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**Pye Phyo Aung\*** ([pye.aung@ndsu.edu](mailto:pye.aung@ndsu.edu)). *Gorenstein Dimensions, Amalgamated Duplication of a Ring, and Pseudocanonical Covers.*

When  $E$  is a semidualizing module over a commutative ring, Holm and Jørgensen studied some connections between  $E$ -Gorenstein injective/projective/flat dimensions and Nagata's trivial extension  $R \times E$ . We generalize these results to other general constructions including D'Anna and Fontana's amalgamated duplication  $R \bowtie E$  of a ring along an ideal and Enescu's pseudocanonical covers  $S(f)$ . We also identify some key properties of those general constructions that give similar connections to Gorenstein injectivity, projectivity and flatness. (Received September 16, 2013)