Permutation problems have always been an important issue in the field of optimization since many real-world problems find a natural representation of the solutions as permutations. In the 90s, when the study in the evolutionary computation focused on canonical genetic algorithm, many different crossover operators for permutation problems have been proposed. These operators embed the idea of linkage learning, and different operators learn different linkages. For example, PMX emphasizes relative order, while EX emphasizes adjacency. In 200x to 200x, munetomo et al. proposed EHBSA and NHBSA