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Miklos Bona* (bona@uf1.edu), Department of Mathematics, University of Florida, Gainesville, FL 32611-8105. *The absence of a given pattern and the number of occurrences of another.*

Following a question of J. Cooper, we study the expected number of occurrences of a given permutation pattern q in permutations that avoid another given pattern r . In some cases, we find the pattern that occurs least often, (resp. most often) in all r -avoiding permutations. We also prove a few exact enumeration formulae, some of which are surprising. Several open questions and conjectures will be announced. (Received September 18, 2009)