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**Inferring interventions in product-based possibilistic causal networks.** (English)

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Summary: Many algorithms deal with non-experimental data in possibilistic networks. Most of them are direct adaptations of the probabilistic approaches. In this paper, we propose to represent another kind of data which is experimental data caused by external interventions in possibilistic networks. In particular, we present different and equivalent graphical interpretations of such manipulations using an adaptation of the ‘do’ operator to a possibilistic framework. We then propose an efficient algorithm to evaluate effects of non-simultaneous sequences of both experimental and non-experimental data. The main advantage of our algorithm is that it unifies treatments of the two kinds of data through the conditioning process with only a small extra-cost.

**MSC:**

68T37 Reasoning under uncertainty in the context of artificial intelligence

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**Keywords:**

causality; possibilistic networks; possibility theory; interventions; graphical models

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