BULL. AUSTRAL. MATH. SOC. 20F29, 20F38, 20C32
VOL. 52 (1995) [345–346]

GROUPS WITH NO NONTRIVIAL LINEAR REPRESENTATIONS: CORRIGENDA

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Professor B.A.F. Wehrfritz has kindly drawn my attention to some errors in the above paper [**1**].

Principally, there is an invalid assertion of complete irreducibility used in Theorem 2.1 and its corollary. Thus the expression "1-dimensional $\bar{\mathfrak{k}}$-representation" should be replaced by "Abelian $\mathfrak{k}$-representation" in both statements. This amended conclusion is still adequate for subsequent results. In particular, the "if" direction of Theorem 2.3 (a) may be proved as follows. One needs the existence of a nontrivial locally finite quotient. When G is perfect, this is immediate from the stated fact that G is soluble-by-locally finite. Otherwise, G admits a nontrivial Abelian, counter-rational quotient, which, when embedded in a divisible group, again leads to a nontrivial locally finite quotient. Likewise, the statement of Corollary 2.4 is unaffected: (ii) implies (iii) from (2.3)(β) and the proof of (2.3)(b).

In Proposition A.1, (ii) should be amended to read either
"$\mathcal{C} \subseteq (\text{counter})^2 - \mathcal{C}$ if $\mathcal{C}$ is closed under the formation of quotients"
or
"$\mathcal{C} \subseteq (\text{counter})^2 - \mathcal{C}$ only if $\mathcal{C}$ is closed under the formation of simple quotients",
while (iv) should be deleted. Incidentally, another derivation of (v) may be found in [**3**], where it is also noted that the class of counter-$\mathcal{C}$ groups is always extension-closed if $\mathcal{C}$ is closed under the formation of quotients. (In fact, $\mathcal{C} \subseteq (\text{counter})^2 - \mathcal{C}$ suffices.) The class of counter-finite groups also arise in a significant way in [**2**].

Example 1.9 cannot be sustained, because a linear group with unipotent generators need not be unipotent. However, the relationship between strongly torsion generated groups and counter-linearity seems worth investigating.

REFERENCES

[1] A.J. Berrick, 'Groups with no nontrivial linear representations', *Bull. Austral. Math. Soc* **50** (1994), 1–11.

Received 23rd February 1995

[2] D.J.S. Robinson and M. Timm, 'On groups that are isomorphic with every subgroup of finite index and their topology', (preprint 1994).

[3] V. Walter, 'A class of groups rich in finite quotients', (preprint 1995).

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