Zbl 453.05050
Duke, Richard A.; Erdős, Paul
A problem on complements and disjoint edges in hypergraph. (In English)
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[For the entire collection see Zbl 444.00009.]
The authors denote by $r(s, N, t; k)$, $N > k$, the least integer m such that
every 2-coloring of the edges of a complete k-graph on m vertices produces
either a matching with s edges in the first color or a complete k-graph on N
vertice with at most t edges in the first color. In the first part of the paper,
the authors consider several questions dealing with the ffunction $r(s, N, t; k)$
arriving, finally, at the following conjecture.Given k and n, $n \geq 2k$, if H is a k-
graph on n vertices which is such that each subset of $k-1$ vertices of H missses
at least k edges of H, then H must possess at least two disjoint edges. After
establishing the conjecture is not correct in general, the authors formulate a
few questions strictly related to conjecture (for example, wath is the smallest
value of k for which there is a counterexample to the conjecture).

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Classification:
05C65 Hypergraphs
05C70 Factorization, etc.
05C55 Generalized Ramsey theory

Keywords:
matching; Ramsey number; k-graph; hypergraph