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Erratum

REFLECTIONS ON QUANTUM LOGIC, *B. Z. Moroz, International Journal of Theoretical Physics*, **22**, 329 (1983).

As has been pointed out to the author by Professor M. Gromov, the hypothesis on p. 333 is not true when X is finite dimensional, with possible exceptions in low dimensions. For let X be an n-dimensional complex Hilbert space. A sufficient set of m operators defines an embedding of the $(n-1)$-dimensional complex projective space corresponding to X into a real Euclidean space of dimension $m.n$. Therefore the known theorems [see, e.g., Sanderson and Shwarzenberge (1963), Theorem 4, and Haefliger (1961), Theorem 2, (a)] about such imbeddings imply that $m \geqslant 4$ for sufficiently large n. For example, it follows that measuring the distributions of the eigenvalues of the three angular momentum operators on an ensemble of particles prepared in a fixed state is, in general, not sufficient to find the angular momentum dependence of the state vector [cf. the beginning of Section (2) on p. 331]. No topological obstruction for the hypothesis to hold true when X is infinite dimensional is known to us. To weaken this conjecture one may ask whether there exists $m \geqslant 4$ such that for *any* X a set of Hermitian operators $A_1, \ldots, A_m$ is sufficient whenever A_i and A_j with $i \neq j$ have no common nontrivial invariant subspace. In the proof of the Proposition on p. 333 it is assumed that $\alpha\beta\gamma\delta \neq 0$, therefore it holds up to a subset of X of measure zero: measuring A_1, A_2, A_3 allows to reproduce only those $\bar{x}$ for which $x_1 \neq 0$.

We use this opportunity to correct a few misprints:

p. 330, line 11: the equation should have number (1);
p. 335, line 11 from the top and line 4 from the bottom:

$$A_t = 0, \qquad x \notin \sigma_1 \cup \sigma_2$$

p. 336, line 10 from the bottom: sup (instead of "sub")
line 7 from the bottom: $b \neq 0$.

REFERENCES

Haefliger, A. (1961). *Bulletin of the American Mathematical Society*, **67**, 109–112.
Sanderson, B. J., and Shwarzenberger, R. L. E. (1963). *Proceedings of the Cambridge Philosophical Society*, **59**, 319–322.