Refutation of approximations of theories

Abstract: We evaluate the definition of $\mathcal{T}$-approximations which is *not* tautologous, thereby refuting the approximations of theories.

We assume the method and apparatus of Meth8/VŁ4 with Tautology as the designated *proof* value, **F** as contradiction, N as truthity (non-contingency), and C as falsity (contingency). For results, 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 p, q, r, s: ϕ, $\mathcal{T}$, T, T'
~ 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; (z@z) **F** as contradiction, ∅, Null;
(%z<#z) C as contingency, Δ, ordinal 1;
(%z>#z) N as non-contingency, ∇, ordinal 2;
~(y < x) (x ≤ y), (x ⊆ y); (A=B) (A~B).

From: Sudoplatov, S.V. (2019).
Approximations of theories. arxiv.org/pdf/1901.08961.pdf sudoplat@math.nsc.ru

2. $\mathcal{T}$-approximations
Definition. Let $\mathcal{T}$ be a class of theories and T be a theory, T∉$\mathcal{T}$. The theory T is called *$\mathcal{T}$-approximated*, or *approximated by $\mathcal{T}$*, or *$\mathcal{T}$-approximable*, or a *pseudo-T-theory*, if for any formula ϕ∈T there is T'∈ $\mathcal{T}$ such that ϕ∈ T'. If T is $\mathcal{T}$-approximated then $\mathcal{T}$ is called an *approximating family* for T, and theories T'∈ $\mathcal{T}$ are *approximations* for T. (2.1)

(~(r<q)>(p<r))>((s<q)>(p<s)) ; TTTT TTTT TT**F**T **FF**TT (2.2)

Because the initial definition of Eq. 2.2 is *not* tautologous, this refutes the approximations of theories.