Notes on Side Experiment Model:

Suppose we try to use the current model, seeing how the three components we think are at work are represented in the two terms of the present equations.

**PURE CM**: There will be three components: AiO and AiN (list familiarity), LTM(Old,New—Extra list familiarity; termed LTMFO for old and LTMFN for new), LTM learning (response learning—termed LTMLO for old and LTMLN for new).

Ai will be used and how much will be indicated by its estimated parameter value.

LTMFO and LTMFN should be equal. Their value should depend on the emphasis given to Ai. Their values should not necessarily be the same as for VM, because whatever learning of responses to CM items occurs, that might lessen the need to focus as strongly on Ai. Thus these values might be smaller for CM than VM.

LTMLO and LTMLN will be positive and go in opposite directions: LTMLO will be in the numerator and LTMLN in the denominator.

In terms of the previous model we can combine the LTM terms in the numerator, and also do so in the denominator:

OLD item test: pi = (AiO + LTMFO+LTMLO)/(AiO + LTMFN + c) = (AiO + LTM + LTMLO)/(AiO + LTM + c)

NEW item test: pi = (AiN + LTMFO)/AiN + LTMFN + LTMLN + c) = (AiN + LTM)/(AiN + LTM + LTMLN + c)

**PURE AN**: There is no long term learning and no long term familiarity except due to similarity, S:

For an OLD item test: pi = (AiO + S)/((AiO + S + c)

For a NEW item test: pi = (AiN + S)/(AiN + S + c)

PURE VM: Long-term familiarity for both OLD and NEW and no learning:

For an OLD item test: pi = (AiO + LTM)/(AiO + LTM + c)

For a NEW item test: pi = (AiN + LTM)/(AiN + LTM + c)

**MIXED CM + AN**: AN NEW stand out because they have almost no familiarity except for S. Thus a regular value of c makes these exceptionally high performing.

**MIXED CM**: If we assume the existence of AN items forces a heavy reliance on recent list context, and hence a focus on AiO vs AiN, and less a focus on LTM, then there is a problem: If we lower all LTM, both LTMF and LTML, then the effects might cancel. We need to keep LTMF high and LTML low – perhaps this could be justified by effects on learning rather than retrieval. Assume MIXED lowers CM learning, but LTMF remains high.

**MIXED AN**: NEW tests are easy—no familiarity except S. OLD tests are hard because CM NEW and AN OLD have similar familiarity. ??