

1096-20-1646

**Joseph P Brennan\***, Department of Mathematical Sciences, Binghamton, NY 13905, and  
**Luise-Charlotte Kappe** and **Gabriela Mendoza**. *Variation on a Theme of I.D. MacDonald*. Preliminary report.

In a 1963 paper I.D. MacDonald gave an example of a group in which the cyclic commutator subgroup is not generated by a commutator and he gives sufficient conditions on the group  $G$  such that its cyclic commutator subgroup is generated by a commutator.

The question arises, what is the situation for other words in case the associated word subgroup is cyclic, in particular the word  $x^n$ ,  $n$  a positive integer. For  $n$  a positive integer, we establish sufficient conditions such that  $G^n = \langle g^n \mid g \in G \rangle$  is generated by an  $n$ -th power in case  $G^n$  is cyclic and give examples of groups  $G$ , where  $G^n$  is cyclic but not generated by the  $n$ -th power of an element. (Received September 16, 2013)