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Conclusion

To we wish to adhere to objective description

We have seen that the principle of ^{the} psychophysical parallelism requires that we should be able to consider some mechanical devices as observers. The situation is then that such devices must either cause the probabilistic discontinuities of Process 1 (convert pure states into non-interfering mixtures), or must be transformed into the superpositions we have ~~noted~~ discussed. The former possibility must be rejected since it leads to the situation that some physical systems would obey different laws from the remainder, with no clear means for distinguishing between the two types. We are thus led to the theory which results from the complete abandonment of Process 1 & the pure wave mechanics herein described. Nevertheless, within the context of this theory, which is objectively ^{deterministic} causal, it develops that the probabilistic aspects denoted by Process 1 reappear at the subjective level, as relative phenomena to observers, a situation

the Classical mechanics for macroscopic bodies can be deduced in the sense of Correlation laws -- System of such bodies can at one time be represented as superposition of states in which bodies have nearly (within uncertainty limits) definite positions and momenta, and which continue for a time to be nearly definite, obeying classical mechanics approximately.

Thus class. mech is ~~a~~ or a law expresses laws regarding correlations with in such systems between different times.

is more free to *of the universe*
One thus begins with a theory, which postulates only the existence of a Universal wave function, which obeys a linear wave equation. One then investigates the internal correlations in this wave function with the aim of deducing laws of physics, which are simply statements of the form, *if* ^{and} *when* ^{the evolution} *A* *has* *such a property*, *then* *B* *has* *such a property*. A subsystem of the universe (subset of the total collection of coordinates for the wave function) is correlated with the property B of another subsystem, with the manner of the correlation being specified. (For example, the classical mechanics of a system of massive particles becomes a law which states that there is a certain correlation between the positions and momenta (approximate) of the particles at one time and the positions and momenta at another time.) (i.e. at any instant a state for the system can, for example, be represented as a superposition, each element of which describes the particles as independent gaussian ~~with~~ wave packets, and each element of which goes into a state at a later time ^(but nearby) for which the packets have moved in a nearly classical manner.) All statements about ~~all~~ subsystems then become relative statements, i.e. statements about one subsystem relative to a prescribed state for the remainder, and all laws are correlation laws.

she thus

It is a complete, causal theory of conceptual simplicity. It maintains fully the principle of ^{the} ~~Psycho~~ Physical Parallelism.

All of the correlation Paradoxes (Einstein et al.) find easy explanation. The paradox Full capability observed with any number of observers consistently. Description of Paradox of introduction, since all elements of a superposition equally valid (no need to bear that any present existence will be upset by a future observer, since he would merely correlate over whole superposition, in no way affect past history).

Since

This viewpoint will be applicable to



all forms of Quantum mechanics where the superposition principle holds.

Viewpoint Avoid ^{merely to consider} anomalous probabilistic jumps scattered about space-time, can assert that field equations valid everywhere and everywhere, then deduce any statistical assertions that are possible by the present method.

We should also like to remark upon the fundamental nature of the correlation information, as defined here, (its covariance, etc) As a basic quantity characteristic of coupled systems. Also its relation to entropy, etc. And the possibility of deducing useful relations concerning it. (regard to precision of particle production, etc.)

(Has such remarkable properties that one cannot escape the feeling that it has a fundamental significance.)

The theory also forms a framework for the discussion of, in addition to ordinary phenomena, observation processes including relationships among several observers themselves & in a logical, unambiguous fashion. While this theory ~~dictates the consistency~~^{justifies} of the solipsist position (expressed in Alternative 4 of the introduction), since that is in fact a deduction of the theory - the subjective appearance to observers, it forms a broader frame in which to ~~be understood~~^(which is maintained by correlations.) the consistency of that view. It transcends that position, however, in its ability to deal logically with questions of imperfect observations (approximate measurements).

It may ~~also~~ from a fruitful framework for the interpretation of new quantum formalisms as they appear, ~~such as~~ ^{high benefit} field theories, particularly any which might be relativistic in the sense of General relativity, since one is free to construct formal (non-probabilistic) theory, and supply any possible statistical interpretations later, ~~as~~ (deductions in the manner carried out here). By focusing attention upon questions of correlations, one may be able to deduce useful relations for such interpretations. (Correlation laws), ^{and} Quantized Fields do not have pointwise independent field values, the value at one ^{place and time} point being correlated to those at neighboring points in a manner ^{their} as to be expected, approximating the behavior of classical fields.)
Correlations are important in systems with a finite no of degrees of freedom, how much more important ~~they~~ ^{they} must be in systems with infinitely many. (Or when no corresponding limit exists)

All practical

Finally, aside from any possible advantages of the theory, it remains a matter of intellectual interest that the statistical assertions of the usual theory are not independent hypotheses, but are deducible (in the present sense) from the pure wave mechanics.