileo died. The "New-Style" (or NS) Gregorian calendar (named after Pope Gregory XIII who decreed it in the papal bull *Inter gravissimas* on 24th February 1582) was introduced only gradually across parts of Europe, and locates Newton's birth date at 4th January 1643. Newton's father (Robert Newton, a farmer) died six months after marriage, and three months before Isaac was born. When Isaac's mother (Hannah Ayscough) re-married, the youngster was lodged with his maternal grandmother (Margery Ayscough). In circumstances he appeared to resent, he took a strong dislike to his stepfather (the Reverend Barnabus Smith). In a confessional list of sins committed up to the age of 19, Newton declared, "Threatening my father and mother Smith to burn them and the house over them"¹⁰. Born prematurely, Newton was a sensitive, private, humble man who wrote as much (if not more) about religion as about science, having said in a letter to the "father of microscopy" Robert Hooke (1635-1703), 6th February 1676, "If I have seen further it is by standing on ye shoulders of giants". We can see how Copernicus and Galileo must have figured tall amongst Newton's lofty ancestors, but what of the evolution of ideas taking place alongside these biographies? How did these translate to Wundt's Leipzig and beyond - informing so essentially our modern psychology?

Self-indulgent philosophers

Once human beings start trying to engage with each other about what is true and what is not true they (almost) invariably start arguing; however, most people (with the exception of the most self-indulgent philosophers) can agree that black is not white. It is this kind of hard objectivity that is sought by those who follow in the empirical tradition. In the example just given, we are referring to a stimulus (light reflected to greater or lesser degrees depending on the light-absorbent properties of an object) and a sensory experience (vision). The philosophical tradition of empiricism considers that knowledge is acquired only through experience. We can trace this sort of thinking as far back as Aristotle (384-322 BC) in Classical Greece. Aristotle occupies an elevated position in the known evolutionary path of ideas stemming from Socrates (469-399 BC) about whom little is recorded other than via progeny: from Plato (428-348 BC, of whom Aristotle was a student) to Alexander the Great (336-323 BC, whom Aristotle taught, and who expanded the Greek empire massively in his time). Aristotle's view of the human mind at birth - as an unmarked tablet waiting to be written upon by the mark of experience - was developed by Eastern

⁹ Newton, I. (1687) *Philosophiæ Naturalis Principia Mathematica*. Samuel Pepys: London

¹⁰ Cohen, I.B. (1970) *Dictionary Of Scientific Biography* (Volume 11, p.43). Charles Scribner's Sons: New York

philosophers such as Avicenna (980 AD-1037) in 11th century Persia, Abubacer (1105-1185) in 12th century Arabia - and by Saint Thomas Aquinas (1225-1274), a Dominican priest who influenced not only Christian theology but all of Western philosophy to the present day. To those readers for whom the *tabula rasa*¹¹ principle seems obvious - a "no brainer" so to speak - it is as well to remember that Plato (Aristotle's mentor as we have seen) considered "mind" to be formed in the "heavens" prior to life¹². Ideas are often as much reactions against what has gone before as they are novel or revolutionary. The Platonic view of a human mind that has the (intellectual) capacity for union with its maker was shared by Saint Bonaventure (1221-1274), a Franciscan contemporary of Saint Thomas Aquinas and, like him, one of only 33 Doctors of the Church. It is a corollary of empiricism that "innate" knowledge (revelation, inspiration, intuition, ideas - even reason) either doesn't exist, or is spurious (with the possible exception of "knowledge" transmitted through DNA). The extent to which one is "radical" about such matters is (inversely) proportional to the extent to which one tolerates exceptions to these strictures.

The founders of empirical psychology fall out with each other

Advancing in history to the establishment of Wundt's laboratory in 1879, we can appreciate better, now, how the empirical tradition and the Scientific Revolution shaped psychology as we know it today. From Helmholtz, Wundt inherited scientific skills in observation and measurement. Wundt was less interested in celestial bodies as he was internal machinations, or the contents of consciousness as it were. Wundt's typical approach to investigation of the psyche was to invite subjects (whom he introduced to the quiet and undisturbed environment of the laboratory) to contemplate the contents of their "minds"; i.e., to "introspect", as they experienced the ticking of a metronome (a device that clicks periodically, like the device a musician might use when a percussionist is not at hand). From the self-reports so generated, Wundt deduced a "Theory of Feeling" in which every internal state (for instance, the "anticipation" that preceded a forthcoming click) could be located in relation to three orthogonal dimensions: "pleasure versus displeasure", "excitement versus calm" and "strain versus relaxation". It is not so much true that Wundt's theories survived history as it is that his laboratory spawned a generation of influential theorists in their own fields. At Leipzig itself, Oswald Külpe (1862-1915) had abandoned his first subject - history - to study under Wundt, later becoming Wundt's assistant.

¹¹ The expression "*tabula rasa*" is attributed to "the first of the British empiricists" John Locke (1632-1704) - an Englishman who inspired the Scottish philosopher and fellow British empiricist David Hume (1711-1776), British philosopher and MP John Stuart Mill (1806-1873) and - abroad - French philosophers and Revolution protagonists François-Marie Arouet aka Voltaire (1694-1778) and Jean Jacques Rousseau (1712-1778).

¹² Reminiscent of Psalm 139: 13-17, thought to date from Old Testament David or later; i.e., written some time between 1100 and 400 BC, thereby preceding Plato considerably:

*It was you who created my inmost self,
and put me together in my mother's womb;
for all these mysteries I thank you:
for the wonder of myself, for the wonder of your works.*

*You know me through and through,
from having watched my bones take shape
when I was being formed in secret,
knitted together in the limbo of the womb.*

*You had scrutinised my every action,
all were recorded in your book,
my days listed and determined,
even before the first of them occurred.*

(Jerusalem Bible: Popular Edition. Darton, Longman & Todd)

These two fell out famously over "imageless thought". Unlike Wundt, Külpe argued that introspection could be used to study complex cognitive processes, coining the expression "imageless thought" to represent psychological processes that were not necessarily hinged on sensory information, or anything (figuratively) in the "mind's eye".

Equally diverse early progeny

The record of prominent psychologists who emerged from Wundt's Leipzig establishment is as diverse as it is impressive. Külpe's progeny included the Marxist philosopher Ernst Simon Bloch (1885-1977) and Henry Jackson Watt (1879-1925) - known for *Einstellung* or "mental set" in arithmetic. Aside from Külpe, Wundt's own students included: James McKeen Cattell (1860-1944), the first professor of psychology in the USA and whose work encompassed intelligence and mathematics in psychology; Granville Stanley Hall (1844-1924), the first President of the American Psychological Association (or APA); Charles Hubbard Judd (1873-1946), an educationalist who favoured empirical over theoretical approaches in schools; Charles Edward Spearman (1863-1945), known for the mathematical "rank" correlation and "g" (or a general factor in intelligence); Lightner Witmer (1867-1956), inventor of "clinical psychology" and co-founder of the first ever psychological clinic at the University of Pennsylvania in 1896 - and Edward Bradford Titchener (1867-1927), an Englishman who settled at Cornell University (New York). It was Titchener who brought the concept of "empathy" into modern psychology - translating from German the original *Einfühlung*, first used by Robert Vischer (1847-1933)¹³.

The great brain-wash

Notwithstanding this august set of significant apprentices, Wundt's "introspection" was eclipsed by the tidal wave of behaviorism that swept America in the early-to-mid 20th century. Maintaining this spelling (without the 'u'), we acknowledge the nationality of its founder John Broadus Watson (1878-1958), and also its most well-known and enthusiastic proponent, Burrhus Frederic Skinner (1904-1990). Behaviorism, explicitly, is concerned with behaviour which - being measurable and amenable to controlled investigation, especially in the laboratory - is, according to behaviorists, more usefully the proper subject matter of psychology than "internal" states. In just this way, behaviour was suddenly divorced from "mind", a concept which the most radical behaviorists consider redundant (unnecessary). Still prevailing in contemporary British, European and North American universities, behaviorism has generated a large body of empirically-driven theory for its own scientific sake, but also in the hope of extrapolating its complex models of learning to humans which - for the most part - it recognises as a species instance of vertebrates.

Curiously unrecognisable "progress"

Would not our amateur "psychologist" - the one who throughout history played guessing games with his enemy in war, succumbed to treachery in "love", or stooped in compassion to assist a fellow human being in need when no-one was there to witness the beneficent deed (and, somehow, he knew that) - be somewhat disappointed about the shape of the modern discipline? Have not the Scientific Revolution and the limitations of a narrow empiricism (one that appreciates the value of experience only when it is so measurable that we can all see it) excluded the thinking "mind" whose focus the vernacular "psychology" ever was? The agnostic as opposed to the radical in behaviorist terms was thence to be discovered out in the ideological cold. In relation to our "minds" - in psychology - are we not now somewhat two-faced?

¹³ Vischer's *Einfühlung* or "aesthetic sympathy" was also championed by Theodor Lipps (1851-1914) - a German philosopher-cum-psychologist greatly admired by Sigmund Freud.



"Rhubarb"

If Chapter 2 is difficult to digest try 32 times before Part II