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Alexander Diaz-Lopez* (adiaz4@nd.edu), 255 Hurley, Notre Dame, IN 46556, and **Matthew John Dyer** (dyer.1@nd.edu), 255 Hurley, Notre Dame, IN 46556. *Representations of Hecke Algebras on Quotients of Path Algebras.*

Given a Coxeter system (W, S) , a W -graph is a graph, together with additional information, that encodes a representation (denoted τ representation) of the Hecke algebra associated to W . We generalize this work by defining W -graphs over non-commutative algebras, which give rise to new representations of Hecke algebras. The main examples to be discussed include several representations of Hecke algebras on quotients of path algebras (over suitable quivers). We discuss the relationship between these representations and the τ representations. The most interesting example comes from a quotient path algebra that is isomorphic to an important ideal of Lusztig's asymptotic Hecke algebra (when defined). (Received July 12, 2015)