SUBJECTIVE PROBABILITY AND INDIFFERENCE

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IN 'Is Epistemic Preferability Transitive?' (ANALYSIS 41.3, June 1981), I attack the following axiom appearing in Chisholm's and Kiem's 'A System of Epistemic Logic' (*Ratio*, December 1972):

(A2) $(\sim(pPq) \,\&\, \sim(qPr)) \supset \sim(pPr)$

This axiom is read: If it is not the case that p is epistemically preferable to q, and it is not the case that q is epistemically preferable to r, then it is not the case that p is epistemically preferable to r. Peter Millican has pointed out that my argument against (A2) is unsound if epistemic preferability is given a probabilistic interpretation ('On the Transitivity of Epistemic Preferability', ANALYSIS 42.2, March 1982). Nicholas LaPara gives such an interpretation in 'Chisholm, Kiem, Preferability' (*Ratio*, June 1975). In the following two paragraphs I provide another counterexample to (A2) that also shows that epistemic preferability cannot be given a probabilistic interpretation.

Suppose there are 21 buckets of water $b_1, b_2, \ldots, b_{21}$ such that bucket b_i contains water at i degrees centrigrade. Jim makes pairwise comparisons between b_i and b_{i+1} where $1 \leqslant i < 21$ by putting his hands in the appropriate buckets. Since Jim cannot discern a temperature difference of 1 degree by this method, he is epistemically indifferent between propositions p_i and p_{i+1} where 'p_i' reads 'The bucket containing water of the highest temperature of all 21 buckets is bucket i'. So if the epistemic indifference relation is transitive, Jim should be indifferent between p_1 and p_{21}. However, Jim can discern a temperature difference of 20 degrees and so he is not indifferent between p_1 and p_{21}. Therefore, epistemic indifference is not transitive. Since (A2) implies the transitivity of epistemic indifference, this example shows that (A2) is false.

The above argument also shows that epistemic preferability cannot be given a probabilistic interpretation. If 'pPq' is read as 'p is more probable than q' then the standard definition of indifference as $\sim(pPq) \,\&\, \sim(qPp)$ forces us to read 'pIq' as 'p and q are equiprobable'. It would then follow that the epistemic indifference relation is transitive. Since this relation has already been shown to be nontransitive, the probabilistic interpretation of epistemic preferability must be rejected.

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