

## ERRATUM TO “GLOBALIZING LOCALLY COMPACT LOCAL GROUPS”

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We thank A. I. Shtern for pointing out in his review (MR2743102) that Lemma 3.2 in our paper “Globalizing locally compact local groups,” Volume 20 (2010), 519-524, is incorrect. In contrast to what that review suggests, it is easy to repair this (routine) lemma so that the proof of the main result goes through. We made two errors: one is that we inadvertently omitted the word “continuous” in our definition, on p. 520, of *morphism of local groups*. (The paper makes no sense without this requirement.) The other error is that we forgot to say that the map  $\iota$  in Lemma 3.2 is *injective*. Here is a slightly more explicit and corrected version of that lemma and its proof:

**Lemma.** *Let  $G$  be a local group,  $H$  a group, and  $\iota : G \rightarrow H$  an injective map from the underlying set of  $G$  into the underlying set of  $H$  such that  $\iota(xy) = \iota(x)\iota(y)$  for all  $(x, y) \in \Omega_G$  and  $\iota(G)$  generates  $H$ . Then there is a unique hausdorff topology  $\tau$  on  $H$  such that  $(H, \tau)$  is a topological group and  $\iota : G \rightarrow (H, \tau)$  is an open morphism of local groups.*

*Proof.* Let  $\mathcal{B}$  be the set of open neighborhoods of 1 in  $G$ . Let

$$\iota\mathcal{B} := \{\iota(U) \mid U \in \mathcal{B}\}.$$

It is routine to check that  $\iota\mathcal{B}$  is a neighborhood base at 1 for a group topology  $\tau$  on  $H$ : the assumption that  $\iota(G)$  generates  $H$  is used to show that for every  $V \in \iota\mathcal{B}$  and  $h \in H$  there is  $W \in \iota\mathcal{B}$  with  $hWh^{-1} \subseteq V$ . The injectivity of  $\iota$  ensures that  $\tau$  is hausdorff. Then  $\iota : G \rightarrow (H, \tau)$  is clearly an open morphism of local groups. Uniqueness is clear.  $\square$

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