

**CHIP-5**  
 Concepts and history in psychology

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**Psychology in relation to other disciplines**

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**A map**

<b>Science</b> Single answers, original questions	Computer Science	Chemistry
	Medicine	Philosophy
<b>“Art”</b> Original answers	Sculpture	Literature
	<b>Applied</b> single context	<b>Unapplied (Pure)</b> single generalisations

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**Pure vs. applied**

“Pure” focusses on a single cause and all its consequences  
 Applied on (achieving) a single effect and all its causes  
 (necessary and sufficient conditions)

E.g. of science related spectrum of pure to applied:  
 Theoretical physics - experimental physics - applied physics -  
 mechanical engineering - engineers (building machines) -  
 garage mechanic.

In “Arts” it may look more like a circle:  
 Painting - history of art, theory of aesthetics - craft - interior décor  
 Prime minister takes power - theory of politics - advisors to parties

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**Pure vs. applied (2)**

So pure vs. applied may play differently in (interact with) the “art” vs. science dimension.

In science: First analysis (of nature); then synthesis (of artifacts)

In “arts”: First synthesis (of art objects, human events); then analysis (articulate something of what governs these).

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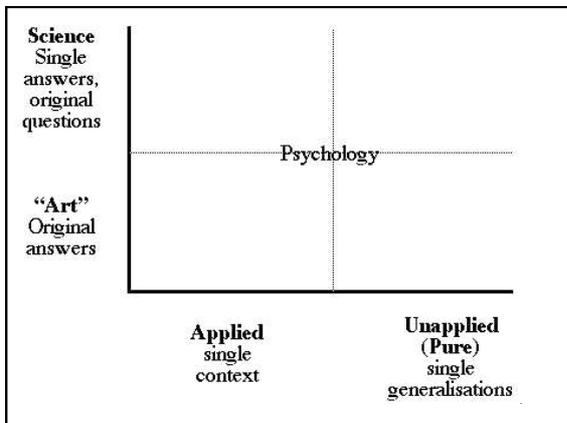
**“Arts” vs. science**

Art vs. science // objective vs. subjective // abstract, concrete // soft, hard // public, private

Science studies what nature has; inanimate effects independent of humans.  
 The “Arts” study what humans have done or created; human agency, and meaning.

So “Arts” address intentionality, perspectives, feelings  
 So are likely to require uncertainty, perspectives, relativity.  
 You might say they are reflection on past human action, and look for (almost always multiple) perspectives.  
 Often (not always) this is grounded on human subjective judgments (– what other standard is relevant?)

These in turn lead to characteristic modes of thought: unresolved questions, seeking to problematise not problem-solve. <sup>6</sup>



**N.B. "Problem solving"**

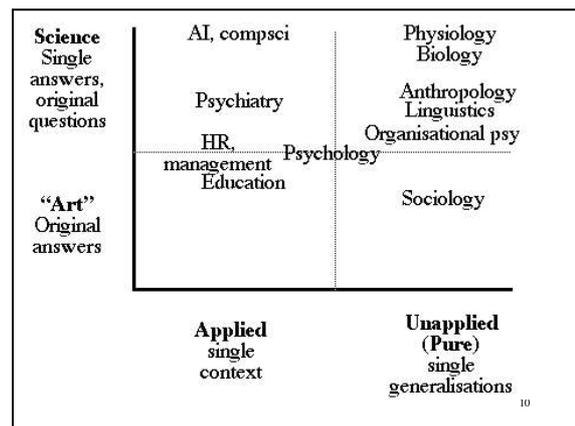
Employers frequently say they want graduates to do this. But really there are 3 contrasting component skills:

- Problematising: taking what others are letting slide by as OK, and flagging it up as something that needs treating as a problem. Every time a big fraud in a firm emerges, it is because people (auditors, ...) let it by. In fact employers need problem-spotters, although not all realise this.
- Redefining an identified but ill-specified problem into something specific that can be addressed.
- Solving it: pushing through to an actionable decision and conclusion. Generally speaking, the Sciences drill their graduates on this all the time, and the Arts do not; (or perhaps the applied disciplines do but the pure ones do not.)<sup>8</sup>

**Psychology's neighbours**

Sociology  
 Physiology, neurology  
 Biology, (evolutionary psy)  
 Computer science, artificial intelligence  
 (Education) IQ, testing (psychometrics), learning  
 Psychiatry, medicine  
 Personnel management (HR); management  
 Organisational psy  
 Linguistics, psycholinguistics,  
 Anthropology

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**Overall assessment of psychology as a body of knowledge**

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**Explanatory Success: Effect size**

In an idealised, pure, experiment we are able to control everything except the causal factor we are focussing on. Effect size is a measure of this.

Effect size means, basically, expressing results in units of the StdDev: by how many SDs does the treatment change the mean. This also shows how much of the variance is explained (and how much is not).

Most of psychology isn't like this. Still there are some successes even on these terms.

Although now unfashionable, IQ tests predict something like 65% of the variance in academic performance (SATs, GCSEs).

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### Other kinds of success

Beck's inventory (a paper test) does nearly as well as a trained psychiatrist in diagnosing the mental illness of depression. I.e. using psychometric methods to replace a human skill.

Cognitive Behaviour Therapy (CBT) is about as effective as the best drugs and as exercise.

This demonstrates that psychology is able to compete, in a very important applied field, with both biochemistry and non-scientific approaches in originating practical solutions.

At the very, very least, psychology seems to be an essential part of the mix of necessary approaches.

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### Again

Perhaps as important, is showing that ...

- inherited characteristics;
- developmental issues (e.g. early childhood neglect)
- persistent traits in general (e.g. the big 5 personality dimensions);

... are all influential in people on average. The effect sizes are not huge, yet the influence is pervasive.

I.e. it seems the nature of psychology is NOT simple mechanical causes;

BUT significant biases / predispositions. It is not that we are doomed by them, but that unless something actively counteracts them, then their influence will be seen.

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### NewSci on gender diffs

TRAIT	Effect size
Gender identity	11.1
Sexual orientation	6.5
Preference for boy's toys	2.1
Height	2
Preference for girl's toys	1.8
Physical aggression	0.4-1.2
Empathy	0.2-1.3
Fine motor skills	0.5
Mental rotation	0.1
Assertiveness	0.2

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### Positive psychology manifesto

The positive psychology movement represents a new commitment on the part of research psychologists to focus attention upon the sources of psychological health, thereby going beyond prior emphases upon disease and disorder.

Positive Psychology is the scientific study of optimal human functioning. It aims to discover and promote the factors that allow individuals and communities to thrive.

This amounts to a criticism of the last 50 years of academic psychology as too focussed on disease, and failing to study normal mental functioning. What is normal functioning, apart from the absence of clear disease?

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### Well-being

What is "well-being"?

A basic idea is that happiness isn't just pleasure; Nor joy (the name of the transient emotional reaction to an unexpectedly favourable event) But involves "meaning" i.e. goals beyond the physical

However "well-being" seems to emphasise a less conscious balance than "happiness", both in body and mind.

The recent finding that exercise is as effective as the best anti-depressants, seems to show that people generally are not aware of well-being and what supports it.

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### Self-management

An extension of this approach would be to look at how people resist impacts on their mental equilibrium, what makes us resilient, etc.

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## Higher levels of self-management

Patrick Wall Pain

Consciously planned ways of managing one's disposition.  
How do we connect cognition and behaviour (cf. CBT); feeling and reasoning; action and motivations of different types.

(Doris Lessing;  
12 steps recovery from addictions, ....)

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**Psychology as distinctive, not by results, but by approach to the distinctive difficulties of the subject area**

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## The taken-for-granted definition of a discipline

Landauer:

"There are two very elementary but fundamental methodological facts that are taken for granted by all experimental psychologists, but astonishingly often fail to be appreciated by others. The first is that behavior is always quite variable between people and between occasions. The second is that it is feasible to obtain objective data on behavior."

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## So psychology has ...

An approach to research; a way of destroying lay psychology myths.

Dealing with a research domain where multiple inextricable causal factors are the norm.

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## Psychology: overall review from outside

Prior standards: can we read others' minds?  
Can we predict what they will do, say, feel, ...

For each topic: How does the research relate pure and applied studies? Applications?

For each topic: How does the research relate to the arts-science spectrum; or rather: the expectation of permanent unresolved complexity vs. the attainment or expectation of a consensual single conclusion?

For each topic: how is the research relating measures of:  
Behaviour, Physiology, attitudes and beliefs (thinking and speaking)

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## (2)

But also:  
Expecting multiple factors, and identifying them;  
And thereby getting away from simplistic one-explanation mindsets (perhaps not just a failing of commonsense, but a malign importation from other disciplines?)

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## Finale

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### Sample exam qu.1

Taking the case of memory, what would be the difference in treating it as an applied as opposed to a pure topic of research?

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### Sample exam qu.2

Pick a topic in psychology which you think would make a good subject for new research.

Briefly state why you think so.

Then discuss it with respect to each of the following:

- Fashionability in the academic literature
- Pure vs. applied research
- Whether it covers all the main types of evidence that psychology as a whole deals with.

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