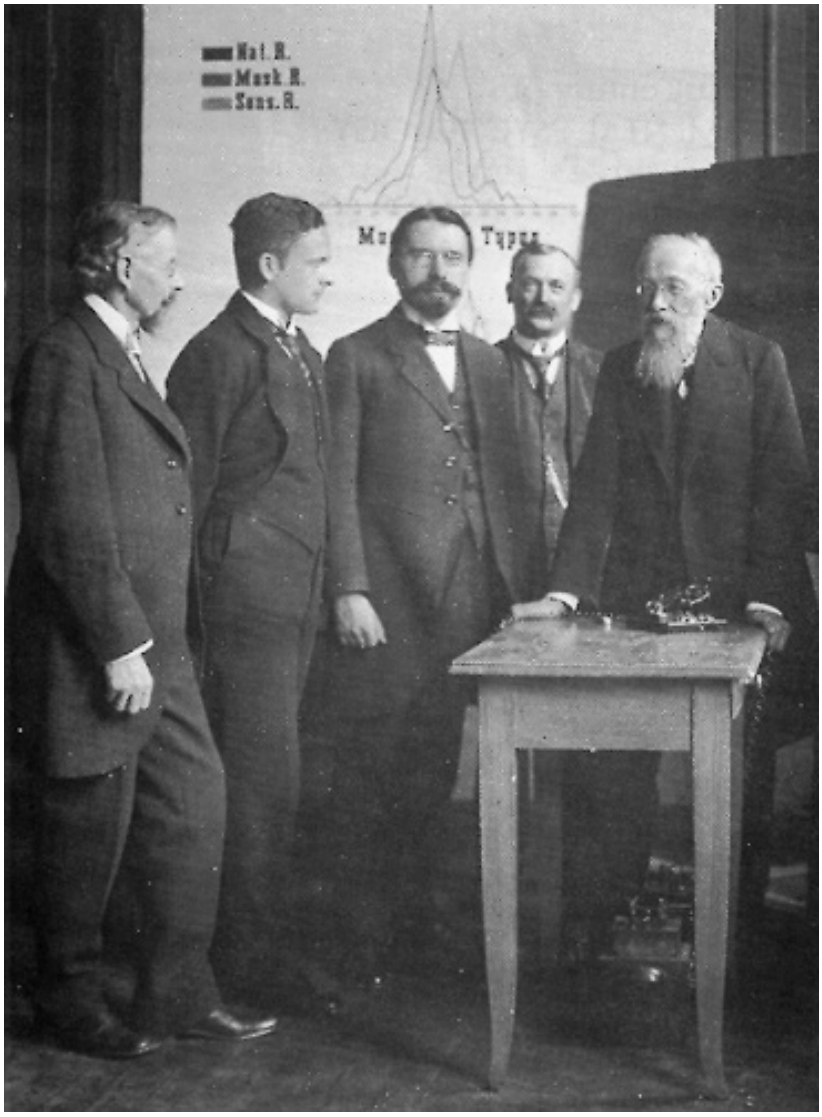

History of Psychology

UCM Fall 2016

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General information

a. Topic of the course

Psychology has a history, just like all other human endeavours. In this course we will follow some of the main developments in psychology from the 16th century onwards. That time is a good starting point for our journey, because it is the time when modern science started to take shape. The way in which the problems of natural science were being defined created the domain of the mental, of the object of psychology. This immediately makes clear that one cannot understand psychological issues without understanding their relationships to other sciences, and to ideas in philosophy that reflect the concepts and goals of the natural sciences. Not only did the rise of the natural sciences define the content of psychology, it also gave rise to a perennial problem in the foundations of psychology, the so called mind-body problem.

To see psychology turn into an empirical science we have to wait till the 19th century, when the natural sciences were breaking up into a large conglomerate of disciplines. This is the time when organized experiment took over from the individual savant; this is the time when medicine and psychology started to become intertwined. It is also the time when biology made inroads into psychology, especially through the theory of evolution. If the scientific revolution defined its object, the 19th century defined psychology as an academic discipline.

The last century marks the proliferation of psychology. A proliferation we can witness in a whole array of schools and perspectives: Behaviourism, cognitive psychology, cognitive neuroscience, clinical psychology, the psychology of individual differences. However we also see this proliferation in the rise of the psychological society, a society in which psychologists work as trained professionals, competing and cooperating with other groups of professionals. Psychology as a profession is linked to the rise of psychological concepts in the general population to understand their own functioning and especially their problems. We talk about a person being neurotic, we tag an individual as depressed, as extravert or introvert. Psychology is everywhere around us. What does this imply for the nature of psychology?

b. Nature of the course.

If one must characterize this course, the two most fitting concepts are: historical and reflexive.

The course is historical in the sense that we deal with the actual development of psychology and other sciences. We will look at these in the context of their time and the culture of the age. The course is reflexive in the sense that we will have to think about the nature of science, the nature of psychology and the nature of the societies where psychology has become entrenched as a (science based) practice.

So we will deal with questions such as:

- What is the nature of psychology? If it is a science, then what kind of science is it?

- Will psychology one day be absorbed by the life sciences, or does it have a character of it own, a unique niche on the continent of the sciences?

- What are the possibilities and limits of psychology? What can it bring to society, and where will it ultimately falter?

A stroll through history often gives food for thought about such issues. Note that there are not necessarily final answers to such questions. We may argue for a specific position, but it is doubtful whether such issues can be clarified in any final way.

c. Course objectives

At the end of the course students have knowledge of:

1. The nature of psychology as a science, and how this notion developed.
2. The origins and development of the main schools in psychology, such as association psychology, behaviorism, psychoanalysis etc.
3. The context in which the history of psychology took place, i.e. the broader scientific and cultural context that psychology is part of.
4. To be able to explore a variety of sources, digest these and use them to enrich the discussion of the tutorial group meetings. See below under f. Literature

d. House rules

1. There is a 85% attendance requirement for the tutorial groups. With 12 meetings this means you can miss 1 meeting. Missing 2 gets you an extra assignment. Missing 3 means you forfeit the course

2. There is a 5 minute grace period for being late. In case you are more than 5 minutes late you miss the attendance for the meeting

3. All students must have a hard copy of the course manual, and bring this to class.
4. The use of laptops, tablets and smart phones in class is not allowed. These must remain in your bags. They may be used during lectures, not during tutorials.

5. On a date (specified below) you must hand in your paper. This must be done both through safe assign, and in the form of a hard copy. If you do not do this your paper will not be graded.

e. Lectures

There is one lecture in each week. The subject matter of the lectures is part of the topics to be studied for the test.

f. Literature

There are 2 reading sources for this course:

a. Thomas Leahey, A History of Psychology: Main Currents in Psychological Thought. International edition, 2003.

b. Internet

A large number of sources is available on Internet. Below are some of the more important links where you can find primary and secondary sources. Primary sources are books and articles written by psychologists and others, in their own time. John B. Watson, (1913). Psychology as the behaviorist views it. Psychological Review, 20, 158-177, is a primary source. 'Robert Boakes, From Darwin to Behaviorism. Psychology and the minds of animals. Cambridge university press, Cambridge 1984' is a secondary source, written by a contemporary historian about the development of behaviorism. Most of the sources on the internet are from the former category.

Part of the aims of this course is that students search for literature on the history of psychology. This also means that students will not necessarily always come up with the exact same readings, apart from he textbook. This is by no means a problem. The discussion groups are intended to gather different perspectives on a problem through a variety of the sources used by the students.

Below are a few examples of links. This list of Internet resources is nothing more than a sample. More such sources are available. Feel free to find these, and share them with your colleagues.

1. Centre for psychology resources. Portal for large number of site on history of psychology: http://psych.athabascau.ca/html/aupr/history.shtml
2. Timeline for recent history of psychology. Interesting for what is included and leaves out: http://www.learner.org/discoveringpsychology/history/history_nonflash.html
3. Science in the Victorian age. Useful for Darwin and other 19th century knowledge: http://www.victorianweb.org/science/sciov.html arnie.kiss@gmail.co
4. 'Classics in the history of psychology'. The name says all: http://psychclassics.yorku.ca/
5. Primarily a portal for other sites. Has interesting links to the history of sub disciplines in psychology, such as that of testing: http://www.socialpsychology.org/history.htm
6. Site with material on psychological instruments: http://www.barnard.edu/psych/museum/b_museum.html
7. Another portal on history and philosophy of psychology. However, note that some of the links are out of date: http://www.psych.yorku.ca/orgs/resource/
8. The Stanford Encyclopedia of Philosophy also offers a good starting point for some figures in the history of psychology: http://plato.stanford.edu/

Students must look for one relevant internet source for each post-discussion. Send the link of this source to the tutor on the day or night before the tutorial. The post-discussion hence will always be about relevant chapter(s) of Leahey plus the source you have gathered on the Internet. !

g. Schedule

Consult your electronic UCM schedule for your tutorials and lectures

h. Assessment

At the end of the course there is a test with essay questions, covering the subject matter of the course, including the topics dealt with during lectures. The test is for 60% of the grade

Furthermore students must write a review of at least two articles from the history of psychology (either from the set collected during the course from the Internet or additional ones). The review must be between 1800 and 2200 words and is to be handed on a date to be specified during the course.

Objective of the review essay is to understand and place the articles you have chosen in the context of their time, and the problem situation in which they were written. These articles may be taken from any of the internet links above. The essay counts for 40% of the grade.

i. Course coordinator:

Louis Boon, Zwingelput 0.032, louis.boon@maastrichtuniversity.nl

Problems

1. Before psychology: mind in history

We are conscious creatures. We have a mind. We are aware, of our environment (and so is my dog). We are aware of ourselves as individual beings (but is my dog?). Mind is truly a phenomenon that is extremely hard to grasp. What is consciousness, and how and when did we get it? Mind itself has a history.

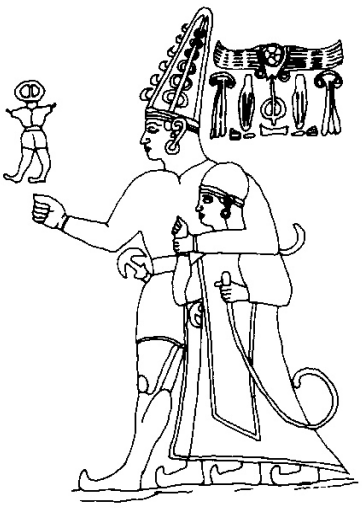
Some scientists believe it took till 60.000 years ago before our ancestors got something we now call the human mind or consciousness. Some call that period the cognitive revolution. Some believe that even as late as the bronze and iron ages we only had a limited form of consciousness, and not much of personhood. But how can we know anything about these distant times and the humans living and experiencing the world? Especially with such a weird phenomenon as consciousness.

Stories transmitted from generation to generation, religious ideas, sacred texts, images on the walls of caves or temples, all of these have fueled the guessing game.

All over the world humans, later designated as philosophers, started to think about the nature of consciousness, but also literary writers, in plays and poems, told us about what they thought the mind was. For our story, in the run up towards the science of psychology, greek thinkers were of seminal importance. After the fall of the western roman empire in the 5th century many of these ideas disappeared for centuries. Later on, via Muslim scholars that had translated these works into arabic, they returned to European culture.

It was of course a culture very different from the pagan greek and roman times. Christianity now dominated Europe. The ideas on man, mind and soul (the eternal soul) of Christianity had to be reconciled with the much more sophisticated ideas of great greek philosophers, like Plato and Aristotle.

Such was the canvas on which in the 16th century modern science would paint a very different picture. In that picture for the first time we glimpse the nature of consciousness and mind the way we have been seeing these ever since.



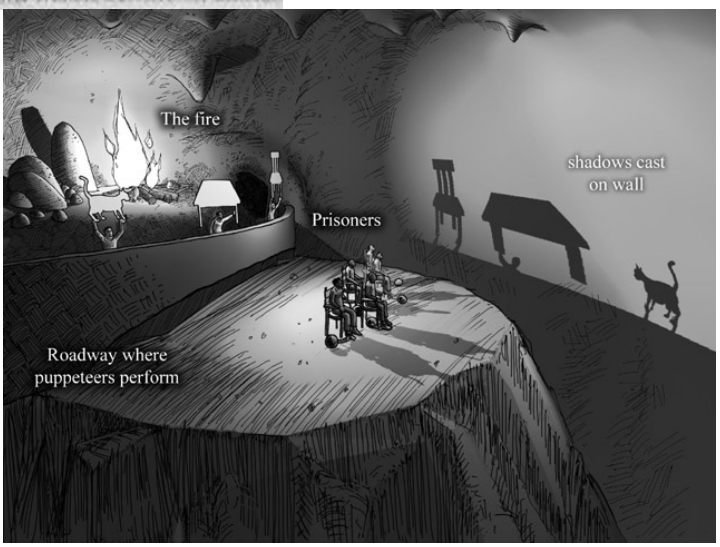
Three examples of a different conception of mind from ours. From left to right: God guiding the king to take action; God giving a law to the king; House statues to make contact with the gods.

Readings

Leahey ch. 2 & 3 (Late antiquity)
41+16 pages

Key concepts

Consciousness
Mind
Person
Greek Philosophy
Plato
Aristotle



Two renditions of Plato's myth of the cave. an essential parabpe for our conception of the mind and its relation to the world. Aristotle will formulate a diametrically opposed perspective.

2. Objective, Subjective, Psychology

The mechanical world view that arose during the scientific revolution in the 16th and 17th centuries did away with vitalistic and mental concepts in physics. From now on, only material processes would be allowed inside science. But there is also the mind.

As long as reality was to some extent of a mental nature, questions about the border between the physical and the mental were ridiculous. But now these become essential, and psychology was the unintended child of this.

Where is the border between physical and mental aspects of reality? How to distinguish the mental from the physical? Is there anything to be distinguished in the first place? Is there a point where physics stops and psychology starts? Or is it possible in the end to subsume psychology under physics? This is food for controversy. Even today we have still not finished this meal.

Two positions from the birth era of psychology, a moderate and a radical one.

A: Galileo Galilei

"I believe that taste, smell and colours are nothing but names for something that solely resides in our corpo sensitivo. If all the creatures capable of experience would be removed from the world these characteristics would disappear with them. If there were no ears, tongues, noses and eyes, there would no longer be sounds, tastes, smells or colours. But the number, form and movement of objects would still be there. These primary characteristics are the only ones that can be analysed in natural science. The secondary characteristics cannot be a legitimate object of science."

So Galilei banishes all mental phenomena form science. But others still wanted to explain mental phenomena. Descartes is a good example. he wanted to explain mental phenomena on the basis of his mechanistic theories.

B: René Descartes

This is how Descartes explains pain, a phenomenon that Galilei would banish from science: A person sits close to a fire, and upon feeling the heat withdraws his foot. How does this happen?

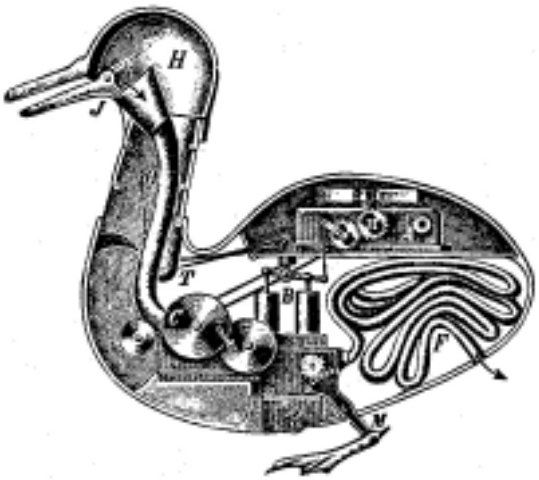
The fiercely moving fire particles agitate animal particles in the body. This movement is passed on by other particles in the nerves, till they reach the brain, where the signal is registered. Particles in the brain come into motion and agitate particles down towards the foot, where the muscles then cause the foot move.

So, secondary characteristics *can* be explained by a mechanistic philosophy.

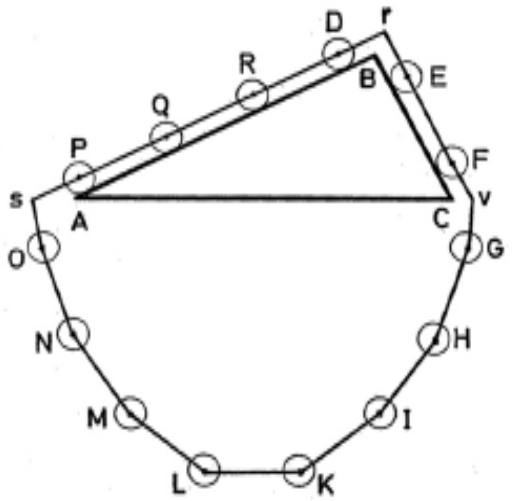
Readings

Leahey ch. 4 & 5

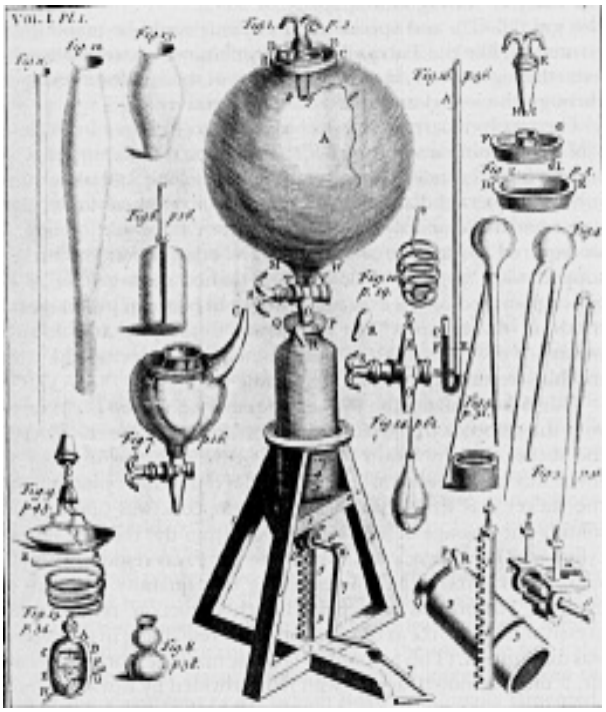
20+29



Vaucusson's mechanical duck. Mechanical life to inspire Descartes



"Miracle is and no miracle". Simon Stevin's Bolcrans, articulating the equilibrium of weights on the inclined plane. Proof of the power of mathematical thinking. Here was the true power of the mechanical world picture



Robert Boyle's air-pump. Mechanicism as an experimental reality

Key Concepts

Mechanical explanation and mechanicism
Vitalism
Objective vs subjective
Primary and secondary qualities
Mind and body

3. Consciousness, structure and function

Psychology as it rose from the scientific revolution was focused on consciousness, on the mental world. Traditionally it asks questions such as: how does the mind or consciousness get filled? How does it acquire structure? Of course such questions were intimately related to philosophy, and to the major positions in that branch of philosophy that is now called epistemology. Remember we are now in the 17th and 18th centuries, and so God was also still important, both as an explanation but also as a standard of explanation.

'Nothing in the mind that was not first in the senses' maintained some, called empiricists. Others, called rationalists, thought that the mind was already pre-structured, full of skills and capacities. But where then did such things come from? Here the representatives of the first position had it easy: from outside, through the senses. God often formed the explanation rationalists gave.

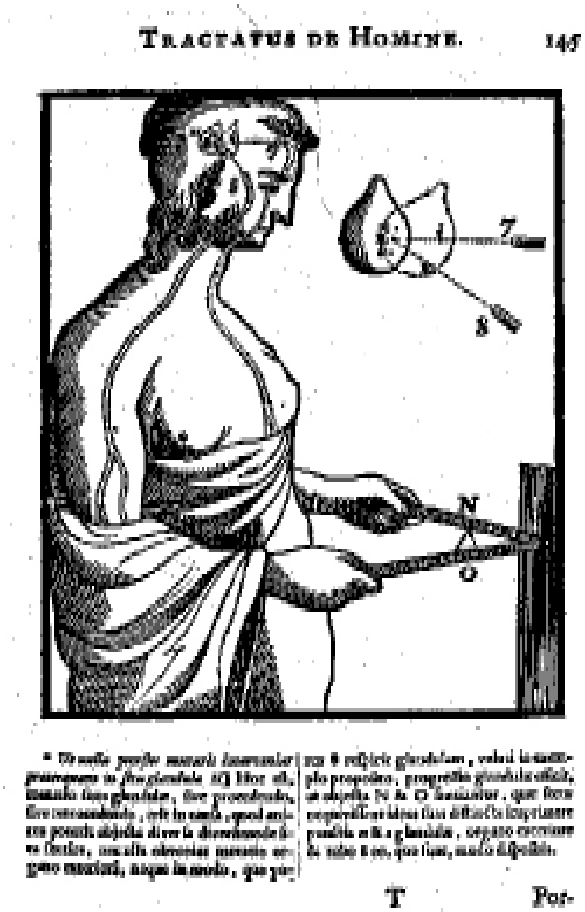
What is also important is that these two opposite positions did not stand alone. All sorts of perspectives and theories were linked to them. Materialism for instance, and spiritualism, but also notions in embryology. Here epigenesis and preformation opposed each other. Even questions, such as 'Where does life come from' or 'Can animals learn to talk' are closely intertwined with these ideas.

However, till way into the 18th century, what united most thinking in psychology was its focus on reasoning, on thinking and consciousness. Against this dominant position another one develops: a perspective that challenges reason and consciousness and wants to put emotion and intuition in the centre. These concepts refer to more than sentimentality (the rationalistic 17th and 18th centuries were full of that). They are seen as full blown alternative *sources* of knowledge, and as a new perspective on how the mind works. Light and dark now seemed to engage in a prolonged struggle

Looked at it from a distance, ideas about man and the mental become ever more complicated and sophisticated. In the 19th century all of these notions would become the object of science, that now belatedly threw itself on the object of psychology: mind and the mental.

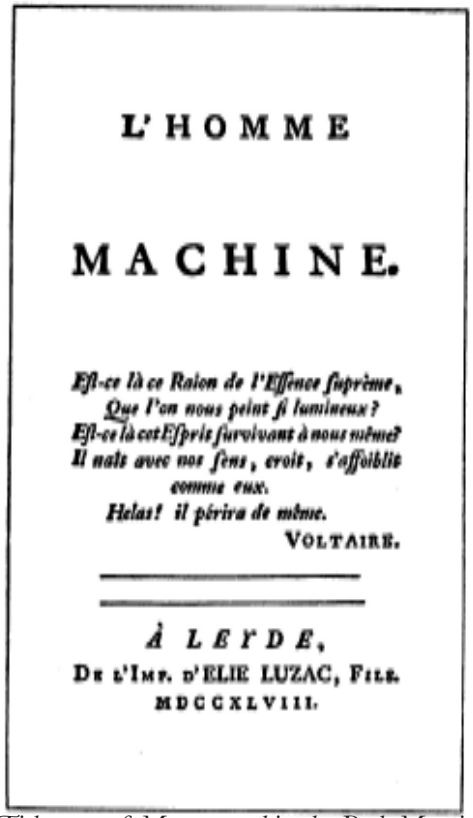
John Locke, arch father of empiricism

David Hume, empiricism ending in irrationalism


TRACTATUS DE HOMINE. 145

T Por-

Descartes, action is under the control of consciousness


L' HOMME

MACHINE.

Eſt-ce là ce Raion de l'Eſſence ſuprême,
Que l'on nous peint ſi lumineux?
Eſt-ce là cet Eſprit ſurvivant à nous même?
Il naît avec nos ſens, croît, s'affoiblit comme eux.
Helas! il périra de même.
VOLTAIRE.

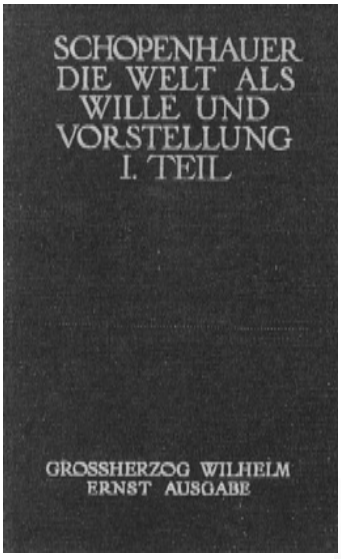
À LEYDE,
DE L'IMP. D'ELIE LUZAC, FILS.
MDCCXLVIII.

Title page of Man a machine by De laMettrie. His radical meterialism dead ends when he attributes mental characteristics to matter

Readings

Leahey ch. 6. Optional, but useful: reread 5

40 pages.



After the enlightenment. Schopenhauer's The world as will and representation. Sources of knowledge beyond reason and observation

Key Concepts

Rationalism vs empiricism
Spiritualism vs materialism
Nativism vs environmentalism
Epigenesis vs preformation
Associatianism
Enlightenment vs Romanticism

4. Unfolding Science, the 19th century

At the beginning of the 19th century science looked much different from what it looked 100 years later. For starters the term 'science' was not even used that often. Rather what we now call 'science' was listed under 'natural philosophy'. By the end of the century we see a wide array of academic fields that make up the sciences more or less as we know them today.

Around 1800 things were still different. Psychology was mostly an armchair activity, introspecting our mind. Kant had argued that a scientific psychology was impossible. However as the sciences were growing and branching out into different fields some of the sciences were bound to stumble on mind and consciousness. Biology was taking an interest in the brain; physiology entered the study of sensory perception; deviant minds became a topic for psychiatrists; with the formulation of the law of conservation of energy even physics entered the realm of the mind, or rather the limitations of any idea that gave the mind a causal role in the world. The sciences as it were encircled the realm of philosophy as it conceived of the mind.

Science not only branched out, it also introduced and organized new methods. The experiment became an ever more important method. Justus Liebig invented the research laboratory laying the groundwork for mass production of academics. Before 1800 much of science was done outside the universities. By the end of the 19th century the universities had become the center of science. And in a century of the rise to prominence of the nation state and nationalism, even the sciences sometimes took on national colors.

By 1900 psychology too had become one academic discipline among many.

Hermann Helmholtz. one of several scientists that formulated the law of conservation of energy, seemingly sealing the fate of dualism in the mind body problem.

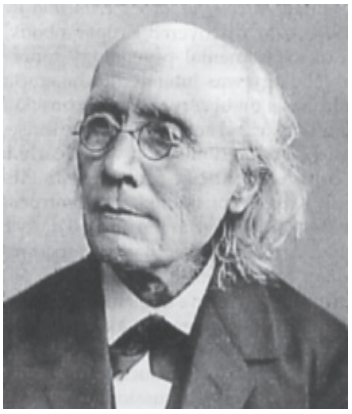
Key Concepts

Science and psychology
Study of the brain
Physiology
Medicine
Experimental science
The research laboratory
Organization of science

Readings

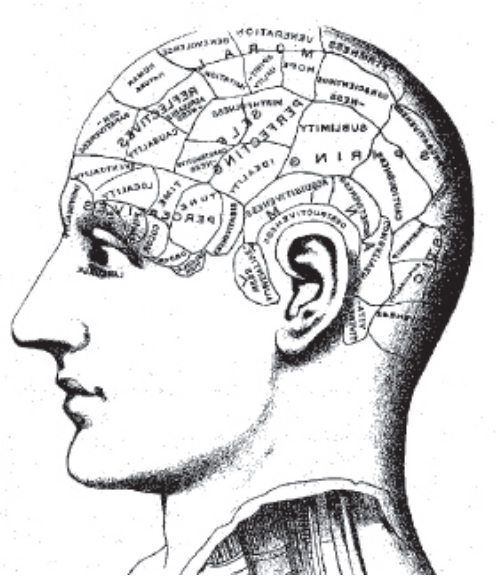
Leahey ch. 7

Immanuel Kant, who showed that experimental psychology was impossible



Gustav Theodor Fechner, who proved Kant wrong, and had a law named after him

Donders, the dutch medical doctor, that made the study of reaction times into a solid foundation of psychology



Phrenology stimulated interest in the study of the brain. Later disowned by 'respectable' psychology, but nonetheless extremely influential.

Liebig, the chemist breeder, brought the laboratory to center stage in science.

Wilhelm Wundt, founder of experimental psychology

5. Experimental psychology

Germany, 1899, a new psychological laboratory is established. The newly appointed professor (of course a graduate from Wilhelm Wundt) opens the laboratory with a 2 hour speech. A few excerpts:

Ladies and gentlemen,

Almost 20 years after Wilhelm Wundt established the first psychological laboratory in the world in Leipzig, our own university is blessed with such a laboratory. We are approaching the end of the century. Our century is the century of science. Over the last 100 years staggering developments have taken place. To a very large extent these have been the result of the modern research laboratory. Here nature can be studied with all the precision of our modern instruments. Since two decades this is also the case for mental phenomena.

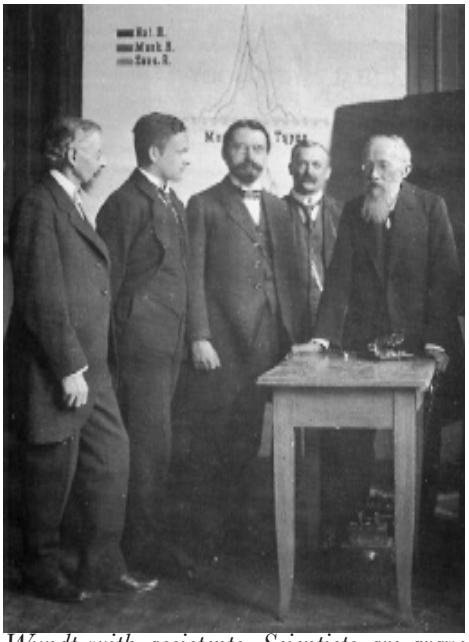
I cannot stress enough what a great accomplishment it was to open the mind to experimental study. One of our greatest philosophers, Immanuel Kant thought this was impossible. For ages psychology remained an armchair science. The physiologists have shown our young science the way, and it was Wundt who forged their example into an independent science of the mind. Experiment and laboratory open up a golden future for us.

Alas, even as I speak our science is threatened from within by those who do not see the restrictions of experimental research. These psychologists perform experiments beyond the boundaries of controlled research; they perform experiments on thinking, problem solving or complex memory tasks. They call them experiments, but in reality such work is worthless.

Recently I read an article by my esteemed and learned colleagues Prof. Dr. Selz. Another learned colleague, Prof. Dr. Girgensohn, in that article analyses introspectively a number of assignments. One of the assignments was 'Right to vote – Two main kinds'. The answer of our colleague after less than 6 seconds was: direct and indirect. Then he describes the thought processes that brought him to this conclusion. I quote:

"Direct appeal to memory. Seeking for something well known is experienced completely different from cases where I have to look for an answer independently. In this case immediately I fathom that I know something, and I try to establish what I know. But also knowledge about the controversies on the right to vote during the last parliamentary session in Prussia shimmered before my mind. Apart from a vague orientation on this, there was something else present in my consciousness that to me seems to represent the object of this orientation. There were no images present during this process....." Here I stop, but professor Girgensohn continues for a whole page, relating everything that has played through his head. And, ladies and gentlemen, all in less than 6 seconds! Such a form of introspection is not science; it is without any controls and its sole results are figments of the imagination. I believe that this phony research is a threat to our young science. The future of psychology is at stake. Only by limiting ourselves to such processes where we can establish experimental controls over introspection can we make psychology into a real science on a par with the other sciences. Only then will psychology deserve the respect of other sciences. I dedicate the work in our new laboratory to this holy task.

Entrance to Wundt's laboratory. Science is a grave and serious matter



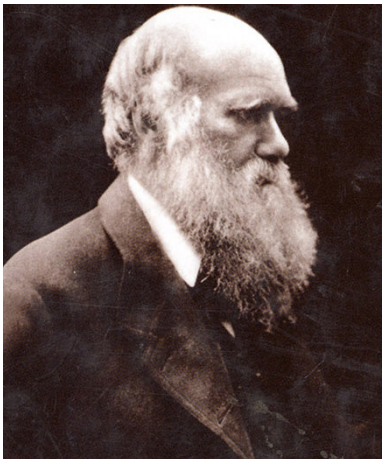
Wundt with assistents. Scientists are grave and serius people

Key Concepts

Physiology and psychology
Introspection
Higher and lower mental functions
Experimentally controlled introspection

Readings

Leahey ch. 8



Charles Darwin

5. God, Nature and time

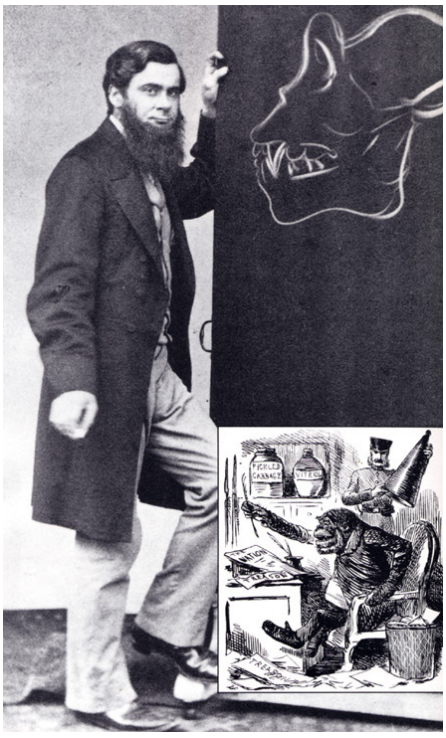
Where do we come from? How did we get here?

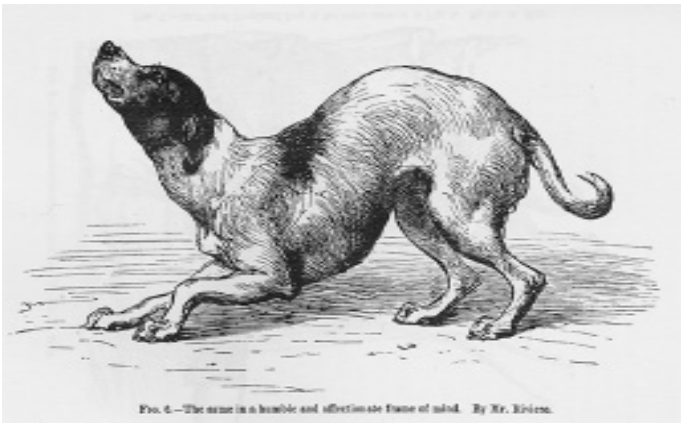
Maybe this is the most ancient question man can ask. The traditional answer is simple: God created man in His Image. As He created the whole of nature. Of course in one stroke this explains why everything in nature works so well and is so exquisitely adapted to each other. The whole of nature works as precisely as a clock, because God, the divine watchmaker, constructed this marvellous mechanism.

In the 19th century the answer to the question 'Where do we come from' becomes controversial. There is irony in the fact that especially clergymen who sought God's greatness in the study of nature contributed decisively to the rising tide of scepticism about the story of creation. However, nobody contributed so much to this theme as Charles Darwin whose theory of evolution through natural selection brought a revolutionary explanation to this controversial field. All life forms come from other life forms through a process of natural selection. The intricate structures we observe around us are the result of a combination of chance and a lot of time. Man is no exception to this.

Darwin went on to argue that this also holds for our experiences and faculties. All our thinking, feeling and acting is always a product of our biological history. Everything we are has been produced by nature. These ideas had far reaching consequences. It made new definitions of the relations between living creatures necessary; men start to look at other animals with new eyes; the status and function of our brain changes; new disciplines become relevant for psychology; new research methods come into use; new theories are developed.

Controversies remain: What is Man's place in nature in this new scheme? In what ways can biology be relevant for psychology? What is the proper relationship between science and religion? What can we learn from animal behaviour about human behaviour?





Readings

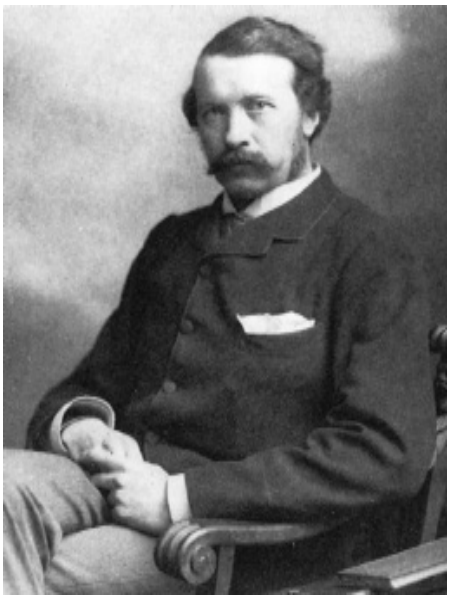
Leahey ch. 10

T. H. Huxley, Darwin's bulldog, who spread the theory of evolution vigorously. He drew the materialist implications that Darwin publicly shied away from. Here he lectures on the recently discovered

Key Concepts

- Evolution by natural selection
- Man's place in nature
- Continuity in nature
- Biology vs psychology
- Science and religion
- Teleology vs causal explanation
- Mind and behavior
- Artificial and natural selection

That troubles our monkey again.
Really Mr. Darwin, say what you like about man; but I wish you leave my emotions alone.
In 'The expression of the emotions in man and animals' Darwin wrote that a pretty girl blushes when a young man gazes at her intently because she immediately thinks about the outer and visible parts of her body and this alters her capillary circulation.



George Romanes, who continued Darwin's research into the evolution of mental life

Below and page 14: The expression of emotions in dogs

6: From thinking animals to psychology as the study of behavior

John Broadus Watson, founder of behaviorism

In the early 20th century psychology went through a transformation. The theory of evolution, and complications in the established psychology of consciousness fed the birth of a new psychology. This approach was to be a clear break with the past. Psychologists vented their ideas of what this new psychology must look like. Below a few paragraphs from one of the manifestos for a new psychology.

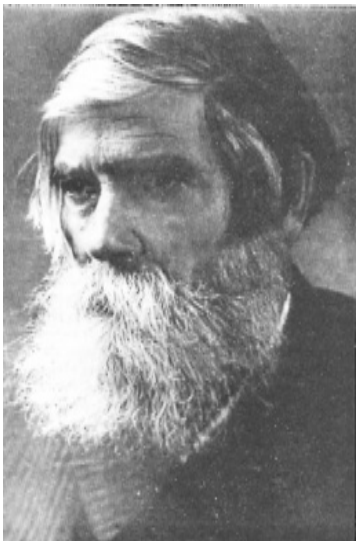
Towards an objective psychology

Psychology as the behaviorist views it is a purely objective experimental branch of natural science. Its theoretical goal is the prediction and control of behaviour. Introspection forms no essential part of its methods. The behaviorist, in his efforts to get a unitary scheme of animal response, recognizes no dividing line between man and brute.

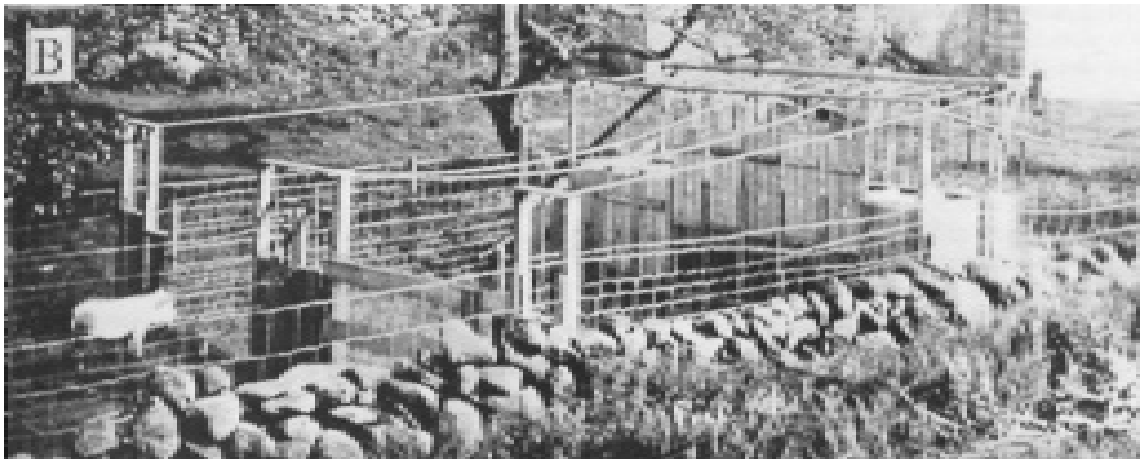
It has been maintained by its followers that psychology is the science of the phenomena of consciousness. The world of physical objects (stimuli, including here anything which may excite activity in a receptor), which forms the total phenomena of the natural scientist, is looked upon merely as means to an end. That end is the production of mental states that may be 'inspected' or 'observed'. It is agreed that introspection is the method par excellence by means of which mental states may be manipulated for purposes of psychology. The time seems to have come when psychology must discard all reference to consciousness; when it need no longer delude itself into thinking that it is making mental states the object of observation. We have become so enmeshed in speculative questions concerning the elements of mind, the nature of conscious content (for example, imageless thought and Bewusstseinslage, etc.) that I, as an experimental student, feel that something is wrong with our premises and the types of problems which develop from them. There is no longer any guarantee that we all mean the same thing when we use the terms now current in psychology. I doubt if any one psychologist can draw up a set of statements describing what he means by sensation which will be agreed to by three other psychologists of different training. Turn for a moment to the question of the number of isolable sensations. Is there an extremely large number of colour sensations — or only four? I firmly believe that two hundred years from now, unless the introspective method is discarded, psychology will still be divided on the question as to whether auditory sensations have the quality of 'extension', whether intensity is an attribute which can be applied to colour and upon many hundreds of others of like character.

This leads me to the point where I should like to make the argument constructive. I believe we can write a psychology, in terms of stimulus and response, in terms of habit formation, habit integrations and the like. Furthermore, I believe that it is really worth while to make this attempt now. The psychology which I should attempt to build up would take as a starting point, first, the observable fact that organisms, man and animal alike, do adjust themselves to their environment by means of hereditary and habit equipments. These adjustments may be very adequate or they may be so inadequate that the organism barely maintains its existence; secondly, that certain stimuli lead the organisms to make the responses. In a system of psychology completely worked out, given the response the stimuli can be predicted; given the stimuli the response can be predicted.

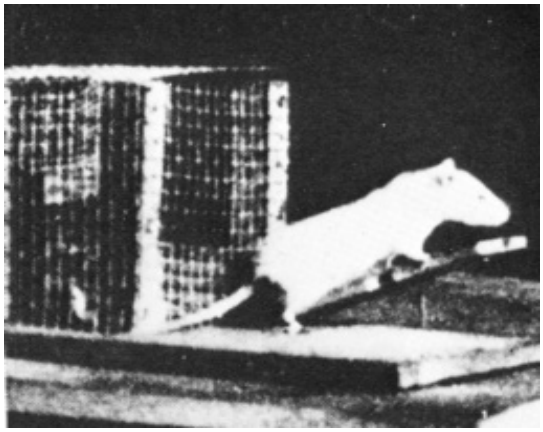
William James, founder of American psychology. Blend of Wundt, Darwin and religion. Triggered the debate on the existence of consciousness in 1904: Does



Bechterew, representative of a rich Russian tradition of reflex thinking as a basis for psychology



Puzzle maze for pigs. Channeling behavior



The rise of the rat. One of Watson's rats pressing a lever to obtain food from a puzzle box

Key Concepts

- Behaviorism
- Objective psychology
- Reflex arc
- Stimulus response mechanism
- Puzzle box/maze learning
- Adaptation to the environment

Readings

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Sigmund Freud

7. A new science for a new century

In every society some forms of behavior are classified as abnormal. In the 19th century medical doctors start to engage issues of deviant behavior. They see them as diseases for which natural causes must be sought. Enter Freud. By conceiving of the normal and the abnormal as a continuum, the deviant comes uncomfortably close to the normal. Often civilized behavior is almost a form of deviant behavior, because it occurs by suppressing healthy natural desires. Freud launched a theory, and established a way of treating deviant behavior that was novel. This new method was used by medical doctors, but also by other players in the field of mental health.

A conversation between two medical doctors, Krombak and Mekkerbeek. This takes place a few years before they fell out over psychoanalysis. Their later quarrel is already present in this conversation.

Krombak:
I have been reading and rereading Freud's Traumdeutung the last few days. I must say, this book worries me tremendously. I am impressed, but I am not sure whether the book is up to the standards of medical scientific research.

Mekkerbeek:
What do you mean?

Krombak:
The book is anecdotal. You know I have always defended Freud and have used his way of treatment for years. But we are physicians; we must always look for a material medical cause for the mental ailments of our patients. So, I welcomed Freud's idea that psychic disorders always flow from processes of a sexual nature. Sexuality is a material, energetic process. All mental disorders, in the end will be reduced to material processes. That is the founding postulate of our science. I always thought Freud shared this assumption, but after reading Traumdeutung I no longer am sure. He submits to fanciful talk about mental processes, for which we will never find a material correlate. I fear with this book Freud is leaving medicine.

Mekkerbeek:
And where is he going?

Krombak:
He comes dangerously close to that new faddish field of psychology. If we are not careful, people without a medical degree will get involved in the treatment of mental ailments. That would be a return to quackery. Have you forgotten how long it took before medicine, and especially psychiatry, became a respectable science and profession.

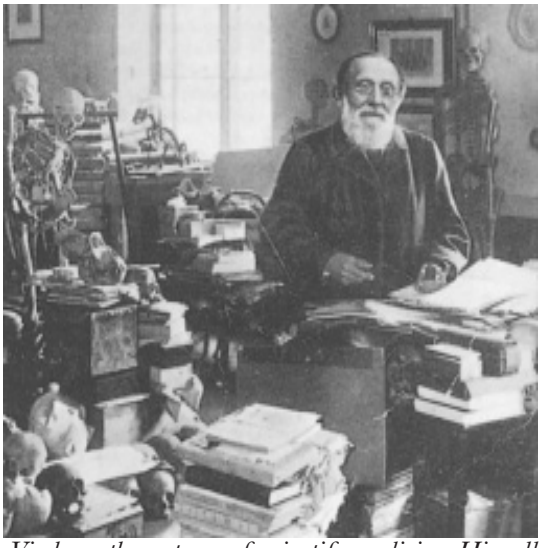
For real science there must be a clear grounding in material processes. That is the only basis for empirical science. But all these interpretations of dreams in the Traumdeutung, are more like bed-side stories, old wives tales in which dreams are explained. This is unworthy of a medical man.


Freud around the time of the publication of Traumdeutung. A severe gaze over his empire

Mekkerbeek:
My dear colleague, you are overreacting. Yes, Freud introduces

new concepts in his latest book, and he establishes mechanisms of a purely mental nature. We must be aware of the fact that mental disorders do not always have a material cause. The causes may be of a purely psychological nature. Psychoanalysis must progress and develop. We must have the courage to think in new ways and test these insights in our clinical practice. Life is more than a laboratory! We stand on the edge of a new century! Dare to innovate. If necessary we might even start to practice psychology.

Emile Kraepelin, one of the founders of psychiatry. Mental illness has material causes. Syfillus for instance leads to insanity



Virchow, the emperor of scientific medicine. His cell theory became the basis of all 19th century medicine

Readings

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Karl Jung, at one time crown prince of psycho-analysis. But then he was banned from the community for deviating from Freud's principles. Many followed.

Freud's sofa. A place for treatment, but also a source of knowledge. Different from an experiment. What is it worth?

Key Concepts

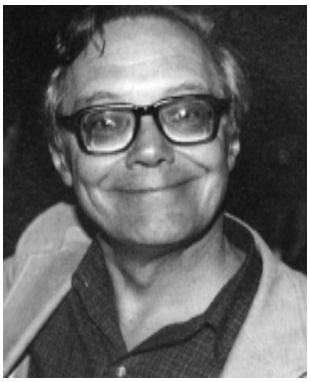
- Medicine as a science
- Normal and abnormal behaviour
- Material postulate of medicine
- Research in a clinical setting
- Experiment vs the sofa as source of knowledge
- Conflicts in psychoanalysis
- Medical profession and medical science

9. Cognitive psychology and neuro-science

Half way into the 20th century we see the downfall of behaviorism and the exponential rise of cognitive psychology. Of course things started way before that date. For instance, ever since Ebbinghaus cognitive psychologists have been busy collecting a tremendous body of knowledge on human memory. But the second half of the 20th century did put a huge boost on the typical methods of cognitive psychology. What makes cognitive psychology special? What is the typical perspective from which cognitive psychology looks at humans? How and why did it conquer psychology?

Not everybody shares the enthusiasm over cognitive psychology. Some psychologists think that the concepts and theories of cognitive psychology are but metaphors. Concepts like 'short term memory' and 'long term memory' are used by cognitive psychologists, but what do they refer to? They do not refer to separate compartments in a human mind. We could say similar things about 'attention', or any other concept in cognitive psychology. In what ways do these concepts differ from dubious concepts in psychoanalysis, such as 'repression' or 'Oedipus complex'?

Often these critics now point to cognitive neuroscience, as the only true path for psychology. They happily point to new methods, such as fMRI or a growing number of neurophysiological techniques that can now be used by the psychologist. These make it possible to investigate the human mind directly, bypassing concepts from cognitive psychology. The latter can be replaced by concrete, measurable physical entities and processes. For these psychologists cognitive psychology is a remnant from days when we thought we could learn about the human mind without looking into the body. Cognitive neuro-science did revolutionize psychology, but has it made cognitive psychology redundant?

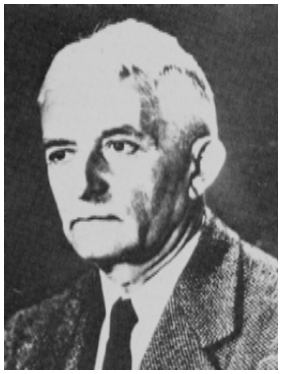


Ulric Neisser, whose 'Cognitive psychology' sounded the start of the cognitive revolution in psychology.

Cognitive psychology
Theories in psychology
Neuro science

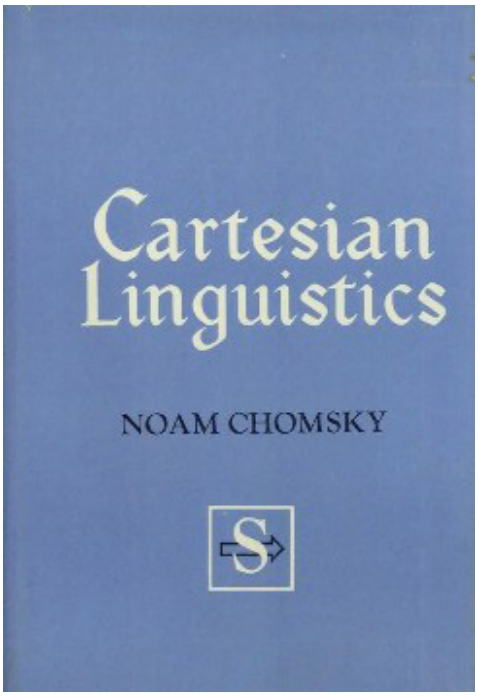
Readings

Problem 9: Leahey ch. 12



There was an unbroken cognitive tradition in Europe during the 20th century. Gestalt psychologists like Koehler used thinking and problem-solving as concepts when studying learning in apes

Noam Chomsky in the early sixties. his review of Skinner's Verbal Behavior was a lethal blow to much of behaviorism.
On the right, Chomsky's book that argued for a nativist view on language, as distinct from the environmentalist perspective of behaviorism. Old dichotomies never die.



10. Psychology as practice

As the 19th century turned towards the 20th, society was growing more and more complex. The 19th century was a century of hope, hope for a better world. Real wages increased dramatically in Great Britain during the century. The middle class was expanding, and increasingly setting itself apart from the lower working classes. But above all, the 19th century was the age of science. From a philosophical pastime for gentlemen it grew into a major force in society. Science rationalized our dealings with nature. We harnessed power on an unprecedented scale. There seemed to be no end to what technology could do, and science increasingly steered technology. This was especially true in Germany, where chemical science and chemical industry became ever more intertwined. If science could help us to harness nature for our purposes, what about society? Would a scientific approach to society not yield similar results? From early on in the 19 century the old enlightenment voices of progress through science, and through a scientific approach to society had been heard louder and louder.

It was for many never a question: science *is* a useful instrument to better our lot. Damn the search for truth or the riddles of the world, usefulness in society was the ultimate test for a science to remain viable in a rationalized society. Science was a tool in the struggle for survival, not only of individuals, but of nations. And nations would only survive if they had a healthy population. Hence an interest in eugenics in many circles; hence an interest in intelligence among people. For, if our society is increasingly driven by science, then we need intelligent people.

On the other hand, society was becoming more complex, with an increasingly intricate division of labour, with jobs and professions taking on new shapes. Society needed all sorts of skills. Could science not help to find the people with such skills and get them to their proper place in society. 'The right man in the right place' became a catch call in this context. Well, wasn't psychology the right science to deal with something like this? Could we test people for their abilities, and then decide where their proper place in society would be? Eagerly psychologists set out to do this, but many tests turned to have no, or little, predictive value. Only after Binet had made a pragmatic test did things take off. In World War I the America army was even persuaded to test all their recruits, to establish their place in the army. Again there were disappointments. Psychologists lost some battles, but their role as practical and useful scientists became more and more legitimized.

So they moved also into other fields, such as testing for jobs, counselling for parents, advising organizations. They grew as a profession in a society that was increasingly relying on experts, and slowly thought that all activity should be monitored by experts. From being hired for a job to raising a child.

Alfred Binet, designer of the first practical test of intelligence

Lewis Terman, adapted Binets test for the US. Active in putting testing on the social and political map

Readings

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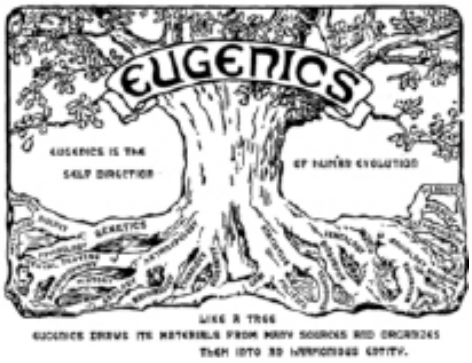
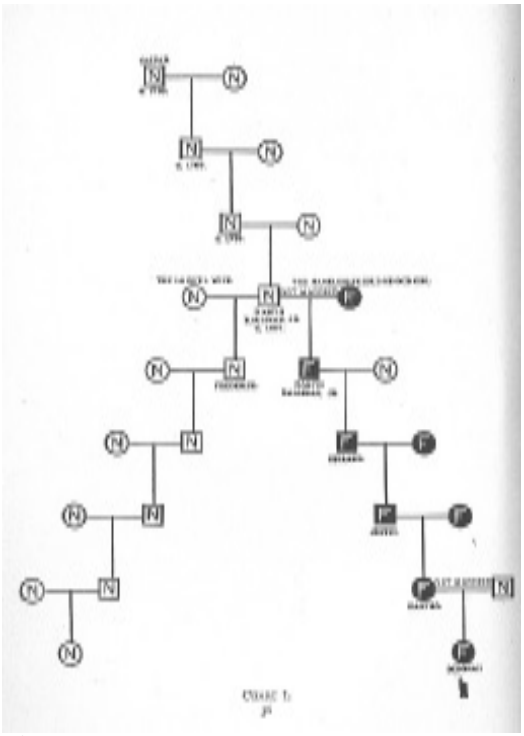
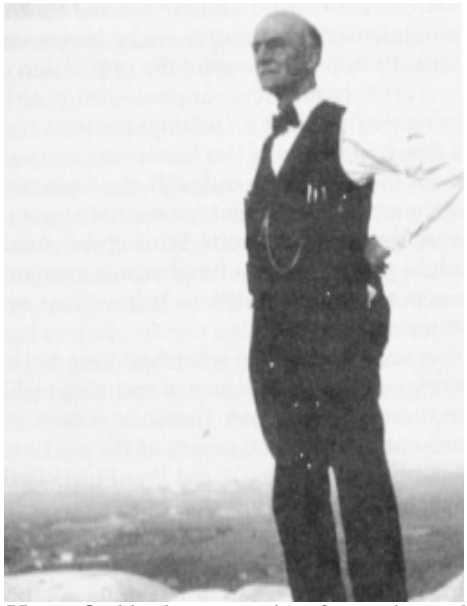


EUGENICS AND IMMIGRATION: Large Amount of Bad Breeding Prevented by Medical Examination of Aliens at Ports of Entry—Detection of Defectives More Thorough Now Than Ever Before, Because of Decrease in Numbers Arriving

L. E. COFER, Journal of Heredity, 1915



The Kallikak (Good-Bad) family whose descent was analyzed by Goddard. One wrong mating leads to a series of feeble minded offspring



Henry Goddard, protagonist of eugenics and testing. Psychology as an intrument to keep out undesirable immigrants

Key Concepts

Division of labour

Science and technology

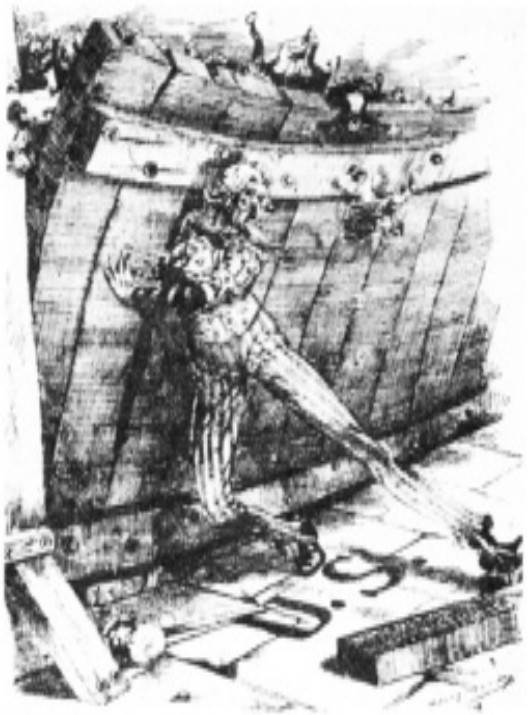
Social Darwinism

Science in society

Testing intelligence, theoretical and practical approaches

Eugenics

Social stratification



Uncle Sam is being overwhelmed by immigrants from the wrong part of Europe, the South and the East. Psychology to the rescue

8. Mind and body, matter and cognition, software and hardware

Here are a few positions in one of the most fundamental and intricate problems in psychology. They might seem to be taking place in our days, but they carry the weight of centuries of debate.

Psychologist 1
If I had to list the biggest mistake in the history of psychology I would point immediately to Descartes, with his dualism of mind and body. With this idea he wrong footed science for centuries. As if there exist two sort of things, mental things and material things. We know better: only matter exists and all so called spiritual or mental phenomena can be reduced to electrophysiological and other material processes in the brain. We are our brains.

Psychologist 2
You know the biggest myth is that Descartes made a mistake with his dualism. It is not that easy to reduce mental phenomena to material processes in the brain. Take a simple stimulus. Whatever modality, there is always the same sequence: the nerves take its signal to the brain. There, a constellation of neurophysiological processes takes place. However, the neurophysiological processes in the brain involved in hearing are not fundamentally different from the ones involved in seeing. All nerves are built in the same way. Brain processes differ in quantity, intensity, temporal and spatial order. How do we explain on that basis the qualitative differences between the various sensory experiences? Nerve processes are nerve processes, but a tone is something completely different from a colour, or a sensation of pain.

Descartes already was aware that it would be quite difficult to explain such differences on a purely material basis. Modern science has not really progressed beyond the point where Descartes expected an insurmountable barrier. Progress here has only been an illusion.

Psychologist 3
Fundamentally you two are in complete agreement. You both think in terms of substances. The only difference is one of you believes there is only one sort of thing: matter and the other believes there are two sorts of things: mind and matter. This is the wrong approach to this issue. We should approach it in terms of aspects or functions. What some people call mind is nothing but a function of information processing. However not all information processing involves consciousness or mind. My washing machine processes information, but I do not think we should attribute consciousness to it. We need a pretty high level of order and complexity before consciousness arises. This way we leave open the possibility that a computer of sufficient complexity could develop consciousness. And why not? As if the only material constellation to develop consciousness would be human bodies.

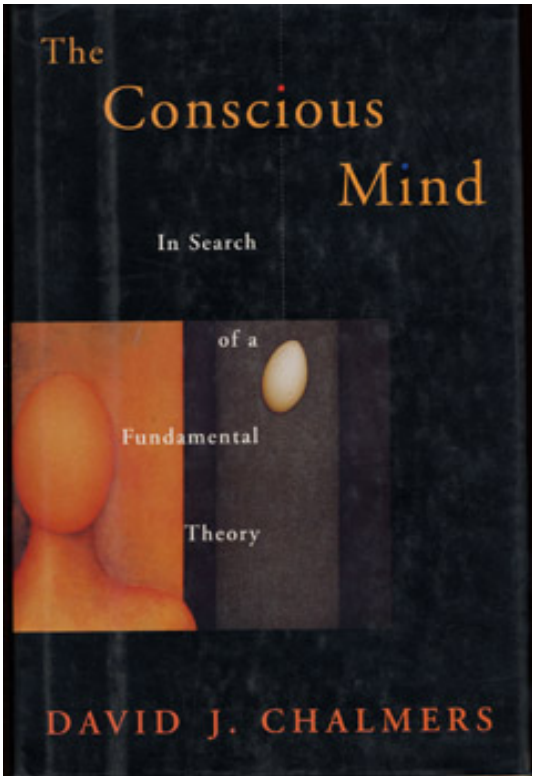
Psychologist 1
I fail to see how all these obfuscations contribute anything to the discussion. The plain fact that brain lesions have mental consequences shows that both bodily and so called metal processes are of a material nature. Mental processes depend causally on material processes. I do not see how a material process could influence a mental process. The law of conservation of energy forbids this. So, you dualists either deny the law of conservation of energy (and deny the whole edifice of physics), or mental processes are as material as any other.

Psychologist 3
Now wait a minute. I am no dualist. My aspect theory of consciousness is no dualism. Mental processes depend on material processes, but our knowledge of the mental world cannot be explained by or be reduced to material processes. Cognitive psychology is a different science form neuroscience. Studying the hardware of a machine is different from studying the software. The one cannot be reduced to the other!

Emile du Bois Reymond. Ignoramus, ignorabimus. We do not know and we will never know. In the 19th century he was referring to the body-mind problem

Descartes, hero or villain? even when wrong in details he got the problem right.

David Chalmers, the return of dualism.



Key Concepts

Mind body problem
Dualism
Monism
Functionalism
Materialism
Consciousness

Readings

Leahey parts of chapters 2, 5, 6, 7, 8, 10, 11 & 12