Marek Zabka* (zabka@fphil.uniba.sk), Department of Musicology, Comenius University, 81801 Bratislava, Slovak Rep. Fokker's 'Periodicity Blocks', Hellegouarch's 'Natural Scales', and my 'Generated Tone Systems'.

Many common tone systems can be modeled using lattices generated by two or more base elements. Special subsets or special quotient groups of such lattices yield convincing formalization of various musical scales. The three formal constructs mentioned in the title strive to build theoretical framework of this kind. Although they share the core idea the relations between the three concepts are manifold and their investigation involve non-trivial mathematical exploration. The paper addresses this issue, reformulates the three approaches within a single terminology and presents preliminary mathematical results. (Received September 16, 2010)