FIRST EXCURSUS

Scrutability and Knowability

The scrutability thesis is related to a number of widely discussed theses in analytic philosophy. In this excursus, I discuss the relation to the knowability thesis and its cousin the verification principle. In the next excursus, I discuss its relation to Quine's thesis of the inscrutability of reference. Doing so can help to indirectly motivate the scrutability thesis, by showing how it avoids problems for related theses while still capturing something of their flavor.

First, the Knowability Thesis.

Knowability Thesis: For any truth *S*, it is possible that someone knows *S*. [1]

This thesis is often doubted, for both intuitive and formal reasons. Intuitively, it seems that there may be truths concerning the distant past, the far away, and the very small, that it may be impossible for anyone to know. Formally, the thesis gives rise to what is often known as the Paradox of Knowability, first published by Frederick Fitch in his 1963 article 'A Logical Analysis of Some Value Concepts'.[2]

Fitch in effect gives a disproof of the Knowability Thesis, arguing from the weak assumption that some truth is not *known* to the conclusion that some truth is not knowable. Let *P* be a truth such that in the actual course of history, no one ever knows *P*. Let *Q* be '*P* and no one knows that *P*'. Then *Q* is true, but *Q* is unknowable. If someone were to know *Q*, then they would know *P*, but if someone were to know *P*, then *Q* would be false. So no one can know *Q*.

The scrutability thesis is closely related to the knowability thesis. It does not say that every truth is knowable, but it does say that every truth is scrutable, or derivable from a limited class of basic truths. One might thereby wonder

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[1] I cast the thesis in terms of knowing sentences rather than knowing propositions for continuity with later discussion (see 2.2 for more on this). The present issues are much the same either way.

[2] Fitch attributes the result to an anonymous referee. Joe Salerno's 'Knowability Noir: 1945–1963' locates the source in a 1945 referee report by Alonzo Church. The relevant material can be found in Salerno's *New Essays on the Knowability Paradox* (2009).

whether scrutability theses are liable to similar problems. In the introduction, we saw briefly that Inferential Scrutability is liable to problems related to Fitch's paradox, problems that I discuss at more length in 2.4 and 3.5. However, Conditional and A Priori Scrutability avoid both sorts of problems.

Concerning the intuitive problem: the truths in a scrutability base C may well include relevant truths about the distant past, including perhaps the spatiotemporal configuration of physical particles then, and so on. Even when S is an intuitively unknowable truth about the distant past, there is no corresponding intuitive problem with the idea that one can know that *if* the sentences in C are true, then S is true. Likewise there is no corresponding intuitive problem with the idea that one can know a priori a material conditional connecting a conjunction of all the truths in C to S. Something similar applies to truths about the far away and the very small. So there is no intuitive objection to the scrutability thesis here.

As for the paradox of knowability: even though Q above is unknowable, there is no formal problem with the claim that one can know that *if* the sentences in C are true, then Q is true. Indeed, as long as P itself and claims about knowledge of P are both scrutable from C, then 'P and no one knows that P' will be straightforwardly scrutable from C. This goes for both A Priori and Conditional Scrutability.

One might suggest that the Scrutability Thesis entails the Knowability Thesis, at least if we grant that the conjunction of all truths in C is itself knowable. By knowing this conjunction D (empirically) and by knowing $D \rightarrow Q$ (a priori), one could thereby come to know Q. However, there is no reason to believe that D is itself knowable. In fact, there is good reason to believe that it is not, both for intuitive and Fitch-style reasons. The intuitive reasons are obvious: D may involve information about the distant past and the far away that no one will ever know. As for the Fitch-style reasons: assuming that no one in the actual history of the world believes D, then D specifies a world in which no one believes D. If someone came to believe D, they would live in a world quite different from ours, one in which their belief would be false. So no one can know D.

One might think that one can define a factive operator 'scry' such that one scries P iff one derives P from base truths.[3] One might then try to generate a Fitchian paradox, by taking P to be any truth that one does not actually scry, and taking Q to be 'P and I do not scry that P'. By Fitch's reasoning, if scrying is factive, then Q is an inscrutable truth. However: the notion of scrying above is ambiguous. If to scry P is to derive P from C, where C are the base truths of the

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[3] 'Scry' is the preferred verb form of 'scrutable', having the advantage of both being more euphonious than the unlovely term 'scrute' and already being a word of English with a somewhat appropriate meaning. 'Scry: to divine, esp. by crystal gazing' (Collins English Dictionary).

actual world (or of any specific world) then scrying is not factive: there will be worlds in which P is scried but false. If to scry P is to derive P from the base truths of the world one is in at the time of scrying, then 'P and I do not scry that P' is indeed inscrutable. But this does not yield a counterexample to the A Priori or Conditional Scrutability theses above, as these require only that truths be derivable from the base truths of the worlds in which they are true, not the worlds in which they are so derived.

It may be that scrutability theses can do some of the work that knowability theses have been intended to do, or that they capture some of the intuitions that have led theorists to express sympathy with the knowability thesis. For example, Dorothy Edgington (1985) suggests that it is intuitive that if P is true in the actual world, then it is possible that one can come to know, in some different world, that P is true in the actual world. Of course this raises questions about what it is to know in a different world that P is true in the actual world. One suggestion is that to do this requires specifying the actual world with a canonical sentence D, and coming to know that if D were the case, P would be the case. Transposing this counterfactual claim into an epistemic mode (if D is the case, then P is the case), the resulting claim is not too far from the conditional scrutability thesis.

Another problem for the knowability thesis concerns cases of indeterminacy. (This problem is raised by Hawthorne (2005) for the case of omniscient knowers, but the problem generalizes.) Suppose that 42 is a borderline case of a small number, and let S be '42 is a big number'. On most views of vagueness, S is neither determinately true nor determinately false. On some such views, the statement $S \vee \sim S$ will be true all the same. If so, one could reason disjunctively: if S, then S is true, so S is knowable; if $\sim S$, then $\sim S$ is true, so $\sim S$ is knowable. So either S is knowable or $\sim S$ is knowable. But if S is (necessarily) indeterminate, this conclusion is implausible. One can raise a parallel problem for the scrutability thesis, yielding the conclusion that for all S, either S is scrutable (from a relevant D) or $\sim S$ is scrutable. Once again, this conclusion is implausible when S is indeterminate.

One could resist this conclusion by rejecting the law of the excluded middle and refusing to accept that $S \vee \sim S$ is true when S is indeterminate, or by holding that when S is indeterminate, it is likewise indeterminate whether S is scrutable. But perhaps the most straightforward way to avoid the problem is to understand the scrutability thesis as applying to *determinate* truths. That is, the thesis will say that when S is *determinately* true, or when $det(S)$ is true, then S is scrutable from D. On the relevant sort of view, the disjunction $det(S) \vee det(\sim S)$ will not be true in cases of indeterminacy, so the problem here will be avoided.

One might worry about cases of higher-order indeterminacy, where it is indeterminate whether $det(S)$ or $\sim det(S)$. In such a case, the best thing to say is that

it is indeterminate whether *S* is scrutable from *D*. Given the presence of vagueness in language, one should expect that scrutability can be vague too. On this view, implication by base truths goes along with determinacy, and vagueness of implication goes along with vagueness of determinacy.[4]

One can extend the scrutability thesis to the thesis that for all *S*, the truth-value of *S* is scrutable from *D*, whatever this truth-value may be. To obtain the extended thesis, one could simply apply the original thesis to the statement '*S* has truth-value *T*', or better, one could apply the thesis to a statement such as '~*S*', '*indet* (*S*)', and other statements which are true iff *S* has a relevant truth-value. As in the cases above, then if one adopts the view of indeterminacy outlined above, these statements will be scrutable only when they are determinately true. So, for example, the claim will be that if *indet* (*S*) is determinately true, then it is scrutable from *D*.

A final worry related to these matters arises from cases analogous to the Liar Paradox. Say that *S* is 'This sentence is not scrutable from *D*'. Then if *S* is true, it is inscrutable, and if *S* is false, it is scrutable. Either way we have a counterexample to the thesis that a sentence is true if and only if it is scrutable.

This worry is an instance of a general worry for any thesis holding that a sentence is true iff it has property ϕ. Whether 'This sentence does not have ϕ' is true or false, it generates a counterexample to the thesis. I do not think it is reasonable to infer that no such thesis can be true. If this were correct, the Liar Paradox would generate a counterexample to 'Every sentence is true iff it is true'. Instead, it seems best to say that sentences like 'This sentence does not have ϕ' should be handled by whatever mechanism best handles the Liar Paradox. Indeed, one might take it to be a constraint on solutions to the Liar Paradox that they should also apply to sentences like this.

The most obvious thing to say is that in cases like this, '*S* does not have ϕ' is indeterminate. Given the discussion above, 'This sentence is not scrutable from *D*' is slightly more complicated, as the relevant thesis says that a sentence is *determinately* true iff it is scrutable. This renders the sentence at issue more closely analogous to the Strengthened Liar, 'This sentence is not determinately true'. So a proponent of the Scrutability Thesis should say that the sentence has

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[4] This view is analogous to the view that knowability goes along with determinacy, and vagueness of knowability goes along with vagueness of determinacy, suggested on behalf of the supervaluationist by Hawthorne 2005. There is an alternative view (Dorr 2003) on which the vagueness of knowability goes along with the vagueness of truth rather than the vagueness of indeterminacy. Transposed to the key of scrutability, this approach yields a view on which *S* is true iff *S* is scrutable and *S* is indeterminate iff it is indeterminate whether *S* is scrutable. If we accept the law of the excluded middle, this view will most naturally be combined with a view on which it is always the case that either *S* is scrutable or ~*S* is scrutable (cases apparently in the middle will be borderline cases of each).

the same truth-value of the Strengthened Liar, whatever that truth-value is (perhaps involving some sort of higher-order indeterminacy). Saying more requires an adequate treatment of Liar paradoxes in general, but that is a problem for everyone, and not for the scrutability thesis in particular.

Finally, the scrutability thesis is in some limited respects reminiscent of the logical empiricists' verification principle, which says that only verifiable statements are meaningful. The scrutability thesis, rephrased, says that only scrutable statements are true, where a statement is scrutable if it is implied by certain base statements. Perhaps scrutability here might be seen as a sort of idealized verifiability, conditional on those statements in the base. One might then wonder whether any of the famous problems for the verification principle will apply here.

Most traditional worries about verifiability are removed by the extension of the base. Scrutability is much weaker than verifiability, not least because the base statements may include truths that are not themselves verifiable. For example, they may include truths about the distant past, the far away, about other minds, and about the extent of the universe. Because of this, there is no problem for scrutability generated by distinct empirically equivalent theories in physics, for example, or by statements about the past, or by the possibility of unverifiable ghosts.

Another famous problem is: is the verification principle itself verifiable? One might likewise ask: is the scrutability thesis itself scrutable? I will argue later that certain general versions of the scrutability thesis are themselves a priori, and are therefore scrutable. Other versions, such as scrutability from a specific base, are a posteriori. But we will later see that as long as a 'that's-all' sentence is included in the base, the scrutability thesis itself will follow. In some cases this 'that's-all' sentence will itself be akin to a scrutability thesis, but this just brings out a way in which the scrutability thesis is far more flexible than the verification principle.

It is also worth noting that where the logical empiricists offered the verification principle in a prescriptive spirit, I am not inclined to offer the scrutability thesis in this way. Instead, in the first instance I am simply arguing for its truth. Perhaps downstream from these arguments, it can be used prescriptively, as a check on realism about certain subject matters that are not scrutable from base truths. Much here will depend on what one antecedently allows into the base, so the matter is not cut and dried. But in any case, it seems clear that the standard reasons for doubt about the verification principle do not apply to the scrutability thesis.