

# ITERATION OF TOTAL NEGATION IN CONSTRAINED ENVIRONMENTS

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## ABSTRACT

Reiterative application of Bankston's total negation operator 'anti-' upon an arbitrary topological invariant is known to lead rapidly to repetition in one of just seven patterns. The authors have recently shown that a great deal of the total negation procedure can be constrained to take place within a fixed class of topological spaces (the 'constraint' for the discussion) without impairing much of the theory. The present article explores iterative behaviour within a constraint. We show that, provided the constraint is hereditary, at most eight patterns of repetition are possible. An example reveals that in non-hereditary constraints the (unending) sequence of invariants generated may consist entirely of distinct terms, without ever entering a cycle of repetition.