Response to Referee Reports for "Solving maximum-entropy sampling problems using factored masks"

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We are grateful for both referees' detailed comments. Below we describe how we have addressed their requests.

Referee #1

1. In response to the question "Would Algorithm 1 be unchanged if W in step 2 was replaced with $h(W)$," we have expanded the discussion of the derivation of Algorithms 1 and 2. In short, the answer is "yes, the algorithm would change."

   By expanding this discussion, we realized that Algorithm 2 is actually a descent method (assuming differentiability at a point), which we did not recognize in the previous version of the paper. Theorem 1 has been added to highlight this realization.

2. We have expanded the discussion of the comparison between Algorithm 1 and Algorithm AS to highlight, in particular, that Algorithm 1 often achieves bounds, which are unachievable by Algorithm AS.

3. We have updated our original warm-start to a new, more reasonable one. All computational results have been updated to reflect the new warm-start.

4. The interpretations of the Branch-&-Bound results have been updated to stress, for example, that we are still very far from solving the $n = 124$ instances. Proper acknowledgement of the NLP-based algorithm of Anstreicher et al. has been given.

5. All other medium and minor suggestions have been incorporated with the exception of:

   - We have left the notation $z(C, s)$ and $\xi_{C,s}(\cdot)$ as is, even though it does not match notation in other papers, because it consistently shows the dependence on C and s.

Referee #2

1. We have added descriptions of how the iterate V is initialized. Note that V is initialized differently in different situations, and so initialization has been described in several places.

2. The first time the entropy gap is mentioned, we stress that it is an absolute gap, not a relative one.

3. We have added running times to Section 3.

4. We have added a discussion of the greedy heuristic used in the paper.

5. We have updated our discussion of the warm-start. (See also the comments above for Referee #1.)

6. We appreciate very much the referee's requests for clarification and insight on several of the finer points of the paper. Wherever possible throughout the paper, we have added such clarifications. One notable exception is:

    - We are unsure if the relative performance between Algorithms 1 and AS is somewhat dependent on s. We suspect it is simply coincidence in Figure 4, but have not mentioned this speculation in the paper.