Decentralized Partnership Formation
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Validating web-based brand images & co-branding potentials

1. STUDY 1: Comparing web-based brand images to brand images obtained in a Dutch student sample – computed as the strength of the associations between 24 brand names and 30 brand personality attributes (as adapted from Aaker, 1997).

2. STUDY 2: Comparing web-based brand images to brand images obtained in an US sample (Mturk) – computed as the strength of the associations between 95 international brand names and 6 brand personality dimensions (as obtained in Study 1).

3. STUDY 3: Comparing algorithm-generated partnerships (high co-branding potentials) to random partnerships in US sample (Mturk) – High co-branding potential represents a high image overlap and a moderate functional overlap between brands.

Decentralized matching

1. Algorithm 1
   - Each node constantly tries to find the best available partners
   - The system converges slowly to a consistent state (where each node is part of a single group)

2. Algorithm 2
   - Random groups of size k are formed at the beginning
   - Nodes swap groups during the execution in order to improve the partnerships values

Both algorithms
- Find groups of k partners
- Each node from a matched group shouldn’t be part of another group
- Use co-branding values to assess the partnership value
- Use heuristic to avoid searching through all the solution states
- Matching is run independently at the site of each company

Co-branding values
Matching protocol
K-Matches