

PSYC1001

SAMPLE

PSYCHOLOGY 1A
COURSE WORK

Part A: Core Topics

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Topic 1: Psychological Perspectives

Presented by Professor Simon Killcross (Head of School)

Lecture 2

Definition of Psychology

Psychology is the scientific study of behaviour and mental processes.

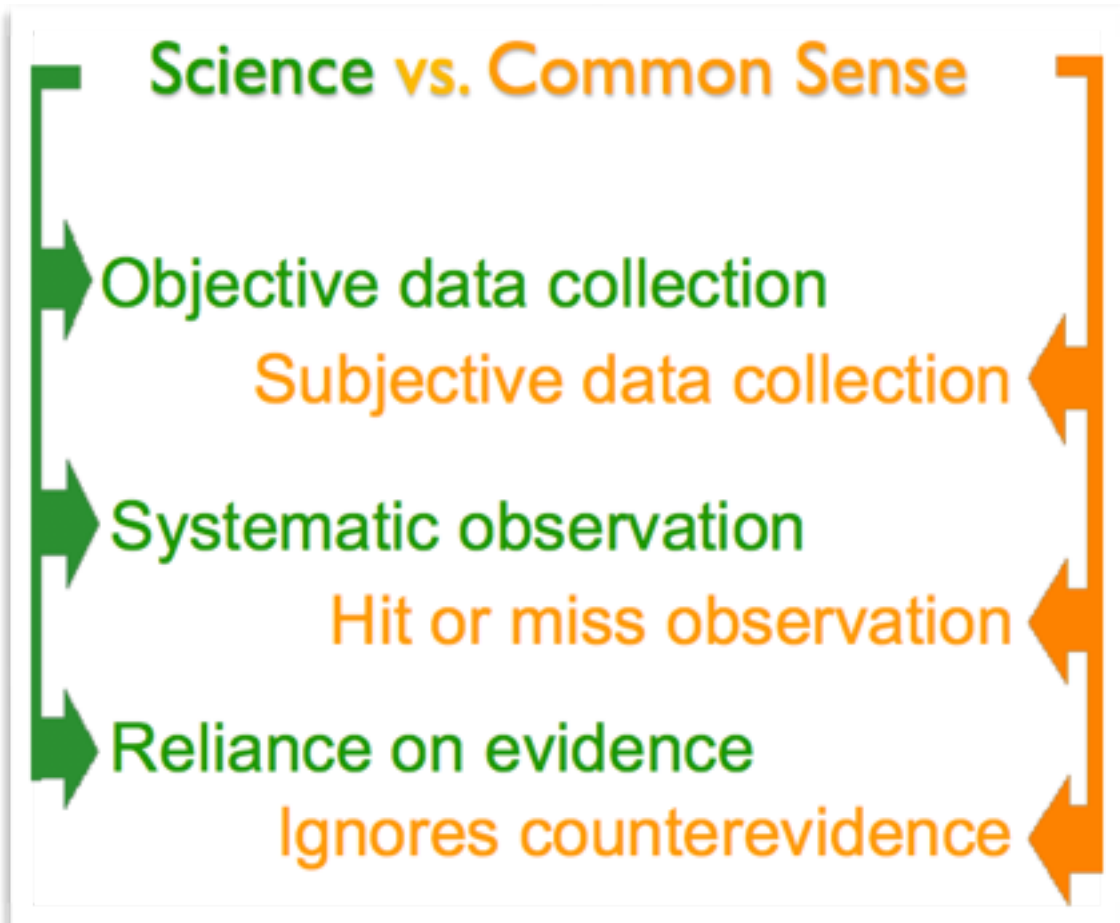
- “**Behaviour**” = overt (observable) actions; the physiological correlates of **actions**
- “**Mental Processes**” = “**thoughts**” (memories, imagery, concepts); **emotions** (fear, happiness, anger, arousal); interactions between the two (e.g. decision making)

Goals of Scientific Psychology

- What? - Description of behaviour using careful observations
- When? - Prediction allows for specification of the conditions under which a behaviour will or will not occur
- Why? - Explanation identifying the cause(s) of behaviour
- Change? - Facilitating changes in behaviour (e.g., therapy)

But aren't the answers to most psychological questions common sense? For example, clichés are often not accurate all the time, the inverse of a cliché is almost always also true in an equal amount of situations. This is because they can be used post-hoc to explain most behaviours, and therefore our common sense is unfalsifiable.

Science vs. Common Sense



Change Blindness

Many videos are available online showing the concept of change blindness. The idea is that the viewer's attention is diffused over the whole picture. Thus, we only "remember" what we are paying attention to – even over very short retention intervals

For example: <http://youtu.be/ubNF9QNEQLA>

Psychology Can Reveal Things About Our Society That We Didn't Know

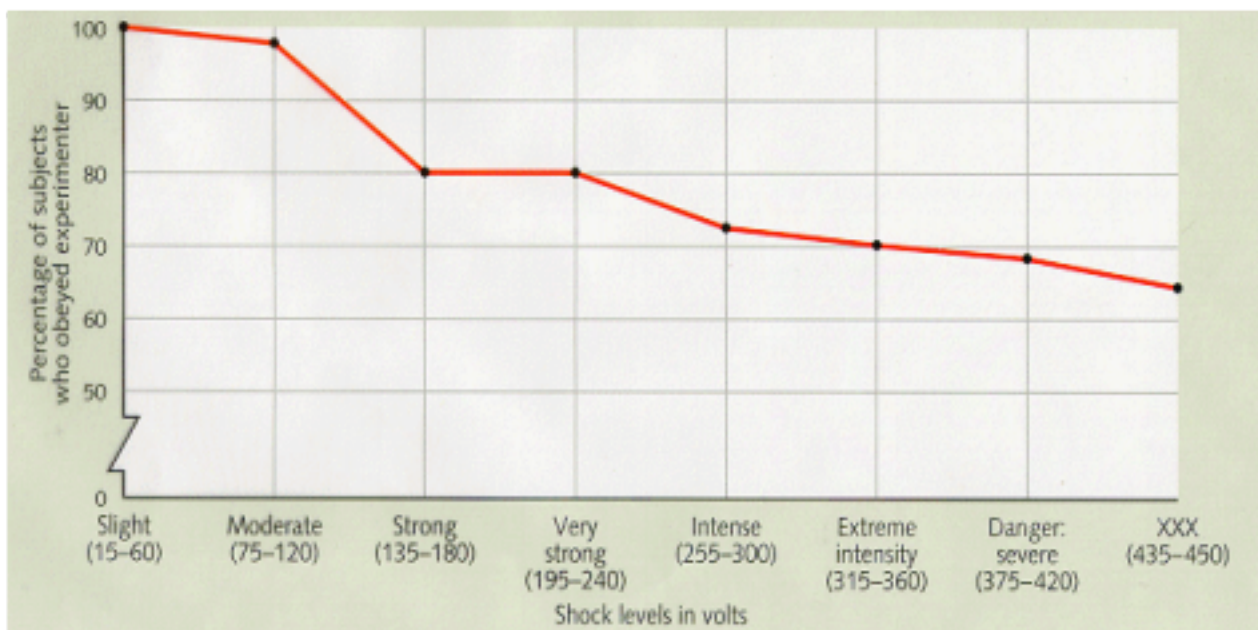
For example, Why did people willingly participate in the atrocities of the Holocaust?

Milgram's Studies of Obedience to Authority

This study is perhaps the first that comes to mind when people think about psychology. Milgram studied the amount of obedience a participant felt when under the influence of a perceived authority. His experiment was thus:

A volunteer was asked to play the role of the "teacher" in a learning experiment (paired associate learning, e.g., "bank"-hat"). The teacher was then asked to administer electric shocks in increasing voltage when the learner (a confederate) responded incorrectly.

His results were thus:



Milgram found that the factors affecting obedience to authority

- Perceived authority of the person giving the orders
- Presence of a contradicting authority
- Proximity of victim
- Level of direct responsibility for the outcome

Milgram concluded that “blind obedience more likely to occur when people shift the responsibility for their actions onto someone or something else”

Psychology: A (Very) Brief History



Some of the great Psychologists

- Psychology emerged in part from philosophy
- However, Psychology defined itself as an empirical science
- The early assumption was that the goal of Psychology was to understand the structure and contents of the mind

First Scientific Psychologists: Introspection

These scientists used the metaphor of “looking inwards” to examine one’s own conscious experience or “phenomenology”. Wilhelm Wundt trained observers to report on their experiences under different experimental conditions, i.e. “Tell me everything that comes into your head when you look at this object”. But Introspection failed because people’s self reports were unreliable.

Functionalism

William James emphasised the analysis of psychological processes in terms of their function, for example, attention serves to highlight and focus analysis on certain stimuli. Functionalism:

- is consistent with evolutionary framework
- focuses on identifying the rules or steps by which a particular task is achieved, not on the underlying mechanism

The philosopher Jerry Fodor has argued that the task could then be implemented on any information-processing system, such as a computer or an alien's nervous system. It is similar to a software algorithm.

Behaviourism

Behaviourism was one of the early challenges to introspection. Behaviourists argued that subjective experience could not be verified by an objective observer. Only the study of observable behaviour qualified as scientific. This was a highly successful approach.

Two Variants:

- Radical Behaviourism - Only the study of observable behaviour qualified as scientific. "Internal states" (thoughts, emotions) unobservable and therefore not part of scientific Psychology
- Methodological Behaviourism - It is acceptable to study "Internal states" (thoughts, emotions) AS LONG as these can be linked to observable behaviours. This is still the approach that underlies much of modern Cognitive Psychology and Associative Learning.

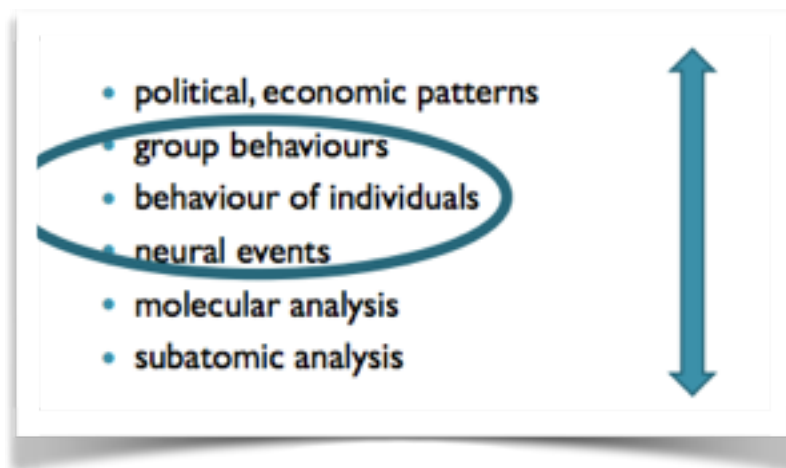
Psychoanalysis

Another challenge to introspection came from psychoanalysis. Freud argued that many important psychological events are unconscious. Although the details of Freud's theory have not been supported, the idea that many psychological processes proceed without full conscious awareness is well established.

Psychology and the Brain

We know that psychological processes depend on physical activity in the brain. So, could we sidestep the study of behaviour and mental events, and focus instead on neurons and neurotransmitters? There are several reasons why the answer is no, but most important is the notion of levels of analysis.

Levels of Analysis



The idea of levels of analysis is that the appropriate level of analysis depends on the task. For example, one could describe a cricket match entirely in terms of subatomic physics, but this wouldn't be very useful. Many lawful patterns can only be defined at a particular level of analysis. In Psychology the appropriate levels of analysis => Functional analysis of behaviour and mental processes, i.e. the levels shown circled in the diagram above

The Brain and Neuroscience

No amount of staring down a microscope or measuring neural activity would reveal a psychological process such as emotion or memory that we didn't already know about. However, if we already have a psychological process defined, we can examine brain activity while we manipulate that process.

The better our *functional* understanding of the psychological process, the better we can identify the neural mechanisms responsible for the various steps in that process. Neuroscience is an important aspect of psychology, but it doesn't replace it.

Psychology as a Natural Science

Psychology is empirical: based on systematic observation.

Experiment: manipulate one variable to observe effect on another.

Analysis: examine data to determine conclusions that can be drawn

Theory: used to generate predictions and summarise existing knowledge

Public: results are subject to review by others

The Bad (and Good) News

The study of psychology will not tell you about - mind-reading, extra-sensory perception, rebirthing, past lives, alien abduction, crystals, pyramids, palm-reading, communicating with the dead, astrology, psychic healing, interpreting dreams or unlocking the hidden potential of your unconscious mind.

The study of psychology will tell you about:

- principles of behaviour that are supported by evidence
- our current understanding of the mechanisms underlying normal and dysfunctional behaviour
- how to do research into behaviour and experience
- practical and effective methods for promoting desirable behaviour and reducing distress

About Psychologists

World-wide, psychology is taught first as a scientific discipline in an undergraduate degree.

Applied fields. Professional training builds on this basic knowledge in a postgraduate degree:

- Clinical
- Organisational
- Health
- Educational
- Forensic
- Human factors
- Sport

Clinical Psychology vs Psychiatry

Psychiatry is a specialisation taken after a medical degree. Medical degrees focus on normal and abnormal functioning of the body – e.g. anatomy, physiology, biochemistry. Therefore psychiatrists are particularly well equipped to treat psychological disorders that involve brain dysfunction, e.g. neurological conditions.

Psychiatrists are also authorised to prescribe drug treatments, but many psychological disorders appear to involve dysfunction at the “software” level (e.g. incorrect beliefs) rather than at the “hardware” level (brain dysfunction), e.g. Social / public speaking anxiety

Others, e.g. depression, appear to involve dysfunction at both levels, and thus the two professions often need to cooperate in patient management.

Delivery of Psychological Services

A relatively recent breakthrough in Australia is the introduction of Medicare rebates for psychological services. An emerging model is one in which a medical practitioner (GP) and a clinical psychologist work together to provide coordinated care for a patient. This is part of a broader debate in healthcare, e.g. private practice vs public health system, treatment vs prevention and how to promote evidence-based practice.

The Scientist-Practitioner Model of Psychology

Psychological Scientist + Psychological Practitioner = Aim to be both a scientist and a practitioner

Topic 2: Clinical Perspectives

Presented by Scientia Professor Richard Bryant

Lecture 3

Psychology and the Real World

Psychology is based on the scientific method:

- Experimental control
- Strict measurement

These factors form the basis of understanding, measuring, and changing the real world

Stress Disorders

After trauma, some people develop post-traumatic stress disorder (PTSD). This is a real problem after disasters, terrorism, war, accidents, etc. PTSD affects about 10% of survivors.

Managing Stress Responses

For 30 years the common response has been to offer everyone trauma counselling. Termed “psychological debriefing,” many millions of dollars are spent every year.

Psychological Debriefing

- Occurs within 48 hours of trauma exposure
- Requires people to discuss their experience and their emotional responses
- Presumes that “spilling your guts” is a good thing
- Intended to prevent post-traumatic stress

Does it work? No!

But, how do we know? By conducting experiments in which people are assessed before treatment with standardised measures. Properly developed measurement tools are essential, and so a comparison condition is needed. This is because we can only know that a treatment works if we compare it against something else.

For example, observed changes MAY be due to:

- Time
- The attention you receive
- Repeated assessments

Randomisation is utilised to avoid biased allocation to a treatment condition.

The subjects are then assessed after treatment. This assessment must be independent - a “Blind” assessment means the assessor is not biased by knowing what treatment was given.

These research steps were ignored for two decades, and as result, everyone believed debriefing worked because people said they liked it. However, controlled trials have now proven that debriefing does not prevent psychological disorders.

The Scientific Method

The scientific method is the hallmark of psychology. Thanks to these studies, debriefing has been debunked. As a result, policy makers are now turning to alternatives and TESTING them. For example:

Post-Katrina Response

Policy makers realised that evidence needed to shape practice. New guidelines were written for all counsellors in US. Each theory is now subjected to randomised controlled trials.

Black Saturday Fires

Governments began wanting to learn how best to help survivors in the short & long term. Researchers based decisions on EVIDENCE resulting from psychological trials.

Randomised Controlled Trials

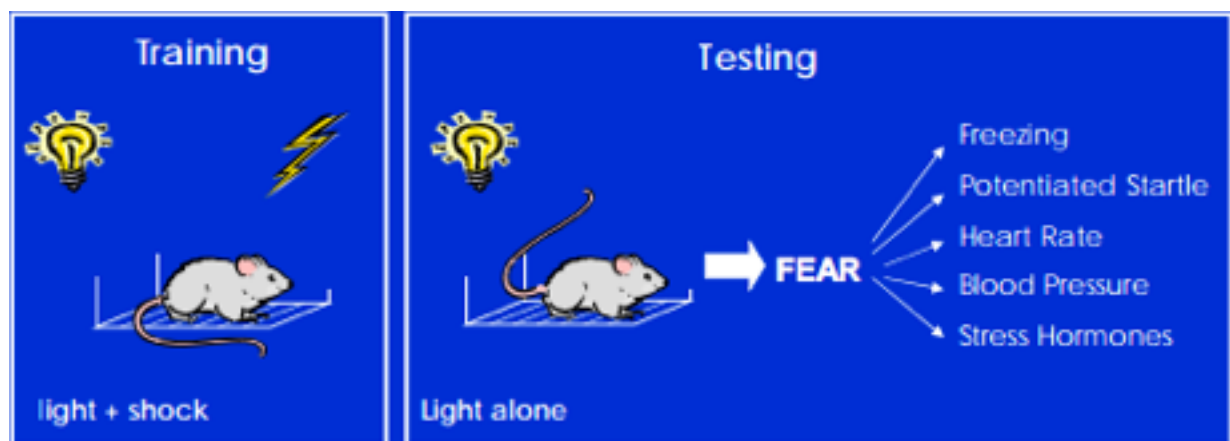
Must follow these criteria:

- Random allocation to groups
- Independent assessments
- Standardised assessments
- Strict protocols for interventions
- Checks that interventions are valid

Basic Psychology and Trauma Response

Classical Conditioning

- Learning that certain environmental stimuli predict harmful events.



Fear Conditioning Models:

- Trauma = Electric Shock
- Fear = Rat's fear
- Reminders = Light
- Distress = Rat's fear to the light

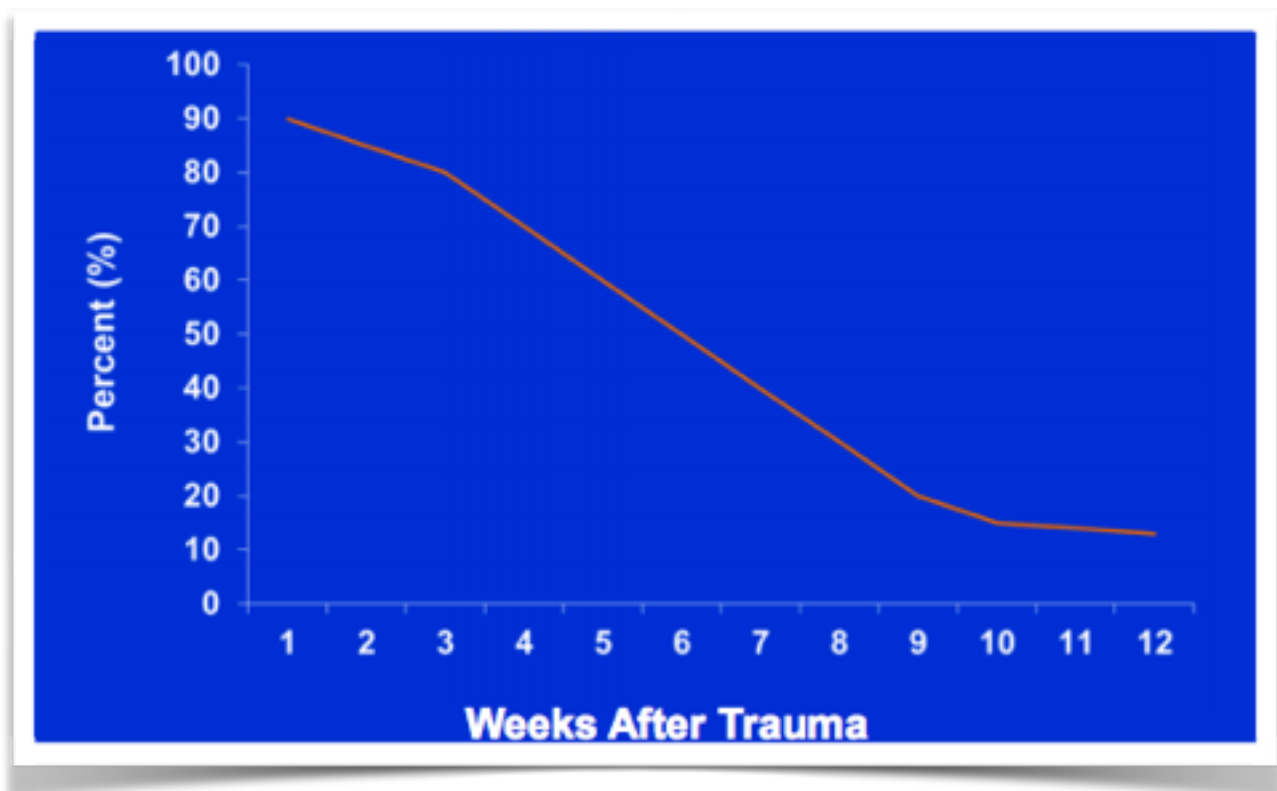
Animal Models

These models (called “fear conditioning”) are shaping how we understand and treat traumatic stress disorders

Extinction Learning

This concept refers to new learning that inhibits initial fear conditioning. Rats learn that the light is safe after repeatedly experiencing it without the shock. For most of us, we undergo extinction learning in the weeks/months after trauma. We learn that the threat is over and we have new experiences that inhibit initial fear responses.

The Trajectory of PTSD:



Extinction Learning & Stress

Extinction learning (learning to feel safe) is important to recovering from trauma.

Cadet firefighters were run through fear conditioning/extinction paradigm. Four years after they had all been exposed to trauma, they were assessed for stress disorders. Those who developed stress disorders were poorer in extinction learning before they became firefighters.

This highlights that basic animal models of learning are crucial to understanding how humans respond to stress. This helps us to identify people who are at risk for PTSD and possibly leads to better prevention methods.

Treatment

Treating the rat:

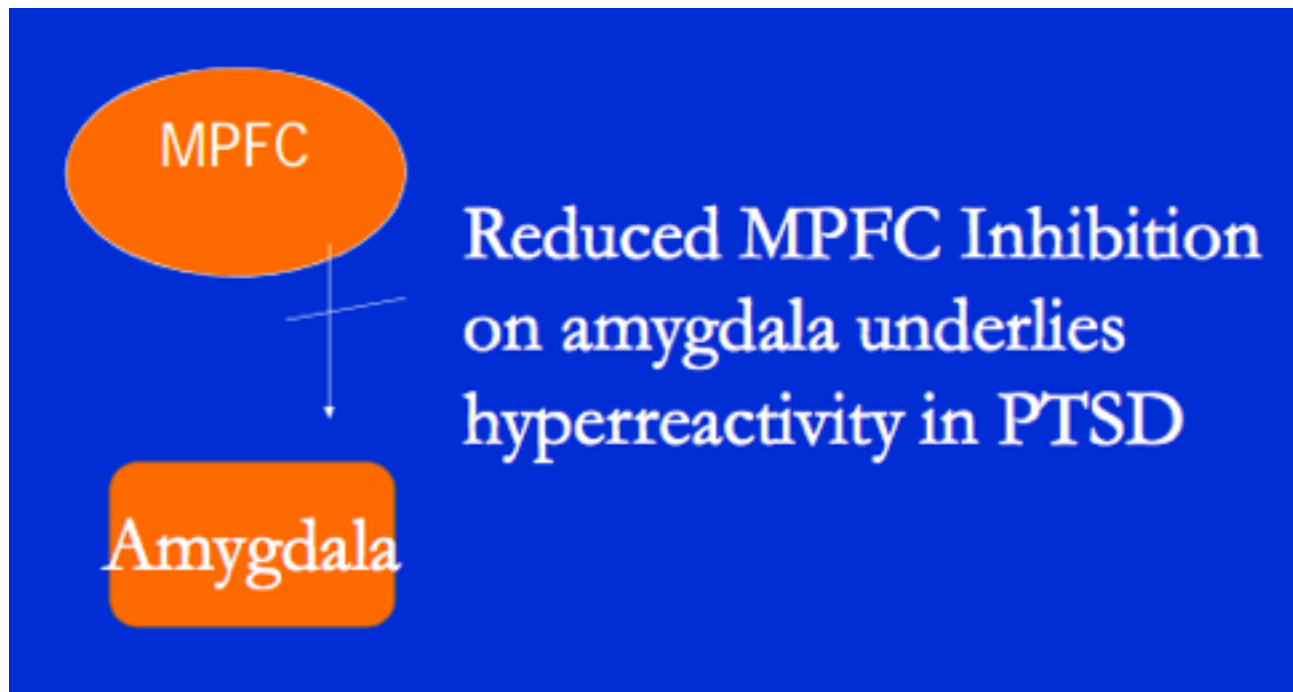
We know that putting the rat back into chamber without the shock leads to new learning that the chamber is safe ("extinction learning")

Treating the human:

We know that putting the human back to reminders in a safe way leads to new learning that the world is safer. This is the major way we treat people after trauma and it is based on basic animal work.

Animal Neuroscience Shaping Clinical Practice

Neurobiological Model of PTSD:



Amygdala - fear gets expressed here

MPFC - Medial Pre-Frontal Cortex - In front of brain, regulates amygdala

The research into PTSD treatment is totally based on animal research. The MPFC must be interacting with the Amygdala, i.e. activated, to lower PTSD.

Brain Regions Predict Treatment Response

The same brain regions underpinning extinction in rats predict exposure therapy for fear in humans. Extending from basic animal research is helping us understand how to treat people affected by trauma.

Neurotransmitters and Learning

Glutamate is the major excitatory neurotransmitter. Animal studies tell us that glutamate is a neurotransmitter linked to emotional learning. By increasing glutamate experimentally before extinction trials, we can increase extinction learning in rats.

We now can improve therapy for anxiety by increasing glutamate prior to therapy session. This advance is a direct result of psychological models tested by animal research.

Summary

- Basic psychological principles & research shape major policies and practices in society
- This basic work is essential for developing new approaches to many disorders
- It is also essential for testing if what we do works or not

Topic 3: Social Psychology

Presented by Scientia Professor Joseph Forgas

Lecture 4-6 (Part 1-3)

and

Presented by Professor Lisa Williams

Lecture 7-10 (Part 4-7)

Part 1: Introduction, Definition, History, Methods

Introduction & Background

The subject matter - social psychology is about everyday life.

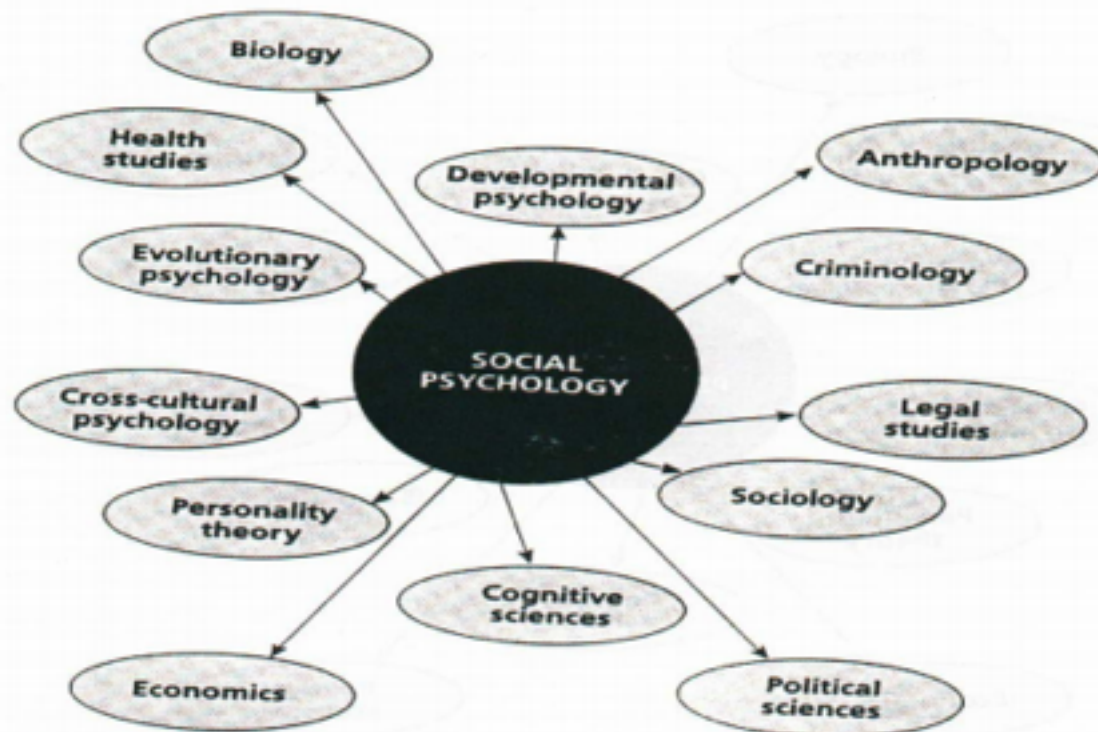
Definitions of Social Psychology

- Allport, 1935: 'the scientific investigation of how the thoughts, feelings and behaviours of individuals are influenced by the actual or implied presence of others'
- Myers, 1990: 'the scientific study of how people think about, influence and relate to each other'

Key terms, social psychology is:

- scientific
- focused on individuals as the unit of analysis
- based on the fact that imagined or implied presence is enough; social is in the mind

Social Psychology Informs Other Disciplines



What Do Social Psychologists Study?

Some examples:

- How can we influence others?
- How can attitudes be changed?
- How can we tell when a person is lying?
- Do groups make better judgments than individuals?
- What influences conformity?
- How do intimate relationships develop?
- How do we form impression

We are Already All Social Psychologists

Social psychology vs. common sense

Everyone is a social psychologist? Research findings can be, in hindsight, 'obvious'. Social psychology and common sense have the same subject matter, different methods.

Common sense: rich, general, non-specific everything and its opposite can sometimes be true.
Science: specific: when, where why and how do events occur?

Also, common sense cannot distinguish between coincidence and causality. Much past common sense belief is now known to be wrong.

Human Nature

Human social behaviour is shaped by evolutionary forces. Our age is very different from our ancestral environment – challenges.

Social Isolation Study

Schachter (1959) studied social isolation. He isolated five volunteers in a windowless room for as long as they could endure. He found that there were considerable individual differences in the time people could tolerate isolation:

- One lasted 2 hrs ("almost hammering the door to get out")
- Three participants lasted two days (two were unaffected by the experience, one was uneasy)
- The fifth participant lasted 8 days without suffering from adverse reactions

We can conclude from this study that humans are profoundly social animals.

Evolutionary Origins of Sociability

Humans evolved to a different kind of social life. Once upon a time, we were all hairy and all lived in small groups. What did your forebears have that allowed them to survive, so you can be here...? Adaptation for group living, cooperation and conformity.

- Steve Pinker: human mind evolved to manage social relationships
- Robin Dunbar: social brain hypothesis

The Need for Identity and Attachment

Since 18th century there has been a breakdown of primary groups. We now have more freedom, mobility, productivity and wealth, but impoverished social relationships. For example, what drives consumption? The need to satisfy social needs? This concept is, ultimately, futile. Some evidence for this includes that life satisfaction is static.

Some Evolutionary Universals

Ingroup Favouritism

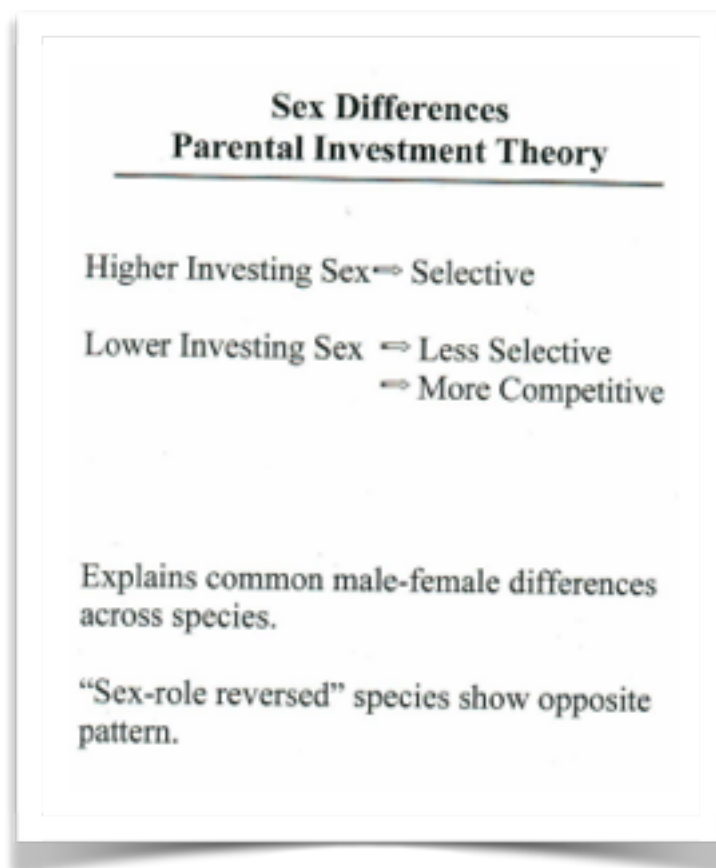
Since stone age there have been primary groups vs. mass society. How do we achieve tolerance? In the 18th century, there existed the idea of **individualism**, or that all humans are equal. By the 20th century, multiculturalism became the prevalent, such that all cultures are equal. This brought inherent dangers of group emphasis vs. individualism.

Gender Differences

David Buss researched whether male and female differences universal. He did this by way of newspaper ads, surveys of sexual preferences. He found that men tended to be 'seekers', and women tended to be 'choosers'. Each gender showed:

- different mating preferences
- different jealousy patterns
- differences in perceptions and judgments

Buss found the reason for gender differences, and called it 'parental investment theory', thus:



Psychology as a Science

The essential components of science:

Accuracy - the careful, precise gathering of information

Objectivity - the unbiased evaluation of information

Skepticism - must be testable, data can be replicated

Open-Mindedness - the ability to change views if views are discredited or inaccurate

Recent Post-Modernist Criticisms of Science

The basic argument is that in science there is the impossibility of achieving truth. There is an emphasis on relativism, social and cultural factors. Superstition, religion vs. science. Based on a fundamental misunderstanding of science vs. falsification: Karl Popper. Common sense evidence for the unique status of scientific understanding.

The Evidence:

Only science works and produces useful new knowledge such that other ways of knowing, such as crystals, superstition, myth, postmodernism, religion do not...



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