Refutation of the Heisenberg principle as a no-go axiom, and its trivial replacement theorem

We assume the method and apparatus of Meth8/VŁ4 with `T`autology as the designated *proof* value, `F` as contradiction, `N` as truthity (non-contingency), and `C` as falsity (contingency). Results are a 16-valued truth table in row-major and horizontal, or repeating fragments of 128-tables for more variables.

LET p; q; r; s:
p σ_p standard deviation of the particle position;
q σ_x standard deviation of the particle momentum;
$\hbar$ reduced Planck constant; s;
~ Not; & And; \ Not And; > Imply, greater than; < Not Imply, less than;
= Equivalent; # necessity, for all or every, ∀; % possibility, for one or some, ∃;
(s=s) `T`; (%s<#s) ordinal 2.

From: en.wikipedia.org/wiki/Uncertainty_principle

The Heisenberg uncertainty principle "states that the more precisely the position of some particle is determined, the less precisely its momentum can be known, and vice versa".

$$\sigma_x \, \sigma_p \geq \hbar/2 \qquad (1.0)$$

~((p&q)<(r\(%s<#s)))=(s=s) ; `TTTT TTTT TTTT TTTN` (1.1)

Eq. 1.2 as rendered is *not* tautologous, due to one value of non contingency `N` (truthity).

Because the Heisenberg principle is a no-go axiom, we ask what can be known about the relation of statistics of position and momentum in a numerical relation, regardless of injection of Planck statistics, such that:

The standard deviation of the particle position is greater than the standard deviation of the particle momentum. (2.1)

p>q ; `TFTT TFTT TFTT TFTT` (2.2)

(p>q)>((p&q)>(p>q)) ; `TTTT TTTT TTTT TTTT` (3.2)
(p>q)>((p>q)+(p+q)) ; `TTTT TTTT TTTT TTTT` (4.2)
(p>q)>((p&q)>(p+q)) ; `TTTT TTTT TTTT TTTT` (5.2)

Because Eqs. 3.2 and 4.2 have the antecedent of Eq. 2.2 as a term in the consequent, we evaluate only Eq. 5.2 which does not have this recurrence of literals.

Eq. 5.2 is tautologous because the consequent ((p&q)>(p+q)) is tautologous.

Back translating this theorem for in terms of the statistic of deviation means:

If position is greater than momentum, then position and momentum are greater than position or momentum. (5.1)

Remark: Eqs. 5.1 could just as easily read "If position is less than momentum" and 5.2 as (p<q) because the consequent is tautologous.

Eq. 5.1 as rendered means there is no uncertainty as to what constitutes a proved relationship between the statistics of deviation for the position and momentum of the particle. In other words, there is an exact statistical relationship in the theorem of Eq. 5.2.

Therefore Eq. 5.1 serves as a counter-example in mathematical logic to the Heisenberg uncertainty principle, and hence refutes then replaces it. (For example in positive integers and ignoring the instance of 2>1, if 3>2 then 3*2 is always greater than 3+2.) To reduce the Heisenberg uncertainty principle to a trivial assertion flies in the face of the intention of modern physics to use the principle as the very basis for justifying investment in itself under the guise of quantum logic.