Lecture 1: Evaluating a point of view

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Handout (with references) & appendix: RICHARDPETTIGREW.COM/LOCKE

What's to come...

Lecture 1: Evaluating a point of view
Lecture 2: The initial point of view
Lecture 3: The point of view evolves
Lecture 4: Choosing from a point of view
Lecture 5: Consenting from a point of view
Lecture 6: Treating points of view

Running themes:

(i) Teleological foundations for normativity;

(ii) Living with permissivism;

(iii) Totalism[1] about credal approaches to theoretical and practical rationality in the face of uncertainty.

[1] (Schliesser, 2024).

Our epistemic point of view

Credences in contents

Verity is more confident Oxford is east of Bristol (O) than that Bath is east of Bristol (B).

Option 1: Verity believes her evidence supports O more strongly than it supports B.

Worry: There are no such facts about evidential support (Lecture 2).

Option 2: Verity has a higher credence in O than in B.

Bath is east of Bristol $\mapsto$ 86% *Oxford is east of Bristol* $\mapsto$ 98%

What are contents?

There is a set of possibilities that represent the world at the finest level grain possible using Verity's representational apparatus. Call these Verity's *personal possibilities*.[2]

The objects of Verity's credences are represented by sets of these possibilities—each is represented as the set of possibilities at which it is true.

(I will spell this out more fully in Lecture 3, where I'll explain how this works when the personal possibilities include logical, conceptual,

[2] We'll assume this is finite. See (Schervish et al., 2009; Kelley, 2023; Kelley & Neth, 2023; Nielsen, 2023; Kelley, msa) for treatments of the infinite case, where things are trickier, but not so different.

and metaphysical impossibilities in order to represent Verity learning logical, conceptual, and necessary a posteriori truths.[3])

[3] (Hacking, 1967; Williams, 2018; Pettigrew, 2020).

What is a credal state?

We represent a credal state by a *credence function*. This takes each content about which Verity has an opinion and returns her credence in it. Credences lie between 0 (or 0%) and 1 (or 100%) inclusive.[4]

[4] A credence function is a function $C : \mathrm{P}(W) \to [0, 1]$. For $A \subseteq W$, $C(A)$ is the credence it assigns to the personal proposition A.

Credal norms

Probabilism At any time, your credences should be probabilistic.[5]

	Positive	*Negative*
C	10%	90%

	Positive Disease	*Positive No Disease*	*Negative Disease*	*Negative No Disease*
C	8%	2%	45%	45%

[5] That is, the credences you assign to your personal possibilities should sum to 1; and the credence you assign to a particular personal proposition should be the sum of the credences you assign to the personal possibilities at which it is true.

Suppose W is the set of personal possibilities. Then Probabilism demands:

(i) $\sum_{w \in W} C(w) = 1$;

(ii) for all $A \subseteq W$,

$$C(A) = \sum_{w \in A} C(w).$$

Conditionalization When you receive new evidence you should condition your prior credences on it.[6]

So, after learning the test is positive, Verity's credences should be:

	Positive	*Negative*
C'	100%	0%

	Positive Disease	*Positive No Disease*	*Negative Disease*	*Negative No Disease*
C'	80%	20%	0%	0%

[6] If you learn a proposition E to which you assigned positive prior credence, your new posterior credence in a given proposition X should be the proportion of the prior credence you assigned to E that you also assigned to X.

That is, if your prior is C, you learn $E \subseteq W$, and $C(E) > 0$, then your posterior should be C' such that, for all $A \subseteq W$,

$$C'(A) = C(A \mid E) = \frac{C(A \,\&\, E)}{C(E)}.$$

Actual Conditionalization You should update in this way.

Plan Conditionalization You should plan to update in this way (when you know your evidence is factive and partitional).

Weak Reflection Principle Your prior credence function should be a mixture of your possible posterior credence functions.[7]

[7] That is, if your prior is C and your possible posteriors are $C_1, \ldots, C_n$, there should be weights $0 \leq \alpha_1, \ldots, \alpha_n \leq 1$ such that $\alpha_1 + \ldots + \alpha_n = 1$ and, for all $A \subseteq W$,

$$C(A) = \alpha_1 C_1(A) + \ldots + \alpha_n C_n(A).$$

(van Fraassen, 1999).

Expected Utility Principle Choose so as to maximize expected utility from the point of view of your credences and utilities.[8]

[8] If o is an option, u is your utility function, and P is a probabilistic credence function, the expected utility of o by the lights of P is defined as follows:

$$\mathbb{E}_P[u(o)] = \sum_{w \in W} P(w)u(o, w).$$

Given a set of options $\mathcal{O}$ from which you must choose, the Expected Utility Principle says that you must pick o such that, for any o' in $\mathcal{O}$,

$$\mathbb{E}_P[u(o')] \leq \mathbb{E}_P[u(o)].$$

The teleological account of credal rationality

Two roles that credences play in our mental lives:

(i) they represent the world;

(ii) they guide action.

We can measure how well they play each role; and we can establish norms to govern them by showing that those that violate the norms play these roles suboptimally.

Advantages of the teleological approach:

(i) leans less heavily on appeals to intuitive responses to vignettes;

(ii) both *establishes* norms and *explains why* they hold;

(iii) allows us to question intuitively plausible epistemic principles;

(iv) accommodates internalism and externalism as *different* dimensions of evaluation, not *competing* ones.[9]

[9] (Alston, 2005).

Measuring the epistemic utility of a credal state

Measure the epistemic utility of a credence function at a personal possibility using a function that is (i) continuous on the probabilistic credence functions, and (ii) strictly proper scoring rule.[10,11]

[10] NB: no additivity needed.

[11] (Rosenkrantz, 1981; Oddie, 1997; Joyce, 1998; Greaves & Wallace, 2006; Joyce, 2009; Moss, 2011; Pettigrew, 2016).

(i) EU is *continuous on the probabilistic credence functions* if, as your credences changes continuously, their epistemic utility at a possibility also changes continuously.

(ii) EU is *strictly proper* if every probabilistic credence function expects itself to be better than any alternative credence function.[12]

[12] Arguments in favour of this property: (Joyce, 2009; D'Agostino & Sinigaglia, 2010; Williams & Pettigrew, 2023).

E.g. Brier score; enhanced log score.[13]

[13] Often, we can think of these scores as measuring the proximity of the credence function to the ideal credence function at a possibility, where the ideal assigns maximal credence to truths and minimal credence to falsehoods.

Measuring the pragmatic utility of a credal state

Hosiasson's Thesis: the pragmatic utility of a credence function at a possibility is the utility, at that possibility, of whatever act it will lead you to choose when faced with the decision you'll face.[14]

[14] (Bain, 1865; Peirce, 1878; Ramsey, 1926/1931; Hosiasson, 1931; Misak, 2016; Torsell, 2024).

Two tweaks: (i) uncertainty over which decision problem you'll face;[15] (ii) uncertainty over how you'll break ties between options you consider equally good.

[15] (Schervish, 1989; Levinstein, 2017).

- If your credence function is probabilistic, you choose by maximizing expected utility.
- If your credence function is not probabilistic, there are numerous accounts.[16] Choosing in line with any one is permissible.

[16] (Ramsey, 1926/1931; Hedden, 2013; Pettigrew, 2019; Pruss, 2021a).

	Sun on Mon		*Rain on Mon*	
P	55%		45%	
	Sun on Mon *Sun on Tues*	*Sun on Mon* *Rain on Tues*	*Rain on Mon* *Sun on Tues*	*Rain on Mon* *Rain on Tues*
P	35%	10%	25%	30%
Loch Muick	10	10	10	10
Ben Macdui	20	20	0	0

Hedden: *Loch Muick* if fine-grained; *Ben Macdui* if coarse-grained.

(i) For any uncertainty about the decision problems, the pragmatic utility function is proper.

(ii) For any uncertainty that is certain that probabilistic choice will be decisive, the pragmatic utility function is continuous on the probabilistic credences.[17]

[17] (Pettigrew et al., ms).

(iii) For any uncertainty that is discerning between probabilistic credences, the pragmatic utility function is strictly proper.

We can combine epistemic and pragmatic utility to give all-things-considered utility, which will also be continuous on the probabilistic credences and strictly proper.

Establishing the norms

Suppose your measure of credal utility—either epistemic or pragmatic or all-things-considered—is continuous on the probabilistic credences and strictly proper.

One option is *strongly dominated* by another if the first is guaranteed to be strictly better than the second; that is, the first is strictly better than the second at all possibilities.

Dominance Argument for Probablism[18] Your credence function is not strongly dominated if, and only if, it satisfies Probabilism.

[18] (de Finetti, 1974; Joyce, 1998; Predd et al., 2009; Joyce, 2009; Schervish et al., 2009; Pruss, 2021b; Pettigrew, 2022; Nielsen, 2022; Kelley, 2023; Pruss, 2024).

Expected Credal Utility Argument for Actual Conditionalization[19]

If you receive a proposition as evidence, you should pick your posterior by maximizing expected credal utility calculated only over the possibilities in that proposition using your prior credences in those possibilities. If you do, you update by conditionalizing on your prior.

[19] (Leitgeb & Pettigrew, 2010).

Expected Credal Utility Argument for Plan Conditionalization[20]

Suppose you know your evidence is factive and partitional, and you plan how to update on each element of the partition. Then your plan maximizes expected credal utility from the point of view of your priors if, and only if, it is a plan to conditionalize your prior on the evidence.

[20] (Greaves & Wallace, 2006; Schoenfield, 2017).

Dominance Argument for Plan Conditionalization[21]

Suppose you know your evidence is factive and partitional, and you plan how to update on each element of the partition. Then your prior-plan pair is not strongly dominated if, and only if, your plan is to conditionalize on your prior.

[21] (Schervish et al., 2009; Briggs & Pettigrew, 2020).

Dominance Argument for the Weak Reflection Principle[22]

Your prior and possible posteriors are not strongly dominated if, and only if, they together satisfy the Weak Reflection Principle.

[22] (Pettigrew, 2020, 2023).

The Value of Knowledge

Meno: concerns knowledge that comes when you "tie down" a belief by "a reasoning out of the cause [*aitias logismōi*]" of the proposition believed (97e6-98a8).[23] This is akin to understanding. The veritist has a good account of this.[24]

[23] (Judson, 2019).

[24] (Hills, 2016; Hu, 2023).

Knowledge $>$ justified true belief? Verity among the fake barns.

Knowledge $>$ unjustified true belief? Verity vs Violet.

The Conditional Probability Solution:[25] Verity's credal state is better, epistemically speaking, because it makes it more likely that other beliefs she later forms on the basis of similar evidence are true.

[25] (Goldman & Olsson, 2009).

But: this confuses the effect on *your expected utility* of *learning a state of affairs has a particular feature* with the effect on the *value* of that state of affairs that comes from *having that feature*.

Craig on knowledge ascriptions

> "[T]he concept of knowledge is used to flag approved sources of information [...] Human beings need true beliefs about their environment [...] That being so, they need sources of information that will lead them to believe truths [...] It will be highly advantageous to them if they can [...] tap the primary stocks of their fellows [as well as using their own perceptual sources]"[26]

[26] (Craig, 1999, 10).

Ascriptions of the form *S knows that X* and *S knows whether X* are much stronger than they need to be to play this role.

(TRUTH) Either (i) *S* believes *X* and *X* is true or (ii) *S* believes not-*X* and *X* is false.

(TRACKING) (i) In nearby worlds at which *X* is true, *S* believes *X*, and (ii) in nearby worlds where *X* is false, *S* believes not-*X*.

Here are three claims that suggest TRACKING is unnecessary.

(1) If I *believe truly S* satisfies TRUTH, and I learn *S* believes *X*, then I thereby come to *believe truly* that *X*.

(2) If I *know S* satisfies TRUTH concerning *X*, and I learn *S* believes *X*, then I thereby come to *know X*.

(3) If I *believe truly* that *S* satisfies TRACKING, and then I learn *S* believes *X*, then I don't necessarily thereby come to *know X*.

An alternative account of knowledge ascriptions

When you learn *S* knows *X*, or knows whether *X*, you learn something about the evidence that person has, the environment in which they have it, and the connection between their evidence and their belief. This is useful because it tells you about this person: it tells you about their epistemic resources and their dispositions for using them. It helps you evaluate their other beliefs in the future.

Contra Zagzebski: we give credit for knowledge in order to encourage beliefs formed using processes motivated in the same way.[27]

[27] (Zagzebski, 2003).

But: a practice of using a concept can be valuable without the instantiation of that concept adding any value to a state of affairs.[28]

[28] (Gardiner, 2021, 675).

Upshot: this explains why it isn't possible to analyse the concept of knowledge into more basic component parts. There are so many ways someone might be, so many ways their environment might be, and so many ways they might relate to their environment that would give us evidence they'll be good sources of information about certain things in the future.[29]

[29] Compare: (O'Brien, 2017; Kelley, msb).