Ideas of Flat and Curved Space in History of Physics ALEXAN-
DER A. BEREZIN, McMaster University — Since "everything which is not prohib-
ited is compulsory" (assigned to Gell-Mann) we can postulate infinite flat Cartesian
N-dimensional (N: any integer) space-time (ST) as embedding for any curved ST.
Ergodicity raises quest of whether total number of inflationary and/or Everett bub-
bles (mini-verses) is finite, countably infinite (aleph-zero) or uncountably infinite
(aleph-one). Are these bubbles form Gaussian distribution or form some non-random
subsetting? Perhaps, communication between mini-verses (idea of D.Deutsch) can
be facilitated by a kind of minimax non-local dynamics akin to Fermat principle?
(Minimax Principle in Bubble Cosmology). Even such classical effects as magnetism
and polarization have some non-local features. Can we go below the Planck length
to perhaps Compton wavelength of our "Hubble's bubble" (h/Mc = 10 to minus 95
m, if M = 10 to 54 kg)? When talking about time loops and ergodicity (eternal
return paradigm) is there some hysterisis in the way quantum states are accessed in
"forward" or "reverse" direction? (reverse direction implies backward causality of
J.Wheeler and/or Aristotelian final causation).

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