

Nativism and Empiricism

Central question: To what extent is our knowledge (of mathematics, language, empirical world) dependent upon sense experience?

Some broad and broadly different answers: Pure nativists (of which some “rationalists” are a subspecies) say some knowledge is gained entirely independently of experience. Pure empiricists say no knowledge is gained independently of experience. But these broad answers are just the beginning of the matter.

Our path through the issues takes us first to Plato’s dialogue *The Meno*.

Meno’s Paradox

(80e): Socrates’ statement of the paradox:

I know what you want to say, Meno...that a man cannot search either for what he knows or for what he does not know. He cannot search for what he knows -- since he knows it, there is no need to search -- nor for what he does not know, for he does not know what to look for.

Socrates resolution of the paradox = **The Doctrine of Recollection**

What is the Doctrine?

81b-e):

The soul is immortal.

The soul has been embodied again and again.

There is nothing that the soul has not learned.

The soul can recollect the things it knew before.

When we say we learn something, we are really merely recollecting it.

Recollecting one thing allows one to recollect more.

How does the Doctrine of Recollection give us a resolution of Meno’s Paradox?

How can it be sensible to search for an answer to a question one doesn’t already know the answer to? Searching for an answer and finding it (aka “learning”) is a process of recollecting what we knew before. So:

We search for what we once knew, although we have forgotten it. This is an entirely sensible thing to do. Our knowledge is not immediately accessible and we need to retrieve it. And since we once knew the thing, it’s easy for us to recognize the knowledge when we find it.

Proof of the Doctrine of Recollection

Socrates has a question: take a unit square U , with $\text{area}=1$. What square would have an area double the unit square?

Let 'Diagonal' be the answer to Socrates' question. **A square with an area double a given square is a square constructed on the diagonal of the given square.**

Argument:

- a. The slave boy didn't know the answer Diagonal, at the beginning of the inquiry. (85c)
- b. He answered the questions on the basis of his opinion, not on the basis of Socrates' word.
- c. The boy arrived at the correct answer and so knows Diagonal. (85c6-d2)
- d. If the boy now has knowledge of Diagonal, he must have either:
acquired the knowledge at some time, or always possessed the knowledge. (85d6)

Either way, the boy recollects his knowledge: Why?

- e. Suppose that he acquired the knowledge of Diagonal at some time or other.
 - (i) He didn't acquire it from Socrates in this discussion, and he didn't acquire it at another time in his life
 - (ii) So if he acquired it, it was not in this life, but before.
 - (iii) If so, he must have forgotten it at the beginning of the inquiry, since he didn't know it going in (a above)
 - (iv) finding knowledge "within oneself" after forgetting it just is **recollecting**.
- f. Suppose that he has always possessed the knowledge of Diagonal
 - (i) once again, he must have forgotten it at the beginning of the inquiry, since he didn't know it going in (a above)
 - (ii) once again, finding knowledge "within oneself" after forgetting it just is **recollecting**.

Morals for us:: The *Meno* is the locus classicus for the idea that we have **innate knowledge**. The picture is one on which we possess innately, without having to acquire through learning, principles which one only needs to have appropriately cued, perhaps by experiential prods, from which further reasoning can produce more and more knowledge.

Mathematics is the key example in the *Meno*, and for Leibniz too. But clearly knowledge

of a language might fit the bill as well.

Locke and Leibniz can be read as playing out two ways of pursuing this issue: one sometimes readily assents to a proposition one hadn't known (in some sense) at the moment of one's assent. How explain this? Through a claim about innateness of the latent knowledge? (Leibniz) Through a claim about our reasoning powers deployed in the present? (Locke)

Locke against the Inscriptionalists

Innate ideas are mental representations that are permanently available to us in our efforts to obtain knowledge or justified belief because we come into the world already possessing them.

Innate ideas are a secondary target of Book I. The primary target is **innate knowledge**, what we might call inscriptional innatism.

Some sample Inscriptionalists

James Lowde, *Discourse Concerning the Nature of Man* (1694) defends what he calls the Doctrine of Natural Inscription:

Our Souls have a native power of finding and framing such Principles or Propositions, the Truth or **Knowledge whereof no ways depends upon the evidence of sense or observation**: thus knowing what is meant by a whole, and what by a part, hence naturally results the truth of this Proposition [the whole is greater than the parts], without being in any ways oblig'd to sense for it. (53)
These truths do in great measure, owe their clearness and evidence to their being thus imprinted...so that the needlessness of imprinting such evident Notions cannot be argued from their present clearness; because it is their being thus imprinted or thus connatural to our minds that makes them so. (57)¹

Henry Lee, *Anti-Scepticism, or Notes upon each Chapter of Mr. Lock's Essay* (1702):

There are several general Propositions...certainly true...yet we can come at no knowledge of them *meerly* by our Senses; because *they* cannot reach to all the Particulars included in the Subjects of them. Our *Senses* may inform us, that any *single* Whole is equal to all its Parts; but not that all Wholes in the World are so, unless we could suppose, that we had seen or felt them all...

The *Connexion*, between the Parts of some *general* Propositions, is so *natural* and *indissoluble*, that we can safely judge them to be *true*, without reasoning or casting about for *other* Objects to make their Evidence clearer. I may need a Foot-Measure to satisfy me, that this Room is of the same Length or Breadth with the next, but I need none to satisfy me, that it is of the same Length or Breadth with itself: because nothing can have so near a *Relation* to a thing as *itself*. And

¹ Quoted in R.S. Woolhouse, *Locke* (Minneapolis, University of Minnesota Press, 1983).

therefore such propositions are call'd *innate*; because...certainly and self-evidently true. (43)

According to the inscriptional innatist, certain very basic and abstract principles are written down in us from the outset: we come into the world already quite properly convinced of their truth.

Some of these principles are speculative (theoretical), concerning how things are; others are practical, concerning what we should do.

Examples: whatever is, is; it is impossible for the same thing to be and not to be at the same time

What Locke accepts

We have intricate cognitive capacities
We are already prepared to operate on the raw materials of experience
We can only know some things through reasoning
Experience alone does not account for all knowledge

What Locke denies

We have a rich stock of innate ideas already available before experiencing anything
We have a stock of innate principles or beliefs before experiencing anything

What Locke denies

Arguments for and against Inscriptivism

For: Argument from Universal Assent

We readily assent to various principles (e.g. whatever is, is).

The claim that these are innate principles is the Best Explanation of this data

Against: Locke's empirical argument from Possibility of Alternative Explanations

- a) candidate innate principles require ideas as components
- b) we acquire all our ideas from experience (Book II)
- c) once we have the relevant ideas, we readily convince ourselves, on the spot, when prompted, of the truth of the complex proposition built from the ideas (Book IV)

Advantages of Locke's alternative explanation:

(1) "children and idiots"—don't assent readily; we say they fail to acquire the relevant ideas, or fail in powers of reasoning required to compose them.

(2) Inscriptivism predicts very general principles are innate, and no differential readiness to assent; but we see that it takes time to move from particular knowledge to more general. We first give our ready assent to particular principles, and only with time to the more general principles that they underwrite.

(3) some principles are unintelligible, permanently, to the sensorily disabled.

Against: Locke's conceptual argument (I.ii.5) "Truth imprinted but not perceived" is a contradiction.

- a) inscriptivism has it that certain very basic and abstract principles are written down in my mind from the outset
- b) what's written in my mind is consciously accessible to me—what else could it mean to be "in my mind"?
- c) but basic and abstract principles are not consciously accessible to me

Leibniz's rebuttal: perceiving or being aware of the principles is different than believing them. What else it could mean to be in my mind is to be believed, without being consciously perceived.

For Inscriptivism: Leibniz (I.iii.5, p.76)

Innate principles have a high degree or the highest degree (certainty) of justification

No principle derived from experience of the senses can be certain.

So Innate principles are not derived from experience of the senses

Leibniz is not exactly an inscriptivist. Innate principles are not inscribed beliefs "stamped upon the mind of man" (I.ii.I: 48)

Contrast:

IP are inscribed beliefs	IP are tendencies, dispositions
Sense experience has no role in getting knowledge	Sense experience has a role in bringing innate ideas to mind and innate principles
Development has no role	Development brings Powers of reason Language Attention

Note: now Leibniz sounds more like Locke

Leibniz's positive argument (79-80)

- a) knowledge (necessary truth) implies proof (necessary truth)
- b) proof (necessary truth) is by understanding alone
- c) our mind (viz the understanding) is source of necessary truths

Locke agrees that universal truths require use of reason. But it is reasoning upon ideas derived from the senses.

Morals for us: Plato's picture is one on which we possess innately, without having to acquire through learning, principles which one only needs to have appropriately cued, perhaps by experiential prods, from which further reasoning can produce more and more knowledge. Leibniz doesn't quite agree—the principles themselves are not in the mind, but tendencies to formulate them are. Locke might say this leaves little to quarrel with, since he too allows inborn cognitive (reasoning) capacities.

Hume (Enquiry II-V)

Missing Shade of Blue

The Copy Thesis: every idea is a fainter copy of an impression already had within the mind.

Since the source of impressions is experience, all ideas trace back to experience.

The missing shade of blue is a counter-example to the copy thesis. Interpolation from existing ideas (themselves derived from impressions of determinate shades of blue) gives us a new idea of a determinate shade we have not experienced. Interpolation is the result of the operation of the imagination.

(Note: Locke might grant we have a complex idea of a shade not yet met with that is blue, but no simple idea of determinate shade of blue never experienced could come about through this sort of act of imagination. Locke is a purer empiricist about origins of ideas than Hume)

Skepticism about knowledge of matters of fact, inasmuch as this knowledge rests on knowledge of cause and effect.

Hume begins by distinguishing relations of ideas and matters of fact.

Relations of ideas are things we can know intuitively or demonstratively.

Matters of fact include everything else, the general run of empirical knowledge and belief.

Matters of fact can be learned or known in three ways:

- (i) the testimony of the senses,
- (ii) the records of the memory, and
- (iii) factual reasoning, based directly or indirectly on the deliverances of sense and memory.

Factual reasoning, in turn, is always founded on the relation of cause and effect.

But for us humans as presently constituted, *causal beliefs* are discoverable only by experience, not by reason; *causal beliefs are themselves matters of fact*, not relations of ideas.

“The effect is totally different from the cause, so can’t be discovered in it” (Enq, IV.1, p. 18). “[Nature’s] ultimate springs and principles are totally shut up from human inquiry” (p. 19).

So: how does experience afford general knowledge—in particular, general knowledge to the effect that Cs (always) cause Es?

Answer:

I have regularly and invariably found Cs to be attended by Es.
I foresee that (all) as yet unexperienced Cs will be also be accompanied by Es
Call these *transitions of form T*

What species of reasoning could warrant, rationally ground, such transitions from seeing to foreseeing, transitions of form T?

All reasoning is either demonstrative or factual.

Demonstrative reasonings are always conclusive.

Problem: the falsity of what I predict (foresee) is compatible with the truth of the observations (seeings) on which I base it So transitions of form T cannot be warranted by demonstrative reasoning.

“Factual reasoning” can’t be the answer either, for I would be reasoning in a vicious circle: I can’t appeal to our general practice of factual reasoning to warrant transitions of form T, while at the same time acknowledging that transitions of form T warrant our general practice of factual reasoning.

Conclusion: no species of reasoning warrants transitions of form T.

Skeptical upshot: Factual knowledge, based as it is always upon some such transitions, is not knowledge at all.

Hume’s resolution:

We have is a brute propensity to *anticipate* an E when confronted with a C, a propensity acquired in the first place by *experiencing* an E when confronted with a C many times in the past.

Anticipating is a kind of *envisioning*; less vivid than *experiencing* the thing itself, but of the same mental kind.

To have the propensity to anticipate something is to have acquired a habit, a mental groove worn into place by experience. This general kind of acquired propensity already has an established name and place in our understanding of human nature; we call it *custom* or *habit*.

What Nature does is give us an “instinct or mechanical tendency” to go in for this sort of operation over and over again. We have a mechanical frame that is just ready to have habits instilled in it.

Morals for us: Plato’s picture is one on which we possess principles innately. Leibniz doesn’t quite agree—the principles themselves are not in the mind, but tendencies to formulate them are. Hume seems to have a similar idea – namely, that nature instills in us a tendency (mechanical, mind you) to go in for certain kinds of reasoning, governed by certain principles (e.g. cause-effect). For Hume perhaps, some of these principles need

never be presented explicitly to the understanding, for them to govern our cognition.