

The last two pages of M. Mürmann's article:  
"A Semi-Markovian Model for the Brownian Motion"  
(p. 248-272) were omitted by error:  
(proof of proposition 5)

Proof: We have to show that the convergence can be  
interchanged with the application of the kernel  $S$   
resp.  $R$ . In ii) we made a supposition, which just  
makes it possible. It can be replaced by correspond-  
ing suppositions.

In i) we can show it without further suppositions.  
We shall show the weak convergence by the following  
characterization of it:

If  $A \subset E$  is a Borel set with  $\nu(\partial A) = 0$ , then  
 $\nu_n(A) \rightarrow \nu(A)$ . Since  $\mu$  is a  $Q$ -invariant measure,  
we have  $\nu = \mu S = \pi_0(\mu)$ .

$$\text{So } 0 = \nu(\partial A) = \pi_0(\mu)(\partial A) =$$

$$\mu(\pi_0^{-1}(\partial A)) \geq \mu(\partial \pi_0^{-1}(A)).$$

Let  $B = \pi_0^{-1}(A)$ . Then  $\mu(\partial B) = 0$  and hence  
 $\mu_n(B) \rightarrow \mu(B)$ .

$$\mu_{n+1}(B) = (\mu_n Q)(\pi_0^{-1}(A)) = (\mu_n SR)(\pi_0^{-1}(A)) =$$

$$(\mu_n S)(A) = \nu_{n+1}(A).$$

Because of  $\mu(B) = \nu(A)$  this completes the proof.

## REFERENCES

- [1] Bourbaki, N.  
Intégration, chap. 9. Hermann 1969.
- [2] Çinlar, E.  
On semi-Markov processes on arbitrary spaces.  
Proc. Camb. Phil. Soc. 66, 381-392 (1969).
- [3] Hennion, H.  
Sur le mouvement d'une particule lourde soumise à  
des collisions dans un système infini de particules  
légères. To appear in Z. Wahrscheinlichkeitstheorie  
verw. Geb.
- [4] Holley, R.  
The Motion of a Heavy Particle in an Infinite One  
Dimensional Gas of Hard Spheres. Z. Wahrscheinlich-  
keitstheorie verw. Geb. 17, 181-219 (1971)
- [5] Maisonneuve, B.  
Topologies du type de Skorohod. Séminaire de Proba-  
bilités de Strasbourg VI. Lecture Notes in Math.  
Vol. 258, 113-117, Springer-Verlag 1972.
- [6] Spitzer, F.  
Uniform Motion with Elastic Collision of an Infinite  
Particle System. J. Math. Mech. 18, 973-989 (1969).
- [7] Spitzer, F.  
Random Processes Defined through the Interaction of  
an Infinite Particle System. Probability and Infor-  
mation Theory, Lecture Notes in Math., Vol. 89,  
201-223, Springer-Verlag 1969.
- [8] Waldenfels, W. von  
An Approach to the Theory of Pressure Broadening of  
Spectral Lines. Probability and Information Theory II,  
Lecture Notes in Math., Vol. 296, 19-69, Springer-  
Verlag 1973.

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