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Correction

Correction: Young Sik, K. Partial Derivative Approach to the Integral Transform for the Function Space in the Banach Algebra. *Entropy* 2020, 22, 1047

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check for updates

1. Correction for Equations

In the original article [1], there were some mistakes in Equations as published.

(1) We mistyped $\frac{1-z}{2}$ as $\frac{z-1}{2z}$, and $\frac{1-\lambda}{2}$ as $\frac{\lambda-1}{2\lambda}$, and $\frac{1-\lambda_n}{2}$ as $\frac{\lambda_n-1}{2\lambda_n}$ in Equation (23), Equation (25), Equations (27)–(29), Equation (41), Equation (43) and Equations (45)–(47). We correct them:

$$\lim_{n\to\infty} z^{\frac{n}{2}} \cdot E_x\left(\exp\left\{ \frac{1-z}{2} \sum_{k=1}^{n} [I,\, \phi_k(t)\,,x(t)\,]^2 \right\} [D,F,x+y,w] \right). \tag{23}$$

$$\begin{aligned} &\lim_{n\to\infty} z^{\frac{n}{2}} \cdot E_x\left(\exp\left\{ \tfrac{1-z}{2} \sum_{k=1}^{n} [I,\, \phi_k(t),\, x(t)\,]^2 \right\} [D,F,x+y,w] \right) \\ &= \lim_{n\to\infty} z^{\frac{n}{2}} \int_{L_2[0,T]} E_x\left(\exp\left\{ \tfrac{1-z}{2} \sum_{k=1}^{n} [I,\phi_k(t),x(t)]^2 + i\,[I,v(t),x(t)] \right\} \right) \\ &\qquad \cdot \Big(i[I,v(t),w(t)] \Big) \cdot \exp\Big\{ i[I,v(t),y(t)] \Big\} df(v). \end{aligned} \tag{25}$$

$$\lim_{n\to\infty} \lambda^{\frac{n}{2}} \cdot E_x\left(\exp\left\{ \frac{1-\lambda}{2} \sum_{k=1}^{m} [\, I\, \phi_k(t)\, x(t)\,]^2 \right\} [D,F,x+y,w)] \right). \tag{27}$$

$$\lim_{n\to\infty} \lambda_n{}^{\frac{n}{2}} \cdot E_x\left(\exp\left\{ \frac{1-\lambda_n}{2} \sum_{k=1}^{m} [I,\phi_k(t),x(t)]^2 \right\} [D,F,x+y,w)] \right). \tag{28}$$

$$\lim_{n\to\infty} \lambda_n{}^{\frac{n}{2}} \cdot E_x\left(\exp\left\{ \frac{1-\lambda_n}{2} \sum_{k=1}^{m} [I,\phi_k(t),x(t)]^2 \right\} [D,F,x+y,w)] \right). \tag{29}$$

$$\lim_{n\to\infty} z^{\frac{\nu n}{2}} \cdot E_{\vec{x}}\left(\exp\left\{ \frac{1-z}{2} \sum_{j=1}^{\nu} \sum_{k=1}^{n} [I,\phi_k(t),x_j(t)\,]^2 \right\} [D,F,\vec{x}+\vec{y},\vec{w})] \right). \tag{41}$$

$$\begin{aligned} &\lim_{n\to\infty} z^{\frac{\nu n}{2}} \cdot E_{\vec{x}}\left(\exp\left\{ \tfrac{1-z}{2} \sum_{j=1}^{\nu} \sum_{k=1}^{n} [I,\phi_k(t),x_j(t)\,]^2 \right\} [D,F,\vec{x}+\vec{y},\vec{w})] \right. \\ &= \lim_{n\to\infty} z^{\frac{\nu n}{2}} \int_{L_2^{\nu}[0,T]} E_{\vec{x}}\left(\exp\left\{ \tfrac{1-z}{2} \sum_{j=1}^{\nu} \sum_{k=1}^{n} [I,\phi_k(t),x_j(t)\,]^2 \right\} \right. \\ &\qquad \left. \cdot \exp\left\{ i \sum_{j=1}^{\nu} [I,v_j(t),x_j(t)] \right\} \right) \\ &\quad \cdot \left(i \sum_{j=1}^{\nu} [I,v_j(t),w_j(t)] \right) \cdot \exp\left\{ i \sum_{j=1}^{\nu} [I,v_j(t),y_j(t)] \right\} df(\vec{v}). \end{aligned} \tag{43}$$

$$= \lim_{n\to\infty} \lambda^{\frac{\nu n}{2}} \cdot E_{\vec{x}}\left(\exp\left\{ \frac{1-\lambda}{2} \sum_{j=1}^{\nu} \sum_{k=1}^{m} [I,\phi_k(t),x_j(t)\,]^2 \right\} [D,F,\vec{x}+\vec{y},\vec{w})] \right). \tag{45}$$

$$= \lim_{n\to\infty} \lambda_n^{\frac{\nu n}{2}} \cdot E_{\vec{x}}\left(\exp\left\{ \frac{1-\lambda_n}{2} \sum_{j=1}^{\nu} \sum_{k=1}^{m} [I, \phi_k(t), x_j(t)]^2 \right\} [D, F, \vec{x}+\vec{y}, \vec{w})] \right). \tag{46}$$

$$= \lim_{n\to\infty} \lambda_n^{\frac{\nu n}{2}} \cdot E_{\vec{x}}\left(\exp\left\{ \frac{1-\lambda_n}{2} \sum_{j=1}^{\nu} \sum_{k=1}^{m} [I, \phi_k(t), x_j(t)]^2 \right\} [D, F, \vec{x}+\vec{y}, \vec{w})] \right). \tag{47}$$

(2) In Equations (26)–(29):

(a). We mistyped $[D, F, x+y, w]$ as $D[F, x+y, w]$ in Equations (26)–(29).

(b). We mistyped $[D, F, \rho x+y, w]$ as $D[F, \rho x+y, w]$ in Equation (26).

(3) In Equations (31)–(47):

(a). We mistyped $[D, F, \vec{x}, \vec{w}]$ as $D[F, \vec{x}, \vec{w}]$ in Equations (31) and (32).

(b). We mistyped $[D, F, \vec{x}+\vec{y}, \vec{w}]$ as $D[F, \vec{x}+\vec{y}, \vec{w}]$ in Equations (34)–(41) and Equations (43)–(47).

(c). We mistyped $[D, F, z^{-\frac{1}{2}}\vec{x}+\vec{y}, \vec{w}]$ as $D[F, z^{-\frac{1}{2}}\vec{x}+\vec{y}, \vec{w}]$ in Equations (42) and (43).

(d). We mistyped $[D, F, \rho\vec{x}+\vec{y}, \vec{w}]$ as $D[F, \rho\vec{x}+\vec{y}, \vec{w}]$ in Equation (44).

(e). We mistyped $[D, F, \lambda^{-\frac{1}{2}}\vec{x}+\vec{y}, \vec{w}]$ as $D[F, \lambda^{-\frac{1}{2}}\vec{x}+\vec{y}, \vec{w}]$ in Equation (45).

The authors apologize for any inconvenience caused and state that the scientific conclusions are unaffected. The original article has been updated.

References

1. Young Sik, K. Partial Derivative Approach to the Integral Transform for the Function Space in the Banach Algebra. *Entropy* **2020**, *22*, 1047.