PROCEEDINGS OF THE
AMERICAN MATHEMATICAL SOCIETY
Volume 134, Number 8, Pages 2479–2480
S 0002-9939(06)08610-2

ERRATUM TO "DIRICHLET BOUNDARY CONDITIONS FOR ELLIPTIC OPERATORS WITH UNBOUNDED DRIFT"

A. LUNARDI, G. METAFUNE, AND D. PALLARA

(Communicated by David S. Tartakoff)

The statement of Theorem 2.4 in our paper published in vol. 133, no. 9 (2005), pages 2625-2635, must be changed as follows.

Theorem 2.4. *Let* Φ *be a* C^2 *function such that* $\Phi(x)+\alpha|x|^2/2$ *is convex for some* $\alpha > 0$*, assume that* $\partial\Omega \in C^3$ *and that*

$$\frac{\partial\Phi}{\partial n} - H \leq 0.$$

Then $(A, D(A))$ *is self-adjoint and dissipative in* $L^2(\Omega,\mu)$*. Moreover, the map* $u \mapsto \langle (D^2\Phi)Du, Du\rangle$ *is continuous from* $D(A)$ *to* $L^1(\Omega,\mu)$*.*

Here $H = H(x)$ is the scalar mean curvature of $\partial\Omega$ at x, taken positive if Ω is convex.

The proof remains the same except at one point; at the beginning of page 2629 we have to use the identity

$$\Delta u = \langle (D^2u)\, n, n\rangle + H\frac{\partial u}{\partial n} \text{ at } \partial\Omega$$

for regular functions u vanishing at $\partial\Omega$, instead of $\Delta u = \langle (D^2u)\, n, n\rangle$. Accordingly, from the equality $\lambda u - \mathcal{A}u = f$ at $\partial\Omega$ we get the estimate

$$\int_{\partial\Omega} \theta_R^2 \langle (D^2u)\, n, Du\rangle\, e^{-\Phi} d\sigma \leq \int_{\partial\Omega} \theta_R^2 \Big(\frac{\partial\Phi}{\partial n} - H\Big)\Big(\frac{\partial u}{\partial n}\Big)^2 e^{-\Phi} d\sigma$$

instead of

$$\int_{\partial\Omega} \theta_R^2 \langle (D^2u)\, n, Du\rangle\, e^{-\Phi} d\sigma \leq \int_{\partial\Omega} \theta_R^2 \frac{\partial\Phi}{\partial n}\Big(\frac{\partial u}{\partial n}\Big)^2 e^{-\Phi} d\sigma.$$

Theorem 2.5 holds without any change in the statement because if $\partial\Omega$ is uniformly C^2, then H is bounded.

Received by the editors December 20, 2005.
2000 *Mathematics Subject Classification.* Primary 35J70; Secondary 47D07.

We are grateful to Prof. Toshio Horiuchi for pointing out the mistake.

Dipartimento di Matematica, Università di Parma, Parco Area delle Scienze 53/A, 43100 Parma, Italy
E-mail address: `alessandra.lunardi@unipr.it`

Dipartimento di Matematica "Ennio De Giorgi", Università di Lecce, C.P.193, 73100, Lecce, Italy
E-mail address: `giorgio.metafune@unile.it`

Dipartimento di Matematica "Ennio De Giorgi", Università di Lecce, C.P.193, 73100, Lecce, Italy
E-mail address: `diego.pallara@unile.it`