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David Carroll (carroll@math.tamu.edu) and **Andrew Penland***
(adpenland@email.wcu.edu). *Periodic points on shifts of finite type and commensurability invariants of groups.*

We explore the relationship between subgroups and the possible shifts of finite type (SFTs) which can be defined on a group. In particular, we investigate two group invariants, weak periodicity and strong periodicity, defined via symbolic dynamics on the group. We show that these properties are invariants of commensurability. Thus, many known results about periodic points in SFTs defined over groups are actually results about entire commensurability classes. Additionally, we show that the property of being not strongly periodic (i.e. the property of having a weakly aperiodic SFT) is preserved under extensions with finitely generated kernels. We conclude by raising questions and conjectures about the relationship of these invariants to the geometric notions of quasi-isometry and growth. (Received August 08, 2015)