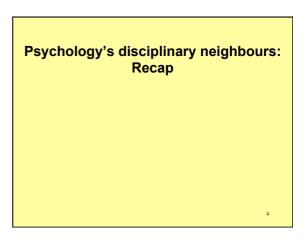
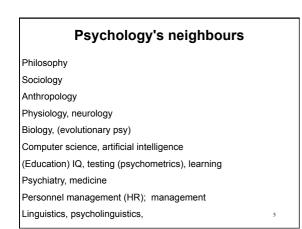


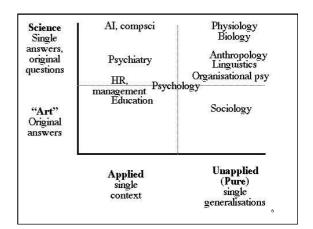
Science Single answers.	Computer Science	Chemistry
original questions	Medicine	Philosophy
"Art" Original answers	Sculpture	Literature
	Applied single context	Unapplied (Pure) single

Discussion questions from the previous lecture

- 1. Where / how would <u>you</u> classify Psychology as a discipline on any dimension, including Arts/Science and pure/applied?
- 2. Where would you classify Philosophy (on the 2-D map of disciplines)?







Examples of cross-boundary topics

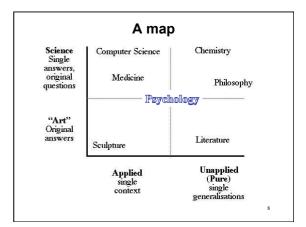
Migraine: physiological or psychological? [Sacks (1992)]

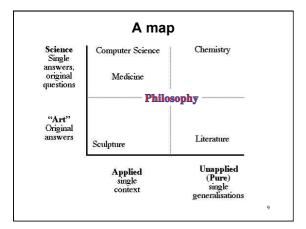
Pain: physiology or psychology? [Wall (1999)]

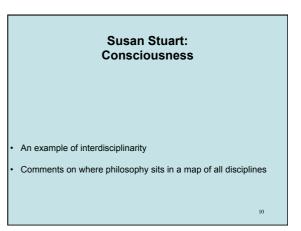
Public Health: medicine, psychology, sociology? [WHO]

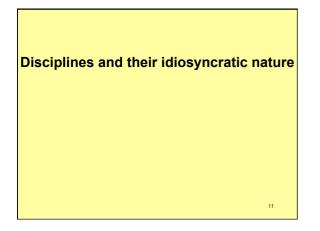
- Solo Social perspectives; in education, and in psychology generally.
- J.J.Gibson on perception: psychology, optics (physics), awareness ... Not representation but information, lawful relationships of object and properties in the light. [reductionism]

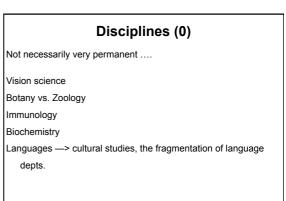
7











Disciplines (1)

Disciplines really do shape a person's mind. They think differently about things depending on the discipline(s) they've been trained within.

What do you think disciplines are defined by?

(subject matter, research approach, teaching method, ...)

Take a few minutes solo, and write down what you think. Only then, discuss/debate your answer with a neighbour.

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Disciplines (2)

(Disciplines really do shape a person's mind. They think differently about things depending on the discipline(s) they've been trained within.)

⇒ So one possible way to define them is as a way of thinking, a characteristic approach to problems. [compSci, …]

Subject matter [but: physics vs. mechanical engineering; nursing vs. being a doctor]

Even the meaning of "research" differs. (It's a science word, not normally used by Humanities scholars.)

Teaching ("signature pedagogies")

Disciplines (3): CDC (1)

There is a real sense that the central learning aim of a history degree is to learn to write a history essay.

In psychology, to write a psychology essay.

- In physics, to demonstrate analysis, reasoning and calculation like a physicist (not like an accountant, or mathematician, or logician)
- I.e. a different way to define what a discipline is, is in terms of the kind of thinking about any new problem which it displays. And this is revealed in the way they teach the discipline over a degree programme in terms of the "core disciplinary criteria" which they use for marking across assignments.

Core disciplinary assessment criteria (2)

So on this account, the key question for each discipline is: What is the assessment criterion that is closest to meaning: "Display thinking like a scholar in this discipline"?

Many disciplines in HE already have much of their assessment organised around a single standard format that exhibits this thinking style e.g. essays for most Arts and Social Science subjects (but actually, quite different essay types depending on the discipline), "problem solving" involving calculation i.e. inferential maths in most science and engineering.

Focussing feedback to students on grasping the core criteria is often key.

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CDC 3: Psychology honours design

For the students responding to NSS 2009, the design had been: Level 3:

9 modules, class exam with some formative feedback on 4 Level 4:

6 modules, no related coursework

BUT

Level 3:

2 CRs (critical reviews), 2 miniprojects with tutorial groups of 5-6 Level 4:

1 CR, 1 project each with a personal tutor

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CDC 4: Psychology honours design (2)

So the programme design could be redescribed as investing 100% of its tutor time in focussing on equipping the students with the ability to display critical thinking (of the kind a psychologist values). It invented a type of coursework ("critical review") that announces to students what the main point is; it requires them to produce 3 month long pieces of work focussed on it; but also marks their exams with this requirement applied.

It is the hardest thing they must learn; the most important thing; almost all our teaching investment is put into it; and in the 2009 NSS, students rated us 5 out of 107 in the UK.

N.B. "Problem solving"

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

- a) 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.
- b) Redefining an identified but ill-specified problem into something specific that can be addressed. [anx. Malaria]
- c) Solving it: pushing through to an actionable decision and conclusion. Generally speaking, the Sciences drill their graduates on this all the time, and the Humanities do not; (or perhaps the applied disciplines do but the pure ones do not.)

