

**Getoor, R. K.**

**Killing a Markov process under a stationary measure involves creation.** (English)

Zbl 0651.60078

Ann. Probab. 16, No. 2, 564-585 (1988).

Given a Borel right Markov process  $X$  and an excessive measure  $m$ , one can construct a stationary measure  $Q_m$  on the space of “two-sided paths” (with random birth and death in  $(-\infty, \infty)$ ), governing a process with the same transition mechanism as  $X$ .  $Q_m$  is called the Kuznetsov measure associated to  $m$  and  $X$ . If the transitions of  $X$  are transformed via a multiplicative functional  $M$  (the process is “killed”), the same technique applied to the new (killed) transition semigroup together with  $m$  yields a corresponding Kuznetsov measure  $Q^*$ .

The goal of this paper is to construct  $Q^*$  directly from  $Q_m$  using certain functionals arising from  $M$ . The title reflects the fact that both the birth and death mechanisms of the Kuznetsov process governed by  $Q_m$  are affected by this procedure.

Reviewer: [J.Mitro](#)

**MSC:**

[60J57](#) Multiplicative functionals and Markov processes

[60J25](#) Continuous-time Markov processes on general state spaces

Cited in **1** Review  
Cited in **3** Documents

**Keywords:**

[multiplicative functional](#); [stationary measure](#); [killing](#); [Markov process](#); [Kuznetsov measure](#)

**Full Text:** [DOI](#)