1060-05-104 **Stephen G. Hartke*** (`hartke@math.unl.edu`), Department of Mathematics, University of Nebraska-Lincoln, Lincoln, NE 68588-0130, and **Tyler Seacrest**, Department of Mathematics, University of Nebraska-Lincoln, Lincoln, NE 68588-0130. *Balanced bipartite subgraphs with at least half the degree of each vertex.* Preliminary report.

It is well known that every graph G contains a bipartite subgraph H with at least half the edges of G. The standard "pushing" argument shows that in fact the degree of each vertex in H is at least half its degree in G. A linearity of expectation argument also shows that a spanning balanced bipartite subgraph exists with at least half the edges. Can both properties be simultaneously obtained? That is, does there exist a spanning balanced bipartite subgraph H of G such that the degree of each vertex in H is at least half its degree in G? We will discuss partial results on this question, including a potential version: for any degree sequence π, we show that there exists a realization G of π that has a bipartite subgraph H with (almost) the desired properties. (Received March 24, 2010)