Now I start the second part.

In this second part of my presentation, as an example of practicing the grammatical physics,
I propose the new coordinate system
which is fundamentally a little different
from the coordinate system of the quantum mechanics
for a massive point particle system
mentioned in the 1st part.
This is equivalent to changing a quantization prescription fundamentally
from existing quantization prescription,
but the theory constructed on the new coordinate system
also should be called a quantum theory in a general sense
because the change is a little.
The main purpose of the proposal of this coordinate system
is to explain the methodology of the grammatical physics
and I am not the person
who claims that this new coordinate system
definitely fits real situations completely,
but I believe that this new coordinate system
is an interesting coordinate system
which has a physical implication greatly
and that the success of the theory constructed on it
is very possible.
Well, the coordinate system is Mnew which is described below.

Mnew is the mapping
which maps each functional Φ from $\{\chi:R\rightarrow R^3\}$ to C
to a quantum history Mnew(Φ)
and therefore it is a coordinate system in Uda's broad meaning,
where Mnew must have the following relationship with Mq.
"If $\Psi(x,y,z,t)=\exp\phi(x,y,z,t)$ and $\Phi[\chi]=\exp[\alpha\int dt\,\phi(\chi(t),t)]$, then Mnew($\Phi$)=Mq($\Psi$).
Therefore the range of Mnew includes the range of Mq as a subset."

The physical implication of Mnew is the entanglement of a quantum history.
The entanglement is a well-known concept for a quantum state.
For example, as for a physical system with n degrees of freedom,
a quantum state of it is generally represented by a mapping (the wave function)
from R^n to C.
Especially when this wave function Ψ can be factorized to the following form,
the quantum state is called a disentangled quantum state.

$$\Psi(x1,\cdots,xn)=\prod_{i=1}^{n}\phi i(xi)$$

Because a wave function can not be factorized to this form generally,
a general quantum state is entangled.
When we replace the name i of a degree of freedom with the name t of a time
in the above discussion about the quantum state,
R^n is replaced with $\{\chi:R\rightarrow R\}\sim R^\infty$,
Ψ is replaced with Φ,
$(x1,\cdots,xn)$ is replaced with χ,
ϕi is replaced with $\phi(\square,t)$
and xi is replaced with $\chi(t)$.
Therefore, as for the system with one degree of freedom,
the quantum history in the meaning of the existing quantum mechanics
is the special disentangled quantum history
in the meaning of the new grammar,
and the new grammar implies that a general quantum history is entangled one.
But, I replaced the infinite product with '$\exp[\alpha\int dt$'
because I felt that the infinite product didn't seem real,
and α is the new physical constant which has a very large value.

So much for the second part of my presentation.