Practice Final

Isaac Wilhelm (iwilhelm@nus.edu.sg)

Here are the three selections. Choose one, and write your final paper about it. Note that the selections below do not include footnotes from the original passages.

1 Okruhlik on Underdetermination

"Larry Laudan's reply is that there is an unfortunate tendency in the recent literature to overestimate underdetermination. Underdetermination, he says, would be a problem if we were actually faced with an infinitude or even a pair of empirically adequate rival theories. But, as a matter of fact, he says, we never encounter such an embarrassment of riches. We're lucky if we get even *two* rivals that are credible contenders for theory acceptance. We're certainly never faced with more than a small handful of competing alternatives. And we can always find (at least in the passage of time) good cognitive reasons for preferring one of these to the others. So, he concludes, although the underdetermination thesis may pose nice problems in principle, these never figure into *actual* theory choice. This is, of course, another way of stating his claim that theory choice is irreducibly comparative in nature—that our choices will always be among a finite class of extant alternatives, not among an infinitude of in-principle rivals. Since there will always be good reasons for preferring one of the extant rivals to the others, he claims that Bloor's invocation of social determinants is effectively undercut.

"Notice, however, that there is an important sense in which this argument strategy simply begs the question. We can still ask why just *this* class of contenders was generated, given that others were equally compatible with the data. To say that once the rivals are fully articulated, our choice among them can be rational is to leave untouched the prior question of how our options came to be determined in the particular ways that they are. As long as Laudan concedes (as he does) that non-cognitive factors play a role in the posing of questions, the weighting of problems, and the initial articulation of theory, he cannot be sure that these factors will be eliminated in the context of justification. I stress once again that it is his attempt to maintain the *conjunction* of two views that gets him into trouble. The first of these views is that the context of discovery is normatively insignificant;

the second is that theory appraisal is irreducibly comparative in nature. Once the second claim is made we *must* grant that factors affecting theory generation acquire normative significance" (p. 175).

2 Maudlin on Laws

"My own proposal is simple: laws of nature ought to be accepted as ontologically primitive. We may use metaphors to fire the imagination: among the regularities of temporal evolution, some, such as perhaps that described by Schrödinger's equation, govern or determine or generate the evolution. But these metaphors are not offered as analyses. In fact it is relatively clear what is asserted when a functional relation is said to be a law. Laws are the patterns that nature respects; to say what is physically possible is to say what the constraint of those patterns allows.

"Taking laws as primitive may appear to be simple surrender in the face of a philosophical puzzle. But every account must have primitives. The account must be judged on the clarity of the inferences that the primitives warrant and on the degree of systematization they reveal among our pre-analytic inferences. Laws are preferable in point of familiarity to such primitives as necessitation relations among universals. And if we begin by postulating that at each time and place the temporal evolution of the world is governed by certain principles our convictions about possibilities, counterfactuals, and explanations can be regimented and explained" (p. 15).

3 Lewis on Undermining

"Let F be some particular one of these alternative futures: one that determines different present chances than the actual future does. F will not come about, since it differs from the actual future. But there is some present chance of F. That is, there is some present chance that events would go in such a way as to complete a chancemaking pattern that would make the present chances different from what they actually are. The present chances *undermine* themselves.

"For instance, there is some minute present chance that far more tritium atoms will exist in the future than have existed hitherto, and each one of them will decay in only a few minutes. If this unlikely future came to pass, presumably it would complete a chancemaking pattern on which the half-life of tritium would be very much less than the actual 12.26 years. Certainly that's so under simple frequentism, and most likely it's so under the best-system analysis as well. Could it come to pass, given the present chances? Well, yes and no. It could, in the sense that there's non-zero present chance of it. It couldn't, in the sense that its coming to pass contradicts the truth about present chances. If it came to pass, the truth about present chances would be different. Although there is a certain chance that this future will come about, there is no chance that it will come about while still having the same present chance it actually has. It's not that if this future came about, the truth about the present would change retrospectively. Rather, it would never have been what it actually is, and would always have been something different" (pp. 482–483).