In one dimension, sofic shifts and shifts of finite type (SFTs) contain an abundance of subsystems and factors. For example, if a $\mathbb{Z}$ sofic shift S has entropy greater than $\log n$, then there exists a factor map (a continuous shift-commuting function) from S onto $\{0, 1, \ldots, n-1\}^{\mathbb{Z}}$. Also, any $\mathbb{Z}$ sofic shift S contains SFTs with entropies arbitrarily close to $h(S)$.

We show that multidimensional analogues of these results do not hold by using some recent results of Hochman to construct several examples of sofic shifts and SFTs with very restricted subsystems and factors. These include $\mathbb{Z}^d$ SFTs of arbitrarily large entropy which do not factor onto $\{0, 1\}^{\mathbb{Z}^d}$ and $\mathbb{Z}^d$ sofic shifts of arbitrarily large entropy which do not contain or factor onto any SFTs at all aside from a singleton fixed point. This is joint work with Mike Boyle and Michael Schraudner.