Are the random graph generators capable of generating graphs that are representative of real world graphs?

این موضوع هنوز هم محل بحث محققان است. به عنوان نمونه، مقاله ۲۰۲۳ زیر (https://arxiv.org/pdf/2306.07758.pdf) در این مورد مینویسد:

Sampling High-Quality Generated Graphs. Although the graph generators are capable to generate graphs with similar distribution as real graphs, some of the generated graphs may still contain obvious artifacts in some cases. There is a concern that the classification may be biased by such artifacts. Thus we compute the number of nodes, the number of edges, density, diameter, average clustering, and transitivity as the statistical features of each graph and use Euclidean Distance to measure the 1-nearest-neighbor similarity between each generated graph and real graph sets [65]. We select 20% generated graphs with the highest similarity for the following experiments.

علیرغم ادعای این مقاله که کاملاً این توانایی وجود دارد، حداقل در مورد این مسأله، نمی توان به صورت قطعی گفت که گراف مناسبی تولید شده است.