

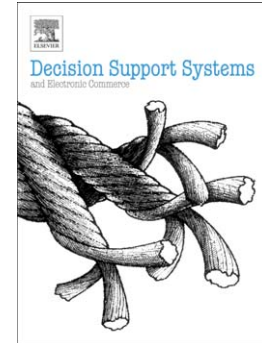
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Increasing the Crowd's Capacity to Create: How Alternative Generation Affects the Diversity, Relevance and Effectiveness of Generated Ads

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**Increasing the Crowd's Capacity to Create: How Alternative Generation Affects the Diversity,
Relevance and Effectiveness of Generated Ads**

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ABSTRACT

Crowds can generate ideas by searching for new designs. A model for such crowd-based search is proposed consisting of three major forces: the problem domain, the actors, and the process. One particular process that can perform such search is that described by human based genetic algorithms, in which crowds are responsible for creating, modifying, and combining designs. This study looks at one aspect of the process: the alternative generation algorithm. Three systems were built that performed greenfield, modification and combination-based alternative generation. These were compared in an experiment involving 2220 participants who played different roles in creating and evaluating advertisements. The results favor the modification system. This suggests for domains like advertising, crowd-based design systems should encourage a series of modifications of initial ideas. For designers of other crowd-based systems in other problem domains, this study suggests that both modification and combination processes should be tested and their ratio of use adjusted according to the results obtained, much as the ratio of mutation and crossover are adjusted in genetic algorithms.

Keywords creativity, human based genetic algorithms, advertisement, crowdsourcing, design, evolutionary computing

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