

# Part II

## Mach's Principle and Bell's Inequality

“...In Part I it is conjectured that a “Mach’s principle” might lead to a dependence of the local Newtonian gravitational constant,  $K$ , on universe structure,  $K \sim \frac{M}{R}$ . Einstein and others have suggested that general relativity predicts such a result. A closer analysis, however, including the carrying out of the geodesic equations to second order, seems to indicate that this is not true and that the apparent “Mach’s principle” terms involving total universe structure are really only coordinate effects.

MACH'S PRINCIPLE

and

A VARYING GRAVITATIONAL CONSTANT

by

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“...It is sometimes said that quantum theory saves free will: In the context of this paper, this might be reversed, so that free will saves quantum theory, at least in the sense of eliminating hidden variable alternatives. In other words, if there are any truly “free” events in the experiment, then there can be no classical determinism and hence no classical hidden variables. Conversely, given FCA (All aspects of the experiment; including detector settings, are determined by initial data at some sufficiently remote time.), there are no truly “free” or “random” events, although

certain sets of variable values may be uncorrelated in any contemporary statistical sense. Thus, an FCA type of hidden variable theory can reproduce exactly the predictions of quantum theory, yet still preserve the apparent randomness of certain choices. ...”

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**Bell's Theorem Does Not Eliminate Fully Causal  
Hidden Variables**

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