

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

UNIVERSITY DISTINGUISHED PROFESSOR OF STATISTICS (703) 961-6904 (or 5657 for messages)

Memo to Dr. Subroto Roy, Department of Economics

From: I. J. Good

Subject: Your chapter "Knowledge, social-choice theory, and

liberalism.

Date: 1984 April 19.

The net effect of your chapter is to convey to me the impression, if you have quoted Arrow and Sen correctly, that some of their famous work is not merely wrong but even absurd.

On page 11 you give Sen's definition of liberalism, in effect, as saying that each person is free to do <u>some</u> acts. This at once seems ludicrous, because, for example, people are usually free to breath in all societies, yet we don't call all societies "liberal". It is not until page 19 that you mention that Arrow excluded "trivial" actions which makes the definition no longer absurd but still vague. Did Sen also exclude "trivial" acts?

Re page 15, it is not surprising that Aristotle was aware of the fact ϕ that no one is concerned with everything that goes on in society, for this fact is absolutely obvious.

I have always understood Arrow to be concerned with a limited set of social choices, such as the election of candidates, but perhaps I assumed this because of the utter absurdity of denying fact ϕ .

The assumption underlying Arrow's impossibility theorem that seems clearly wrong to me, though not absurd, is that the outcome of a voting system should be unchanged if a new candidate is introduced. The way I express it is that if a voter prefers A to B, and then C is introduced, and if the voter puts C below B, this implies that, in the voter's utility scale, B is probably closer to A than if the voter had placed C between A and B. This might be called the relevance of new alternatives (or alternative candidates). See also #871, page 382, for the way that Nic Tideman and I expressed the matter. In a meeting in Roanoke about ten years ago I described the point as "Garbage in, garbage out" (a familiar saying among computernicks).

Re Note 2 on page 21, please may I have the page reference where Quine mentioned Euclidean geometry. I've looked through Quine's article and couldn't find the reference (in about half an hour of