▶ GEMMA ROBLES, *Paraconsistent logics included in Lewis' S4*.
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Let $\vDash$ be a relation of consequence, be it defined either semantically or proof-theoretically. As is known, a logic S is *paraconsistent* iff the ECQ ('E contradictione quodlibet') rule $A \wedge \neg A \vDash B$ is not a rule of S (cf. [3]).

It is well known that Lewis' modal logics are not paraconsistent, fact that did not disturb at all this great logician. Far from it, Lewis vindicates the validity of the ECQ rule in a famous proof ([2], p. 250) currently known as the Lewis' proof or the Lewi's argument (cf. [1], §16.1). This proof essentially leans on the disjunctive syllogism. The aim of this paper is not to discuss this proof, but the following. Let $S4_+$ be the positive fragment of Lewis' S4, we define a series of paraconsistent logics included in $S4_+$ extended with the double negation axioms, the contraposition axioms, the principle of non-contradiction and the disjunctive syllogism.

[1] A. R. Anderson, N. D. Jr. Belnap, ***Entailment. The Logic of Relevance and Necessity*** vol. 1, Princeton University Press, 1975.

[2] C. I. Lewis, H. Langford, ***Symbolic Logic***, Dover, New York, 1959.

[3] G. Priest, K. Tanaka, *Paraconsistent Logic*, ***The Standford Encyclopedia of Philosophy*** (E. N. Zalta, editor), Winter edition, 2004, http://plato.stanford.edu/archives/win2004/entries/logic-paraconsistent.

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