

**CHIP-4**  
 Concepts and history in psychology

Types of explanation

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**4a. What types of data does psychology use?**

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**What kinds of data must psychology explain? (1)**

Before psychology began, what areas (and questions) would we expect it to explain?  
 (Just as for physics, we'd expect it to predict the weather, predict the properties of wood and stone, ...)

In particular, what types of data or observation?

From a prior, outside, view we might expect:

- A. Behaviour: What people do.
- B. Introspection: What people think, feel, are aware of.
- C. Physiology: What their bodies do (physiology) related to this.
- D. Functional: what any organism must do
- E. Social: requires analysing a group, not an individual

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**What kinds of data (2)**

What types of data or observation?

- A. Behaviour (non-verbal).  
 What the person does as a whole.  
 External observation of the whole person.
- B. "Verbal reports":  
 What they think, feel, are aware of.  
 Conscious thoughts, as observed through language
  - What people say
  - Introspection
  - Attitudes
- C. Physiological (and neurophysiological) observations.  
 Observing internal bodily events.

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**What kinds of data must psychology explain? (3)**

Just because we want an explanation, doesn't mean one will ever exist. That's true of any topic: no guarantees in advance. ("Randomness" is a technical term for circumscribing things we think we can never predict.)

Perhaps humans can never understand humans (though a more intelligent species could): how could a mind use only part of its complexity to describe all of its complexity? Wouldn't that be a mental version of the Tardis?

There is no prior guarantee that one science must be able to unify the 3 kinds of data. One possibility is that there will end up being 3 sciences, each addressing only one kind.  
 Behaviourism.

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**What kinds of data (4)**

But nevertheless:

- Like Newton, we much prefer unified grand theories that link disparate things, and disparate types of data
- Pre-psychology commonsense expects us to link these things.
- Theories which don't, lack something we feel we want
  - If it's just behaviour then it's not psychology but ethology (animal behaviour)
  - If it's just feeling then it's literature, not science.
  - If it's just physiology then it's medicine, not psychology.

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### Critical thinking tip:

A lot of psychology can be criticised for ignoring or covering up shortfalls of this kind i.e. dealing only with one or two of these types, rather than scrupulously reporting and discussing what is lacking (so far) in “theories” of a given area. [e.g. *emotion*]

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### Internal inconsistencies (0)

We could, then, see psychology as a whole as attempting to link, and make consistent, fundamentally different types of evidence. Obviously it is interesting, often amusing, when they contradict each other e.g. when a person says one thing but does another (hypocrisy? unconscious motives?); Or intend to do one thing but actually do another (psychology of human errors)

There is a somewhat unsavoury tendency in academic psychology to publish experiments that seem to sneer at the participants: demonstrating how silly they are. (Perhaps to get over objections that psychology is mostly just proving what already seems obvious to ordinary people.)

But an opinion that I have is that a large part of mental life is going work to maintain and improve internal consistency.

### Internal inconsistencies (1)

The broad category of thoughts we are aware of and can report on in language has many subdivisions.

And sometimes we observe contradictions even within that one category, besides contradictions between the broad categories (e.g. of what people say and what they do).

Even within the one evidence “type” of what people can be aware of, we quite often observe dissociations (contradictions).

This further elaborates the general point, that the wished-for, a-priori scope of psychology is to look for unified explanations that apply to all these types of data.

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### Internal inconsistencies (2)

- In researching children's conceptions of physics:
  - Predict
  - Explain
  - Behave (intentional behaviour)
- Slips and mistakes
- “Catalytic” assessment
- Attitudes and behaviour (expectancies, theory of planned behaviour)

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### Abstract vs. experiential knowledge: internal vs. external understanding

In all academic areas there is the important, if under-attended, issue of how to acquire both:

1. An understanding that is public, abstract, shared (“from the outside”, “Third person perspective”);
2. And personal, concrete, private (“from the inside”). E.g. linking a concept like “force” to a bodily experience like pressure on one's palms.

Theories which don't, lack something we feel we want:

If it's just behaviour then it's not psychology but ethology (animal behaviour)

If it's just feeling then it's literature, not science.

If it's just physiology then it's medicine, not psychology.

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### A double scoping issue: Experiential: first or second person?

In psychology, uniquely, the experiential aspect has a double bearing:

- What does it feel like to see and recognise someone else behaving like X?
- What would it feel like to experience / behave like X myself?

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### Experiential double scope (2)

In forensic work, and psychiatry, the “observing others” is often the only one of the two “links to the personal” adopted.

In contrast:

Adelbert Ames [Ames room; 50 other demos]

Ames' view was that statistics should be unnecessary: if a phenomenon was real, you should be able to build a demo so that everyone could experience it directly and personally.

Some of science's most important advances do have this character: telescopes, microscopes, engineering

Brecht's view of science and democracy

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### Experiential double scope (3)

This point, about whether the connection to personal experience has been well built, implies:

- It is a further demand on “scope” and the types of data that should be covered
- In psychology, it applies twice over (unlike other disciplines)

So, roughly:

A1What other people's behaviour looks like.

A2What my behaviour looks and feels like.

B1What other people think, feel, are aware of.

B2What I think, feel, am aware of.

C. What bodies, mine and others, do (physiology) related to this.

### 4a2) Emotion as an example topic

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### Experiential double scope

Perception of others' emotion is a quite separate issue from the perception of one's own. Most theories presuppose there is no difference. Yet the mechanism must be quite different.

“You're getting angry about this.”

[shouting] “NO I'M NOT”

This old but perceptive joke is revealing. Recognising one's own emotion and recognising other people's are clearly two quite different skills. It is also a problem (counterexample?) for the theory that emotion is about the agent switching attention: how could the agent not even notice an emotion in that case?

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### The 3 main types of theory for emotions

1. It's all physiology/bodily  
(Blush, hair erection, weeping, laughing, sneering, trembling ...)
2. It's all social.  
(Laughing shaming, praising, mobbing, ...)
3. It's all about an agent's response to events: switching attention.  
(Joy = success; sadness, despair = failure; fear = flight; anger = attack; disgust = avoid)  
Intrusive brooding whenever there's not an immediate other goal to act on.

Those are examples that support each theory.  
Arguments by counterexample (ceg) can demolish them, however.

### CEGs to type 1

It's all chemicals:

Adrenalin is one hormone relating to 2 opposite emotions: fear and anger (flight and fight)

It's evolutionary: Baring teeth means a threat (aggression) in most species including primates; but in humans it mostly means laughter: the opposite, a reduction in tension

There are universal (facial) expressions for emotions:

Some people go white with anger, others go red; some start to shout, others go deadly quiet.

It's all physiology/bodily: sublime emotions, with infinite variety

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### CEGs to type 2

It's all social:

But: pain, fear of falling, disgust at rotten food, ....

Bowling alley and expressions of joy: 90% more if in company BUT not 100%. Laughing alone (much more if canned laughter, but not 0% if alone and no other laughter).

It's all about an agent's response to events: quite a lot of laughter isn't actually a response even to a joke, let alone an event. It seems to be about a group process for its own sake.

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### CEGs to type 3

A fixed set of alternative responses to events:

So do you include or exclude, from the set of what count as emotions:

- Pain
- Laughter
- The sublime elevation of admiring a sunset (or cherry blossoms)
- The feeling of, and desire for, understanding
- Gratitude
- Guilt (as opposed to shame)
- Anxiety

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### Major omissions from the theories

More CEGs: ignoring cases that clearly contradict assumptions about mechanisms.

1. Emotions are learned, not an innate code:

It is obvious from everyday life that learning plays a huge part in recognising emotions.

A child visits her 8 year old friend, who tells her to watch herself, her dad's getting really angry.

Paddy glances at Sara's back and tells me she's getting annoyed now.

2. Not only or mainly facial expression:

Emotions are recognised from voices, from backs and body posture, from behaviour [snatching: joke or anger or greed]

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### Repeat: Critical thinking tip:

A lot of psychology can be criticised for ignoring or covering up shortfalls of this kind i.e. dealing only with one or two of these types, rather than scrupulously reporting and discussing what is lacking (so far) in "theories" of a given area. [e.g. emotion]

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### A place to stop

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