ERRATUM TO "MINIMUM NUMBER OF DISTINCT EIGENVALUES OF GRAPHS"

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In this note, we wish to add an additional hypothesis to Theorem 4.4, which in turn impacts the resulting original conclusions of Corollaries 4.5 and 4.6 as presented in the paper [Minimum Number of Distinct Eigenvalues of Graphs, The Electronic Journal of Linear Algebra, Volume 26, pp. 673-691, 2013].

Consider the following necessary notation. Suppose $\alpha \subseteq \{1, 2, \ldots, m\}$ and $\beta \subseteq \{1, 2, \ldots, n\}$. For a matrix $A \in M_{m,n}$, $A[\alpha, \beta]$ denotes the submatrix of A lying in rows indexed by α and columns indexed by β. For any vertex v of a graph G, the *neighborhood set of* v, denoted by $N(v)$, is the set of all vertices in G adjacent to v.

THEOREM 4.4 *Let G be a connected graph on n vertices with $q(G) = 2$. Then, for any independent set of vertices $\{v_1, v_2, \ldots, v_k\}$, that satisfies for each $i = 1, 2, \ldots, k$ there exists a $j \neq i$ for which $N(v_i) \cap N(v_j) \neq \emptyset$, we have*

$$\left| \bigcup_{i \neq j} (N(v_i) \cap N(v_j)) \right| \geq k.$$

In the original version of this theorem (see Theorem 4.4 in the aforementioned paper) we inadvertently omitted the possibility that for some i, $N(v_i) \cap N(v_j)$ is empty for each $j \neq i$. Assuming that this possibility does not arise, the original proof goes through as it appears. As noted in our work, the next two results are immediate consequences of Theorem 4.4; however, we need to account for the additional case that was previously omitted. We include the revised statements of both results here for clarity and completeness.

COROLLARY 4.5 *Let G be a connected graph on $n \geq 3$ vertices with $q(G) = 2$. Then, any two non-adjacent vertices must have at least two common neighbors or none at all.*

COROLLARY 4.6 *Suppose $q(G) = 2$, for a connected graph G on $n \geq 3$ vertices. If a vertex v_1 has degree exactly two with adjacent vertices v_2 and v_3, then every vertex v, different from v_2 and v_3, has exactly the same neighbors as v_1 or has no common neighbors with v_1.*