

Teaching a New Generation about Psychology

How Not to Repeat the Mistakes of the Last 100 Years

Dr Warren Mansell
Senior Lecturer
University of Manchester

Plan

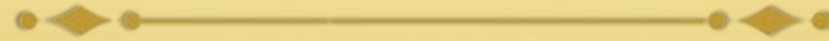


- ✦ The Five Big Blunders of Psychology
- ✦ What kind of approach avoids these blunders?
- ✦ How do we teach it?

Learning Psychology is Fun!

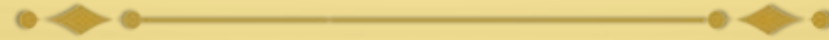


Learning Psychology is Fun!



- ✦ It's learning about people!
- ✦ It's about emotions and feelings!
- ✦ It's a science that still has a lot of challenges!
- ✦ It's useful for all kinds of careers!
- ✦ But...

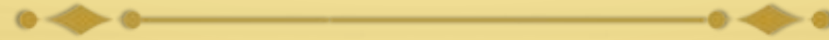
Learning Psychology is Fun!



- ✦ It's learning about people!
- ✦ It's about emotions and feelings!
- ✦ It's a science that still has a lot of challenges!
- ✦ It's useful for all kinds of careers!
- ✦ But is it also 'woolly'?



The Five Big Blunders of Psychology...



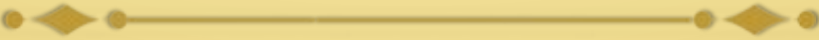
- ① ISOLATION
- ② REIFICATION - e.g. what is 'intelligence'?
- ③ THE TOOTHBRUSH PROBLEM (Mischel, 2008)
- ④ THE LINEAR MODEL (Marken, 2009)
- ⑤ LIES, DAMNED LIES & STATISTICS!



① Psychology is isolated...



Psychology is isolated...



- ✦ Prior to 19th Century, part of philosophy & closely linked to physiology & psychiatry (e.g. study of spinal nerves & brain damaged patients)
- ✦ Psychology emerged as a discipline
 - ✦ Wundt (1874)
 - ✦ University departments 1870s onwards...
 - ✦ William James (1890)
- ✦ Early 20th Century... became independent from other disciplines... this is often how it is now taught...

Why is isolation a problem?



- ✦ The mind is what the **brain** does (Minsky, 1990)
- ✦ The nervous system has **evolved** over millions of years.
How is this relevant?
- ✦ How can the methods we used be questioned without **philosophy**?
- ✦ What are the **social**, **cultural** and **political** implications of psychology?
- ✦ How can we use psychology in the **real world**?

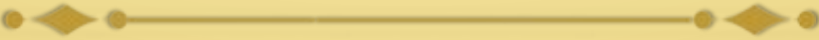
④ The Linear Model



“Stimulus, response!
Stimulus, response!
Don't you ever *think!*”

Is this really how people function? We experience our behaviour as *intentional* rather than triggered by ‘stimuli’?

So, what approach is needed when teaching psychology?



- ① Not isolated but... **Grounded in science** as a whole (e.g. physiology, philosophy, mathematics, sociology)
- ② No reification but... **real working models** that do things
- ③ Not a new 'toothbrush' but... a **unifying** approach
- ④ Not a stimulus response model but... a theory that proposes people have **intentions**
- ⑤ Not only using statistics to find weak effects but... creating accurate models that **closely match** the real world

Perceptual Control Theory (PCT)



- Living organism control their *input*, not their output
- ‘Behaviour is the control of perception’
- Engineering principles can be used to explain these mechanisms of control
- Very detailed theory – Powers (1973)
- 11 x 2 hour course at University of Manchester
- Supported by website – www.pctweb.org

The Rubber Band Demo



- ✦ Observable behaviour is used as the outcome in psychology studies, e.g. reaction time; aggression
- ✦ Is observable behaviour really an outcome?
- ✦ Or is it something else?
- ✦ Can you actually tell what someone is doing by watching what they are doing?

The Rubber Band Demo

- ✦ People try to control their own experiences
- ✦ We have many ‘knots over dots’
- ✦ i.e. internal goals & purposes for their own experiences, e.g. getting the temperature of their porridge, ‘just right’
- ✦ This is **control**...
- ✦ ...the core of PCT

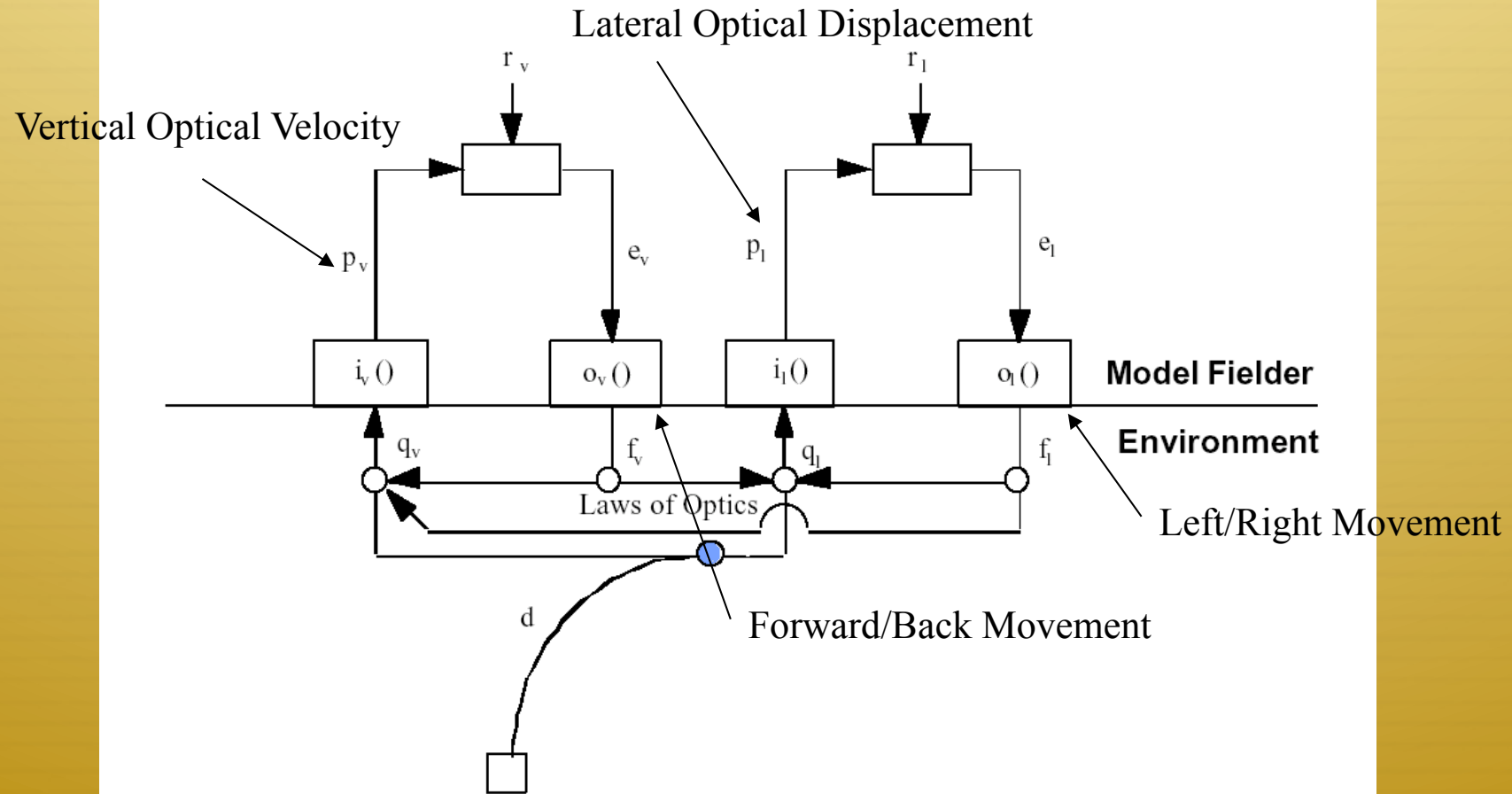


A Model That Catches Fly Balls (Marken, 2001)



A Model That Catches Fly Balls

- Baseball Catch



Method of Levels (Carey, 2006)



- ✦ A psychotherapy to help people regain control of their lives
- ✦ Questions to help people manage & resolve their conflicting goals
 - ✦ e.g. To please my parents vs. To be independent
 - ✦ e.g. To understand my trauma vs. To try to block memories
- ✦ Used in a wide range of mental health problems
- ✦ Evaluated in primary care as a more accessible, easily trainable form of cognitive therapy (Carey et al., 2008)
- ✦ Demonstration

Examples of PCT...

- ✦ Sociology – modelling the behaviour of crowds (McPhail et al., 1992)
- ✦ Human Factors – designing helicopter interfaces (Taylor, Farrell et al., 1999)
- ✦ Robotics – modelling of walking (Kennaway, 1999)
- ✦ Economics – modelling of financial markets (McClelland, 2010)



Summary



- ✦ There are Five Big Blunders of Psychology
- ✦ These run through how it is practised and taught
- ✦ A new approach to teaching psychology is needed
- ✦ Perceptual Control Theory, around for over 50 years, provides one such approach
- ✦ It is enjoyable to learn and fun to teach!
- ✦ But can psychology *really* be studied in this way, because it's not a physical science?... oh yes it can!
- ✦ Check out www.pctweb.org now!
- ✦ PTO

Quotes from Students



- ✦ **"It should be taught much more. The theory is new and exciting and therefore encourages students to believe in what we are doing at uni."**
- ✦ **"PCT is an interesting theory that should be involved far more in the teaching of psychological processes – this course has advanced my understanding of psychology."**
- ✦ **"PCT was a revelation for me, the one psychological theory that makes most sense and should be taught more widely"**
- ✦ **"PCT as a theory inspires me more and makes greater sense to me than any other psychological theory I have studied in the three years of psychology."**
- ✦ **"It may be the most practical/applicable module I have studied in that it seems totally relevant even 'outside of the classroom' unlike some aspects of psychology."**