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## Corrigendum and addendum to “Ascending derived series”

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## Corrigendum and addendum to “Ascending derived series”

by

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Dr Graham Higman has pointed out to me that the construction of the example in § 9 is incorrect as it stands, because  $H_i''$  is not, as claimed, a direct product with amalgamations of copies of  $H_{i-2}$ , but of copies of  $H_{i-1}'$  (p. 61, lines 12—11 from the bottom). I am indebted to Dr Higman for the following modification of the construction, to give an example with all the properties stated in the last 8 lines of § 9. The definition of the groups  $H_i$  remains unchanged, but we denote their inductive limit by  $H^*$ ; we denote by  $L_{i-1}$  the group generated by all the isomorphic copies that arise from  $H_i$  by forming the successive direct products with amalgamated  $Z$ , for all positive  $i$ : Thus  $L_{2i-1}$  is what was denoted by  $G_{2i}$ ; what was denoted by  $G_{2i-1}$  will again be denoted by  $G_{2i-1}$ . It follows from (8.3) that  $L_i'' = L_{i-1}'$ . Thus if we put  $L_i' = G_i$  for all positive  $i$ , then  $G_{i+1}' = G_i$ , and

$$\{1\} = G_0 \subset G_1 \subset G_2 \subset \dots$$

is an infinite ascending derived series, with  $G_1 = Z$  of order 2. The inductive limit of this series is again denoted by  $G^*$ . The construction in § 10 requires no modification.

Dr Higman has also remarked that a consequence of Theorem 7.3 is the following COROLLARY: *A finitely generated group is isomorphic to a term of its derived series only if it coincides with it.*

The University, Manchester, 13.

(Oblatum 10-2-57).

\*) Compositio Math 13, 47—64 (1956).