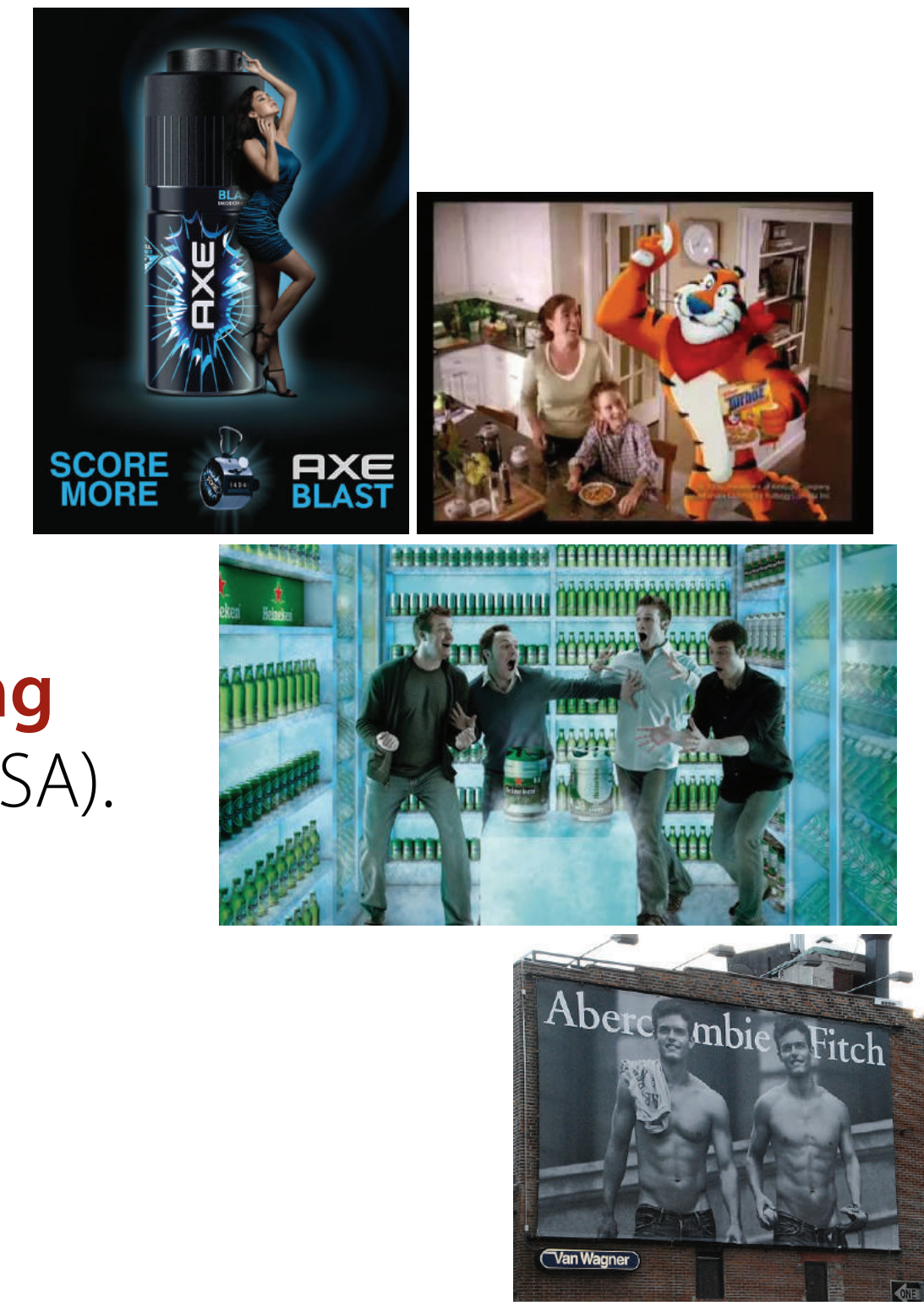


How are brand images represented in the brain?

'Perceptions about a brand as reflected by the brand associations held in consumer memory' (Keller, 1993).
 How do we retrieve such information from consumer's mind?

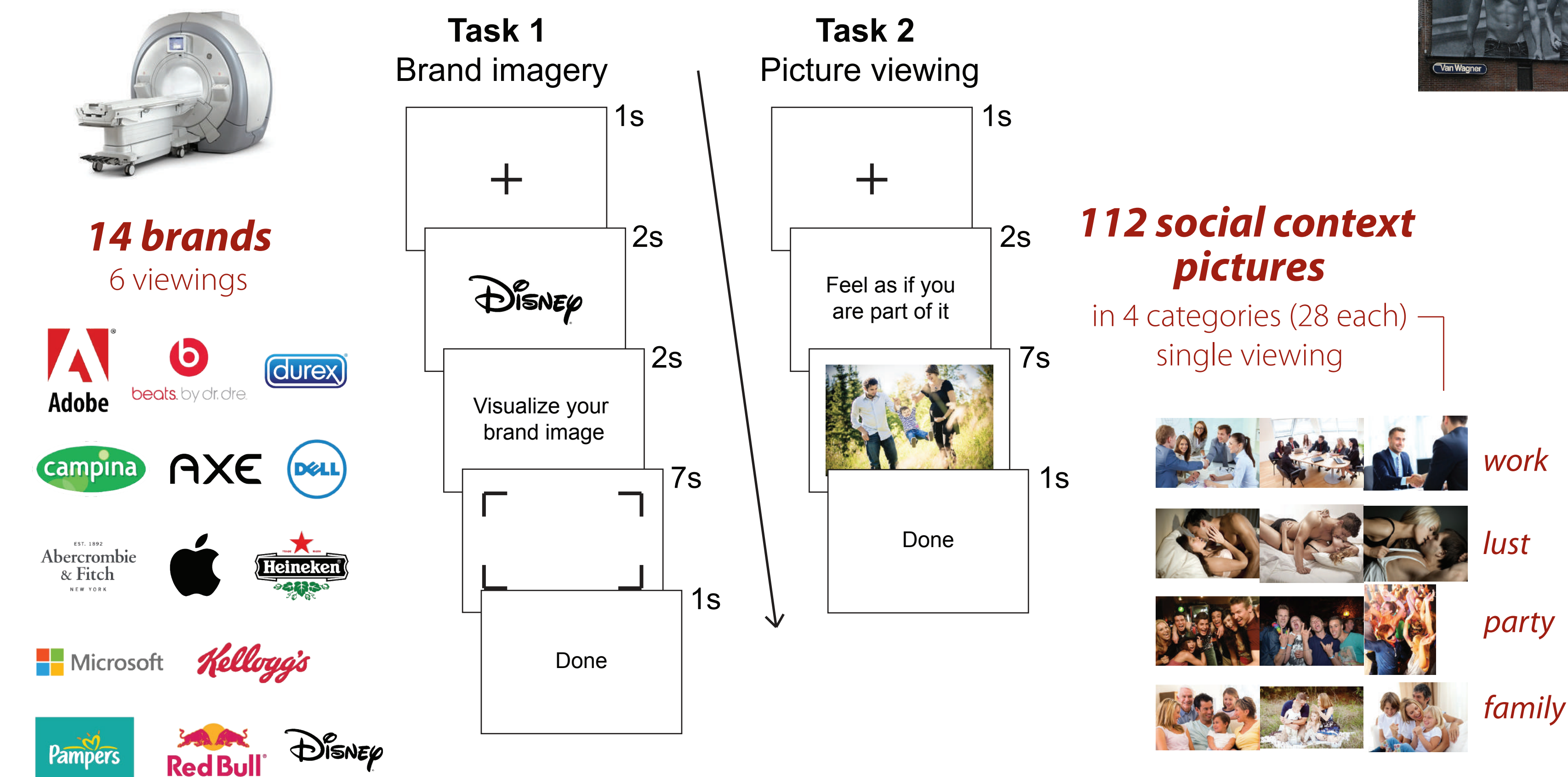
We extract neural representations of brand images

by comparing them against a large set of natural stimuli depicting various social contexts using representational similarity analysis (RSA).

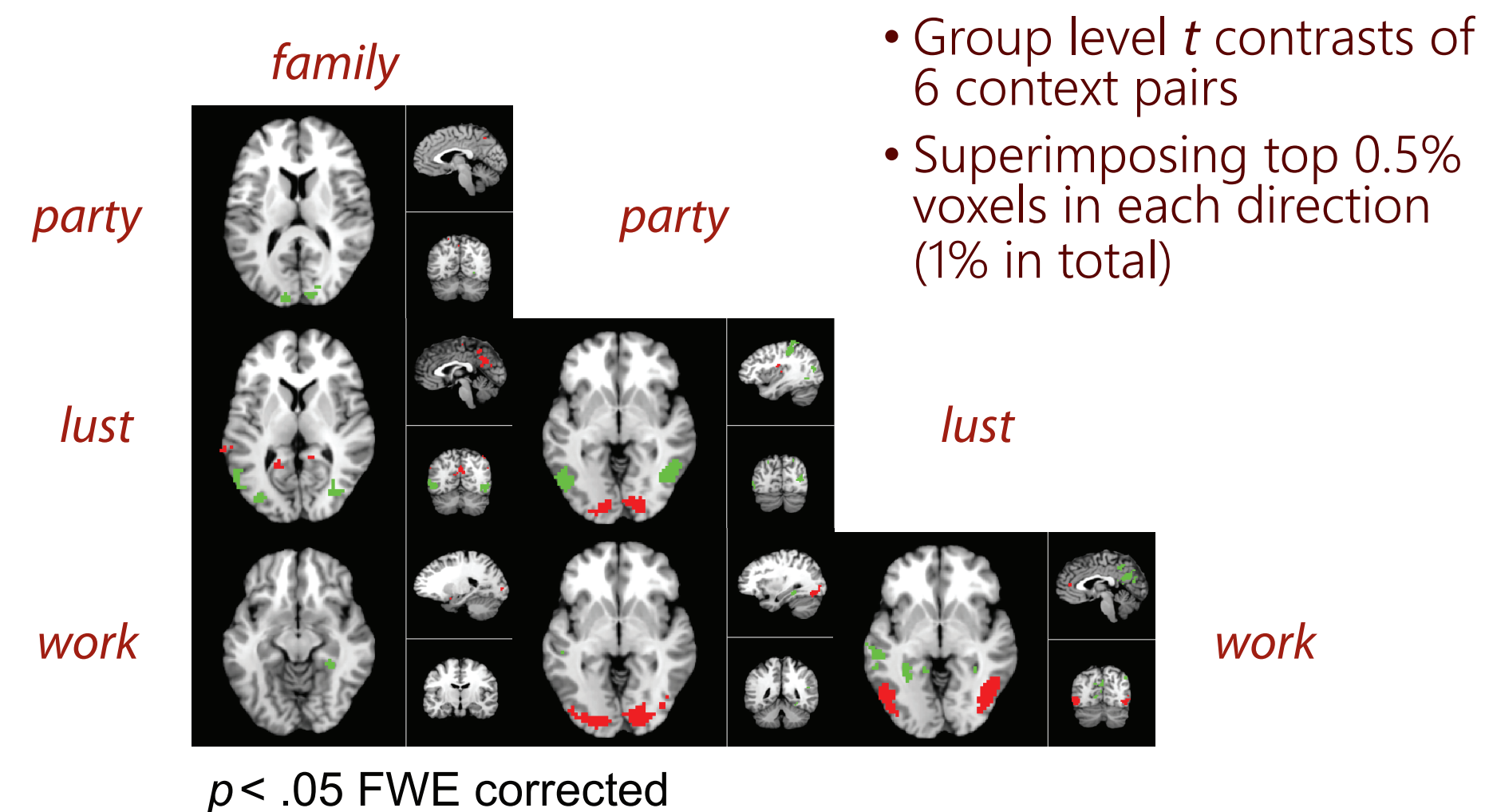


STUDY DETAILS

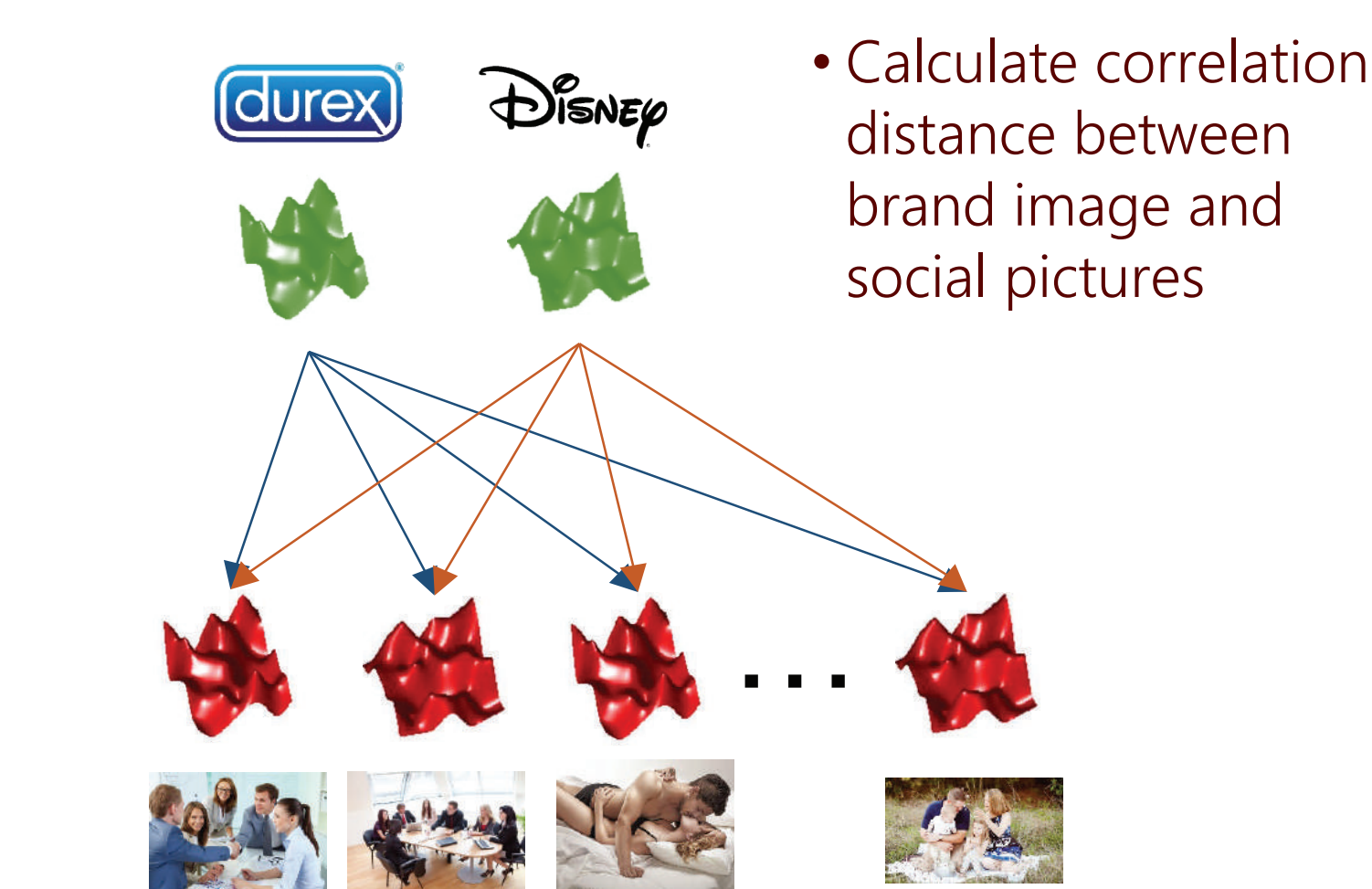
38 Dutch participants (21 men), aged between 18-35 (mean: 23.3, SD: 3.5)



Step 1 Voxel selection



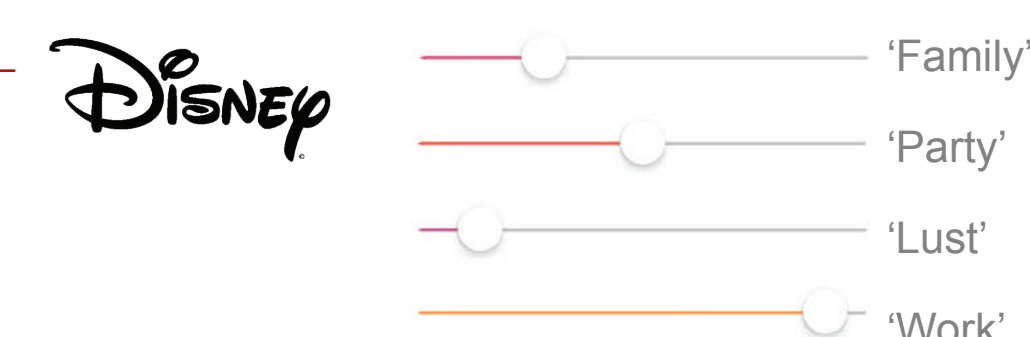
Step 2 Comparing representational similarities



From the extracted neural representations, we can:

1 infer the content of brand images

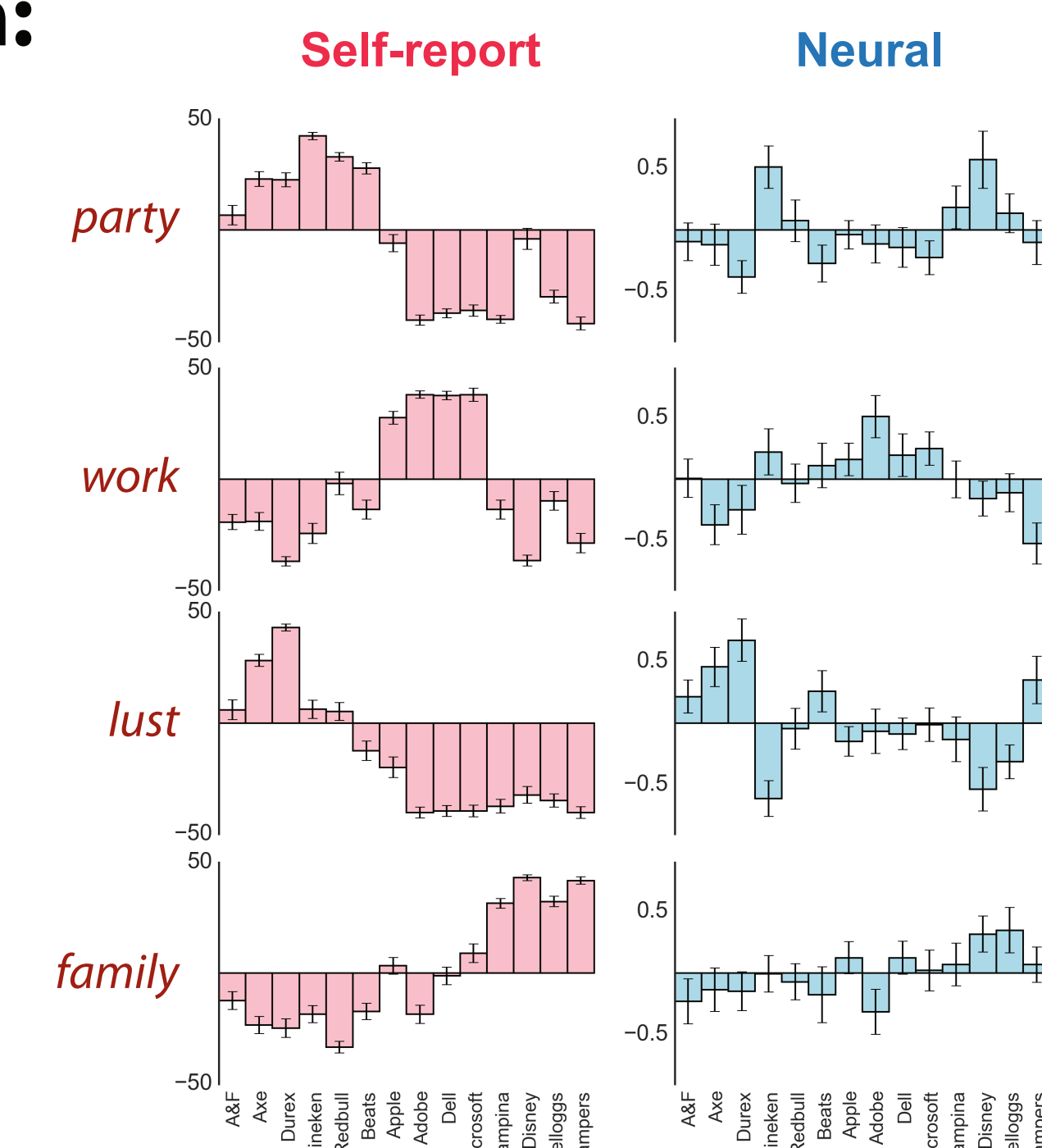
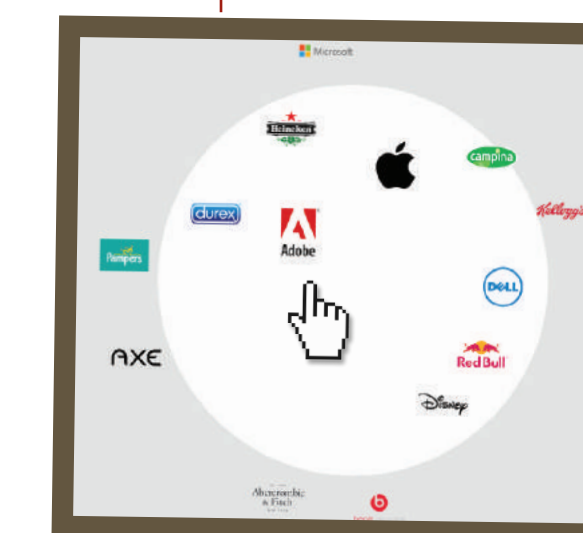
- Generate social context SVM classifiers from pictures
- Calculate each brand's distance from decision planes (i.e. how closely Disney resembles 'family')
- Compare these neural scores with self-report brand image perception



2 map out brand image similarity

- Construct neural dissimilarity matrix based on correlation distances from social context pictures
- Compare with self-report brand image similarity

Please arrange the brand logos according to their brand image similarities
 Inverse multidimensional scaling (Kriegeskorte & Mur, 2012)

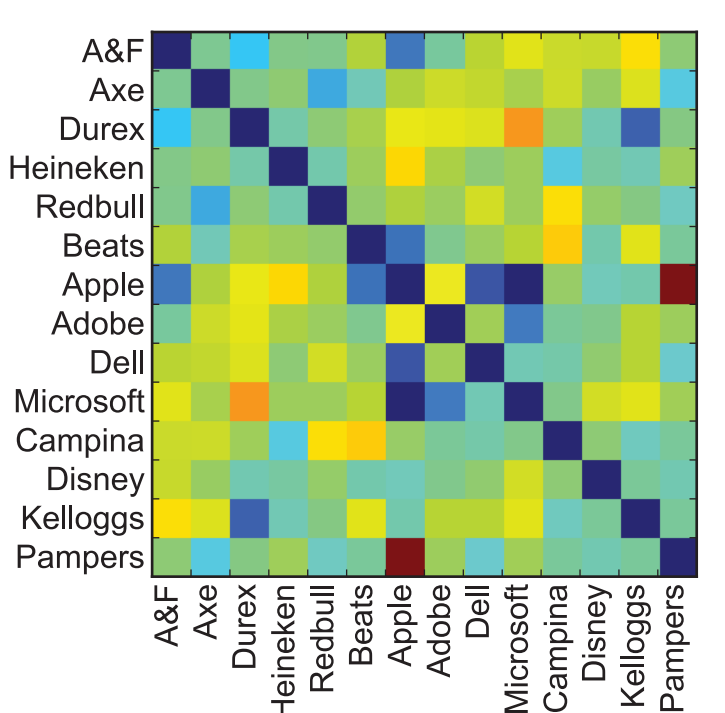


Linear mixed-effects model

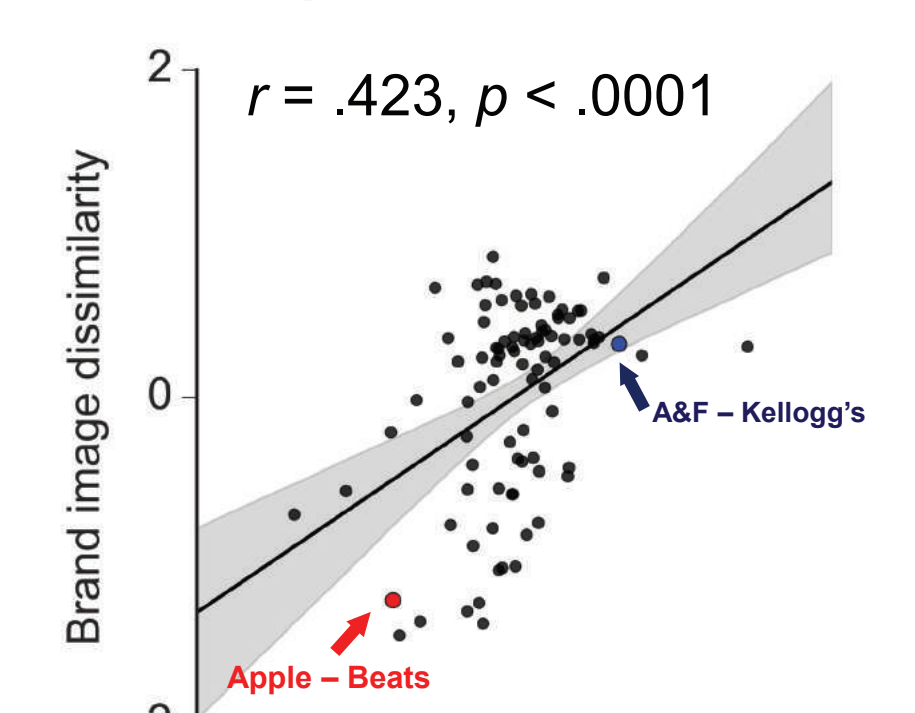
F statistics of fixed effects	Self-report
Neural	26.8***
Context	25.2**
Context × Neural	2.2
Marginal R ²	.043

Context coefficients

Party	.045
Work	.207
Lust	.108
Family	.223



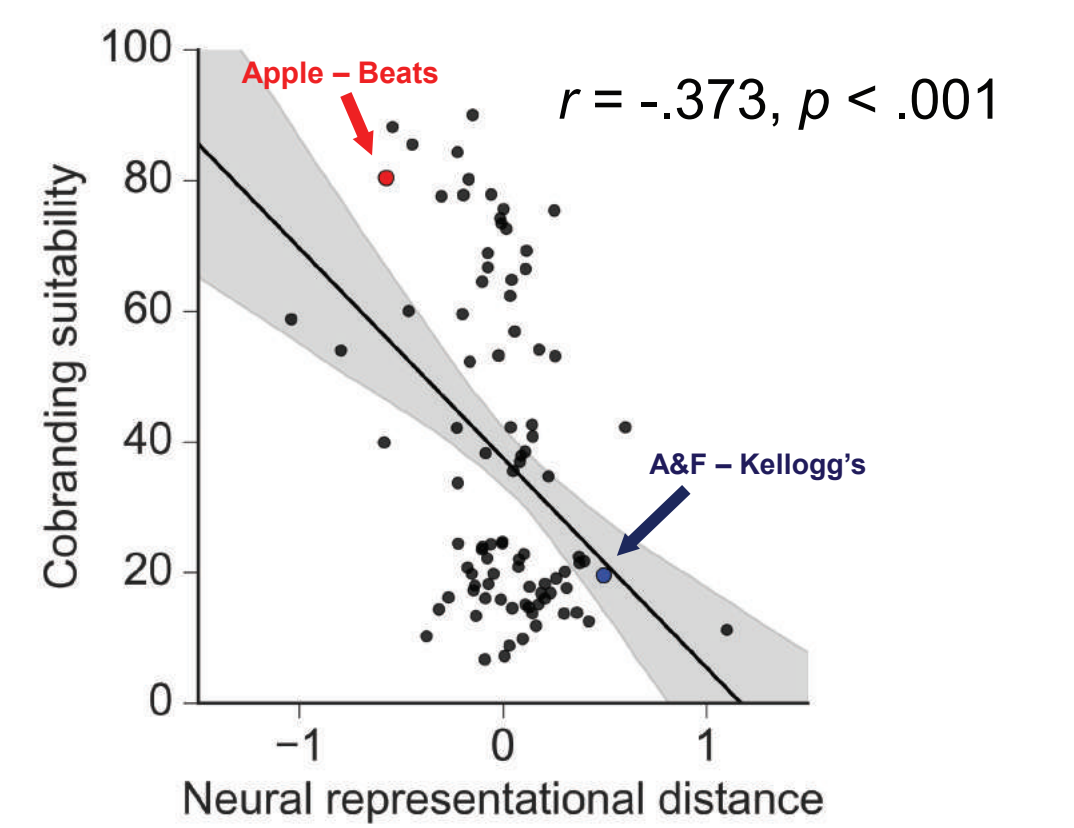
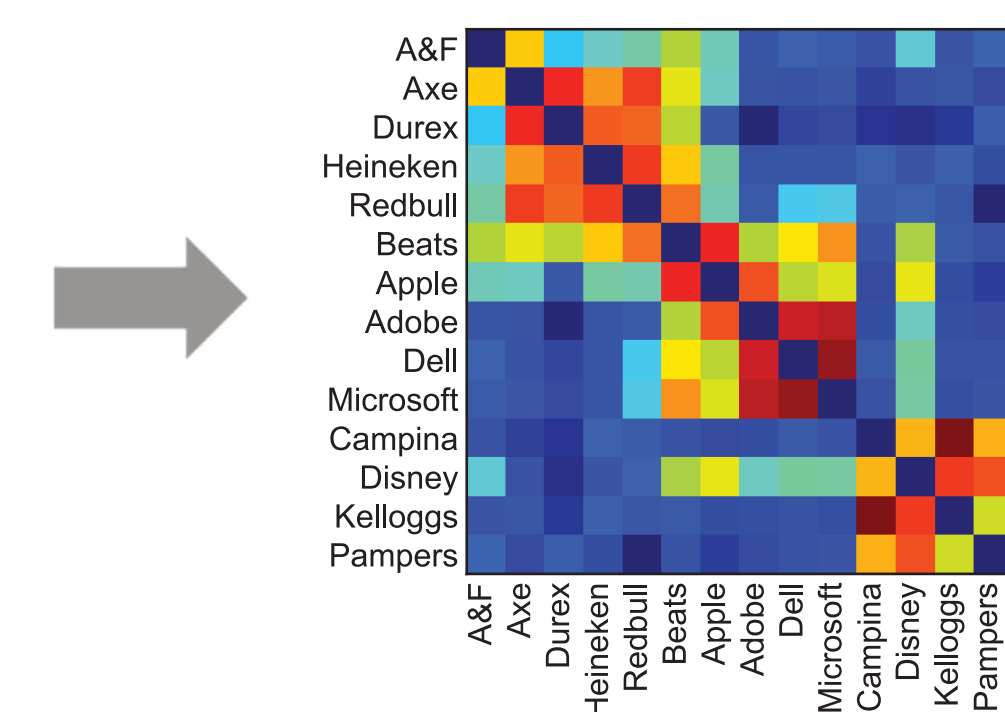
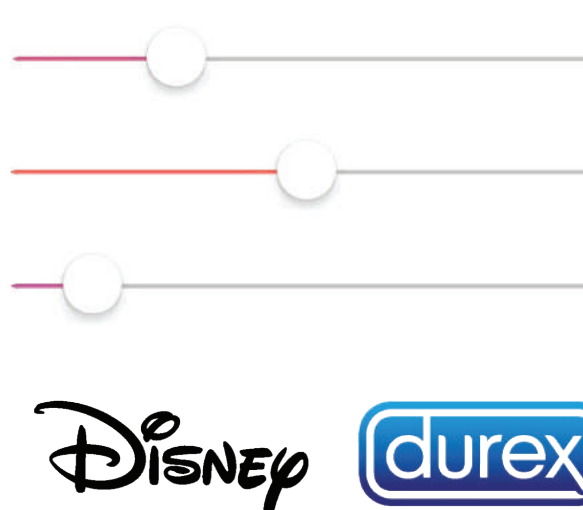
Neural representational distance



3 predict co-branding suitability

- Compare with self-report co-branding suitability

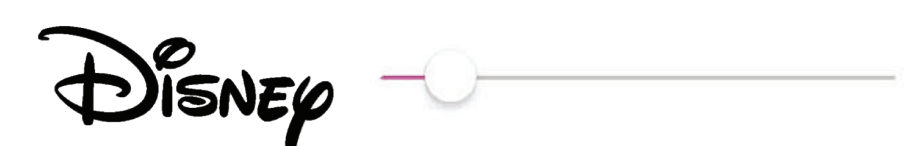
Are these two brands a compatible fit?
 If the two brands decide to co-sponsor an event, does it feel natural to you?
 If the two brands decide to develop a co-branded 'crossover' product, do you think it will more likely be a success?
 (α = .952)



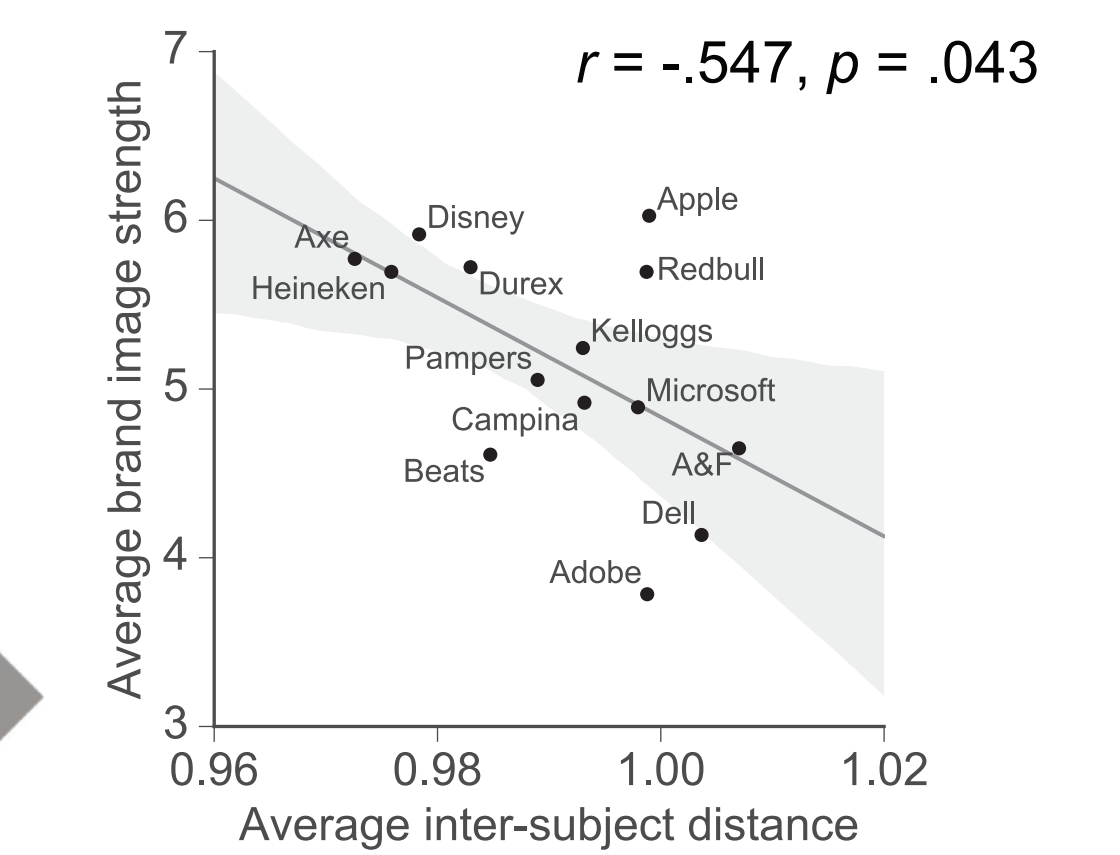
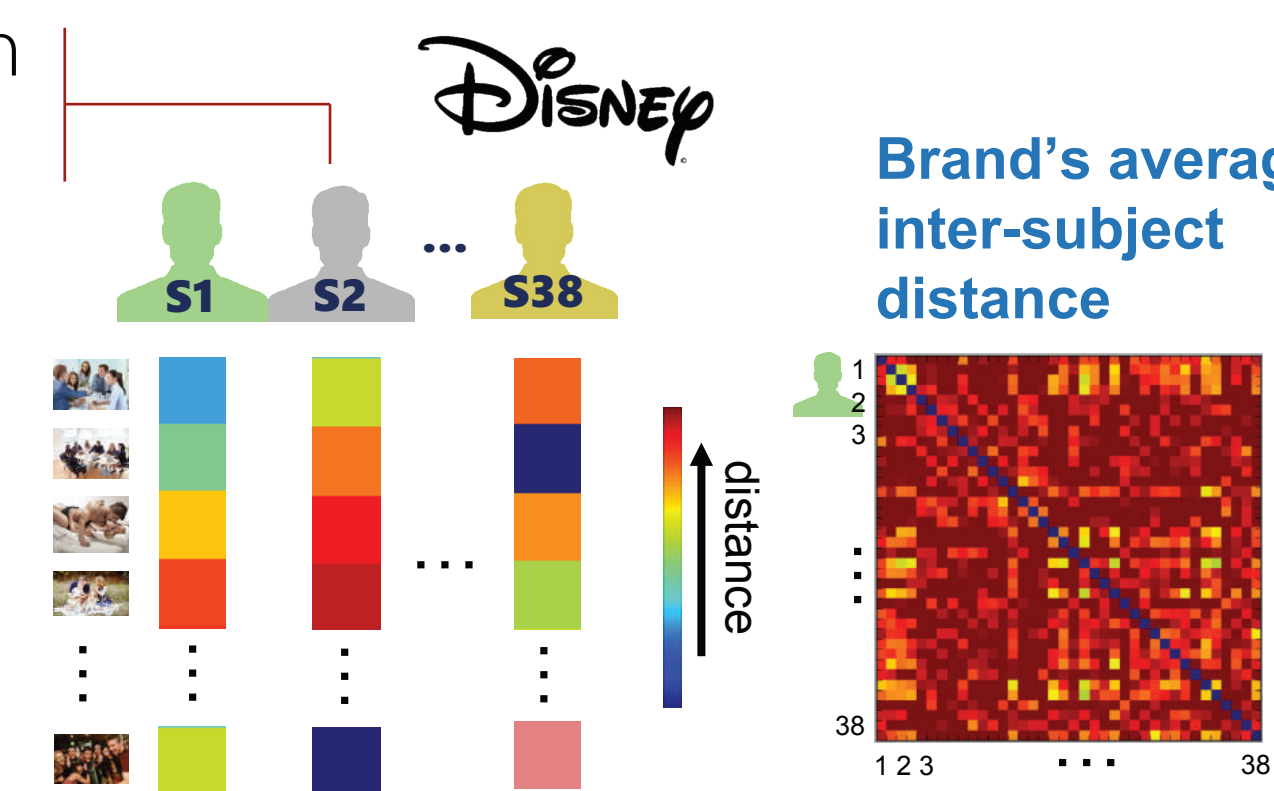
4 differentiate brand image strength

- Calculate inter-subject reliability of brand image in terms of their distances to social context pictures
- Compare with group-averaged self-report brand image strength

Do you think you have a clear or vague sense of this brand's image and/or message?



Self-report brand image strength



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Conclusion

We have developed a novel approach that can decode brand image content, similarity and strength based on individual's mental visualization of brand imagery.