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Jan Cameron*, Department of Mathematics, Mailstop 3368, Texas A&M University, College Station, TX 77843-3368. *Structure results for normalizers of II_1 factors.*

For an inclusion of II_1 factors $N \subset M$ we study the normalizer $\mathcal{N}_M(N) = \{u \in \mathcal{U}(M) : uNu^* = N\}$ and the von Neumann algebra it generates. We obtain a crossed product decomposition of the generated von Neumann algebra with respect to a countable discrete subgroup of $\mathcal{N}_M(N)$. By analyzing the structure of certain weakly closed modules in $\mathcal{N}_M(N)''$, this leads to a “Galois-type” theorem for normalizers, in which we find a description of intermediate subalgebras of $\mathcal{N}_M(N)''$ in terms of a unique countable subgroup of the normalizing group. Implications for inclusions $N \subset M$ arising from the crossed product, group von Neumann algebra, and tensor product constructions are also addressed. Our work leads to a construction of new examples of norming subalgebras of II_1 factors: If $N \subseteq M$ is a regular inclusion of II_1 factors, then N norms M . (Received September 15, 2008)