**"Not all majority-based social choice functions are obviously strategy-proof".**

We consider three families of strategy-proof social choice functions, all based on the majority principle. Generalized majority voting on the universal domain of preferences over two alternatives, generalized median voters on the domain of single-peaked preferences over a finite and linearly ordered set of alternatives, and voting by committees on the domain of additive or separable preferences over a set of alternatives composed by all subsets of a given set of objects or candidates. For the first two families we characterize their obviously strategy-proof subclasses, which are substantially smaller than their corresponding strategy-proof families. We also show that no voting by committees is onto and obviously strategy-proof, even on the restricted domain of additive preferences