

## PH355 – Philosophy of Education 2016

### Lecture IV – Fodor and the paradox of learning

Outline:

I Orientation

II Background

III Starting to look at Fodor's argument

IV Why language? Why concepts?

V Fodor's assumptions

I

We've been looking at issues re the aims of Education.

In last set of lectures the key issue is:

How is education so much as possible?

Understanding why this is a pressing question and how to go about answering it, gives a more fundamental purchase on the aims of education.

Fodor's paradox of learning shows that learning is not possible. In so far as Fodor's argument is discussed in the phil of ed – the response is to appeal to education as initiation; in the philosophy of psychology, the response is to provide accounts of bootstrapping mechanisms that underlie learning. Arguably, both responses are descriptive rather than explanatory answers to the above question.

II

**Background**, Piaget/Chomsky/Fodor argument in 1975. Chomsky & Fodor's nativism in response to Piaget's developmental theory of cognition.

Piaget – there are discontinuous stages of development, later stages manifest cognitive abilities richer than earlier.

Education as transformative (increase in competences/cognitive abilities)

And that's learning. Education is transformative; it changes the pupil's competences.

Fodor argues that there is no such thing as learning thus conceived. In particular, there is no such thing as learning concepts. All (primitive) concepts are innate (or are definitionally acquired out of primitive concepts.)

See Fodor *Language of Thought* Chapter 2. First rough formulation:

- (i) Learning engages the pupil's cog abilities
  - (ii) At any initial given stage, pupil's cog abilities have range R
  - (iii) Suppose abilities with range R+ are learnt
  - (iv) But R+ is outwith range of abilities at initial stage
- so,
- (v) abilities with range R+ are not acquired by learning (engaging abilities with range R)

(vi) abilities with range  $R^+$  must be innate (there all along) or produced by trauma or a development of performance, not of competences

See Fodor's e.g. at p.93 re propositional logic and 1<sup>st</sup> order quantificational theory for illustration of idea of ranges  $R$  and  $R^+$ .

Note, Fodor has two responses to his own argument:

Prior to 1998 – nativism, all primitive concepts are innate

Post 1998 – conceptual biologism

In both phases, learning as an engagement of the learner is not possible. Latter position is an account of the 'switching on of underlying cognitive mechanisms'

Concept acquisition is:

a kind of thing that our sort of brain tissue just does' (Fodor, 1998, p.152)

III

### **Starting to look at Fodor's argument**

Key texts, LOT Chapter 2, Bereitier (1985), Carey (2009). Carey for seminarin week 8, on bootstrapping abilities.

Fodor – wants explanation, not description, see pp, 87 ff on Piaget, Vygotsky et al, p.93 on trauma & maturation vs learning.

p.64 – the supposed criticism of Augustine by Wittgenstein (*Philosophical Investigations* §32) actually gets it right – learning a 1<sup>st</sup> language *is* like learning a 2<sup>nd</sup> language.

Learning a language requires a LOT (language of thought). LOT is not learned, it's innate.

IV

### **Why language?**

Best model of cognitive abilities is computational model

Computational models need to be defined over a system of representations

A system of representation is a language.

Representational system for cognition can't be natural language, for natural languages are learned.

If natural language is learned, there must be a language for that process: LOT.

p.38: concept learning begs for analysis as involving the determination of a confirmation relation between observed and extrapolated reward contingencies.

Learning as hypothesis formation and confirmation. Need a language for this.

E.g.: all things that look like this are called 'black'

Also, need a language (LOT) for solving Goodman's problem ('grue').

## Why concepts?

If cognition modelled computationally, concepts are the components of representational systems.

Fodor's conclusion (another version):

Not all the languages one knows are languages one has learned, and at least one of the languages which one knows without learning is as powerful as any language that one can ever learn. (p.82)

and he denies:

that one can learn a language whose expressive power is greater than that of a language one already knows (p.86)

## V Fodor's assumptions:

(a) learning a 1<sup>st</sup> language is hypothesis formation and testing

(b) learning a 1<sup>st</sup> language is learning semantic properties of its predicates

(c) a pupil learns semantic properties of the predicates iff pupil learns generalisations which determine the extensions of the predicates. (cf. p.59)

On (a)

Idea of *engaging* the pupil

One issue – providing experiences on which to generate hypotheses

Engaging - figuring as part of personal-level experience

(d) things available in experience for you

(e) things available in experience in a way for you

If (d) requires (e), then you engage, e.g., blackness, only if you have ability to experience blackness (a way blackness is for you); but that is a concept, a component of a representational system. Only if you have that, you can then generate a hypothesis, e.g.: all things experienced in this way are called 'black'.

So Fodor assumes that for something to be available to you in personal level experience, it must be represented in experience. In part, this is just a consequence of the computational model of psy processes.

Experience is a psychological process. Analyse it with computational model. So it is a process involving manipulation of items in a representational system – concepts. So you can't experience blackness without already possessing a concept for blackness. So in order to form the hypothesis for learning, you already need the concept to be learned. There is no learning.

Note, the transition from (d) to (e) might be denied.

Second point on (a):

The above point is re the forming of the hypothesis. But the hypothesis has to be tested and confirmed.

That means that the subsequent engagements with blackness stand in a relation that supports (gives reason for) the hypothesis.

What does this mean?

Doesn't it mean at least this: the confirming experience shows that the hypothesis was correct (gives support for taking it correct)?

So your personal level experience of learning shows that you've got the *right, correct* pattern in your hypothesis – you acquire knowledge of the correctness condition for the application of 'black'.

What's that?.....It's the truth rule for 'black'.

So you need a language in which the truth rule is expressed.....LOT!

Fodor:

Either it is false that learning language L is learning its truth definition, or it is false that learning a truth definition for L involves projecting and confirming hypotheses about the truth-conditions upon the predicates of L, or no one learns L unless he already knows some language different from L *but rich enough to express the extension of the predicates of L* (p.82)

Fodor denies '...that one can learn a language whose expressive power is greater than that of a language one already knows' (p.86).

Assumption (a) re hypothesis testing and confirmation requires LOT in two places: first for the content of the data of the hypothesis; second for giving results that show the hypothesis correct. Both are meant to operate at the personal level.

### **Alternatives....?**

(i) not hypothesis formation and testing, but initiation/training as the basic form of learning

(ii) not hypothesis formation and testing, but Quinean bootstrapping mechanisms.

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