Refutation of Lusin's separation theorem

Abstract: "In descriptive set theory and mathematical logic, **Lusin's separation theorem** states that if *A* and *B* are disjoint analytic subsets of Polish space, then there is a Borel set *C* in the space such that $A \subseteq C$ and $B \cap C = \varnothing$." We evaluate two renditions of that equation, both *non* tautologous, refuting it. Therefore, the separation theorem of Lusin forms a *non* tautologous fragment of the universal logic VŁ4.

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). The 16-valued truth table is row-major and horizontal, or repeating fragments of 128-tables, sometimes with table counts, for more variables. (See ersatz-systems.com.)

LET ~ Not, ¬ ; + Or, ∨, ∪, ⊔ ; - Not Or; & And, ∧, ∩, ⊓, ·; \ Not And;
> Imply, greater than, →, ⇒, ↦, ≻, ⊃, ↠ ; < Not Imply, less than, ∈, ≺, ⊂, ⊬, ⊭, ↞, ≲ ;
= Equivalent, ≡, :=, ⇔, ↔, ≜, ≈, ≃ ; @ Not Equivalent, ≠;
% possibility, for one or some, ∃, ◊, M; # necessity, for every or all, ∀, □, L;
(z=z) `T` as tautology, ⊤, ordinal 3; (z@z) **`F`** as contradiction, Ø, Null, ⊥, zero;
(%z>#z) `N` as non-contingency, Δ, ordinal 1; (%z<#z) `C` as contingency, ∇, ordinal 2;
~(y < x) (x ≤ y), (x ⊆ y), (x ⊑ y); (A=B) (A~B).
Note for clarity, we usually distribute quantifiers onto each designated variable.

From: en.wikipedia.org/wiki/Lusin%27s_separation_theorem

In descriptive set theory and mathematical logic, **Lusin's separation theorem** states that if *A* and *B* are disjoint analytic subsets of Polish space, then there is a Borel set *C* in the space such that

$A \subseteq C$ and $B \cap C = \varnothing$.[..] (1.1)

LET p, q, r, s: A, B, C, D

(~(r<p)&(q&r))=(s@s) ; `TTTT TTT`**`F`**` TTTT TTT`**`F`** (1.2)

Remark 1.1: If Eq. 1.1 is rendered in theorem variables, then

(~(C<A)&(B&C))=(D@D) ;
`TTTT TTTT TTTT TTTT,`
`TTTT TNTN TTTT TNTN,`
`TTTT TTTT TTCC TTCC,`
`TTTT TNTN TTCC TNC`**`F`** (1.3)

Eqs. 1.2 and 1.3 are *not* tautologous, thereby refuting Lusin's separation theorem.