DISCUSSION

REMARKS TO KEMENY'S PAPER

The ideas expressed in Kemeny's paper[1] were found by him independently, but they coincide to a remarkable extent with some ideas which I developed years ago but published only recently.

As indicated in the preface of my book[2], I have developed a system in which inductive methods (i.e., methods of confirmation and methods of estimation) are characterized by the values of one parameter λ. This system and its use for comparing the goodness of given inductive methods by measuring their successes in given state-descriptions has been described in a monograph[3]. Now I find that Kemeny's parameter k is the same as my parameter λ. I distinguish two kinds of inductive methods. For those of the first kind, λ has a fixed value; for those of the second kind, λ is dependent upon the language-system (essentially, the number of primitive properties). The methods of the first kind supply values of the degree of confirmation (and of the estimate of relative frequency) which are independent of the number of primitive predicates; this is Kemeny's condition 6. I regard this characteristic as an advantage of these methods (pp. 48f., 53) in agreement with Kemeny's view (see his objection B). On the other hand, I show that the methods of the second kind have an advantage of simplicity in another respect (p. 54) and should therefore not be discarded. This holds, in particular, for the function c*, which is the simplest function of the second kind (pp. 54, 40); its definition is simpler than that of any other c-function that comes at all into consideration. Hence the selection of c* would by no means be arbitrary, as Kemeny's objection A maintains. However, I do not think that we should regard either c* or any other c-function as the absolutely best inductive method. We should rather offer to the scientist in search for an inductive method the whole continuum from which he may choose. This choice is not essentially different from that of choosing an instrument; the relevant points of view are analogous (§18).

Kemeny's condition 7 is implied by my requirement that c must be symmetrical with respect to the Q-predicates (C8, p. 14), and is therefore fulfilled by all c-functions in the λ-systems.

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[1] "A Contribution to Inductive Logic," this issue.

[2] *Logical Foundations of Probability*, Chicago, 1950; see Preface, pp. x, xi.

[3] *The Continuum of Inductive Methods,* Chicago, February 1952; References in the following are to this monograph.

The λ-system makes it possible to determine in a simple way for any given state-description the "optimum" inductive method, i.e., the one with the greatest measure of success. It is shown (§22) that the optimum λ-value grows with the degree of disorder (the opposite of the degree of order, traditionally known as regularity or uniformity). This confirms and makes more specific Kemeny's view that the parameter value somehow corresponds to the complexity of the universe. However, the complexity should not be measured by the number of particles, and no very large number should be chosen as parameter value, because otherwise the method would have disadvantages similar to those of Wittgenstein's method (p. 53).

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