

Neural Correlates of Judgments about Relationships of Self to Persons and Brands

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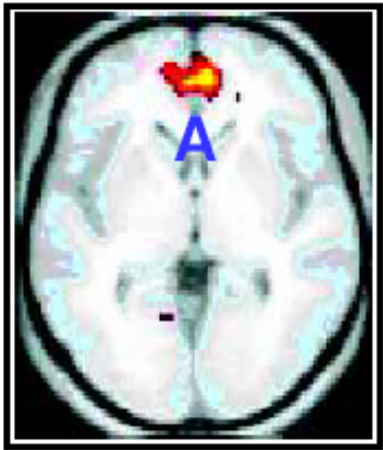
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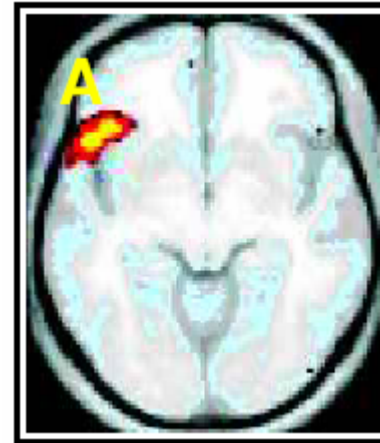
Orlando, Florida

Background Literature

- Person and object processing are subserved by distinct brain regions



medial prefrontal cortex
(MPFC)

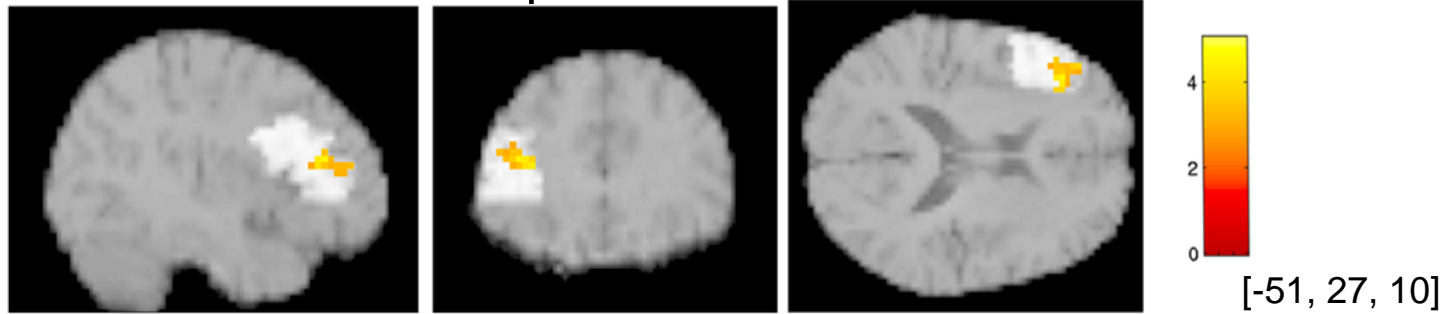


left inferior prefrontal cortex
(LIPC)

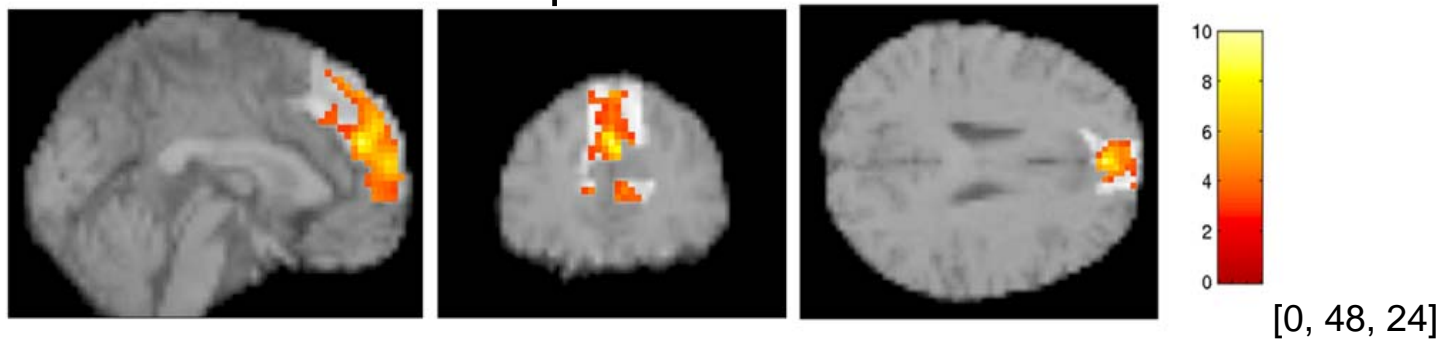
Background Literature

- ❑ A neural dissociation was obtained of cortical regions subserving personality judgments about brands and people.
- ❑ Comparisons of neural responses for personality judgments about Persons (Self and Nonself) and Brands (Self and Nonself) indicated significantly greater activation in the MPFC – regions associated with person-related processing – for persons.
- ❑ The results suggest that consumers do not process judgments about brands in the same manner as that of humans.

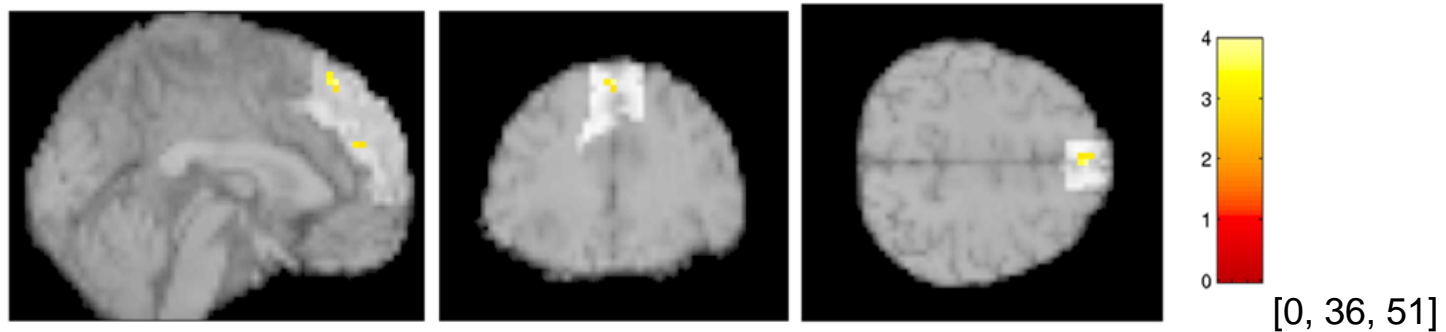
Brand vs. Person comparison in LIPC



Person vs. Brand comparison in MPFC



Interaction of Person/Brand x Self/Nonself in MPFC



Main Research Questions

- ❑ Are positive facets of close vs. distant relationships differentially rewarding with people compared to brands?
- ❑ To what extent do close brand relationships (compared to close relationships with people) generate emotional processing?

Main Hypotheses

H1: (Close Person – Distant Person)
> (Close Brand – Distant Brand)

in MPFC and regions associated with “theory of mind”
emotional attachment, and reward

- Anterior paracingulate cortex
- Right orbitofrontal cortex
- Posterior superior temporal sulcus
- Posterior cingulate/precuneus
- Thalamus
- Amygdala
- Ventral striatum (including caudate, putamen, nucleus accumbens)

(e.g., Frith & Frith, 2003; Gallagher & Frith, 2003; Gobbin et al. 2004; Aharon et al., 2001; Bartels & Zeki 2004)

Main Hypotheses

H2: (Close Brand – Distant Brand)
> (Close Person – Distant Person)

in LIPC and reward-related areas associated with brands and products

- Ventromedial prefrontal cortex (VMPFC)
- Dorsolateral prefrontal cortex (DPLFC)
- Orbitofrontal cortex
- Anterior cingulate
- Ventral striatum

(e.g., Erk et al., 2002; McClure et al. 2005)

Pretests

- ❑ Generated 192 words descriptive of some positive aspect of relationships -- e.g., supportive, natural, honesty, trusting, meaningful
- ❑ Identified a large number of well known public figures
- ❑ Identified a large number of potential close and distant brands

Behavioral Session

- ❑ List names of Close Persons and describe nature of the relationship
- ❑ Rate familiarity, attitudes, and the degree to which one identifies with each type of relationship partner:
 - Distant Brands
 - Close Brands
 - Distant Persons
 - Close Persons
- ❑ 6 Close/Distant Brands and Persons

Method

- Participants
 - N = 14 (7 females)
 - Age = 20.3 (19 – 22)
 - Right-handed
- Ratings
 - Relationship judgments (yes/no)
- Scanning
 - 3.0 T General Electric LX
 - TR = 2000 ms
 - TE = 40 ms
- Analysis
 - SPM2 Random Effects Model

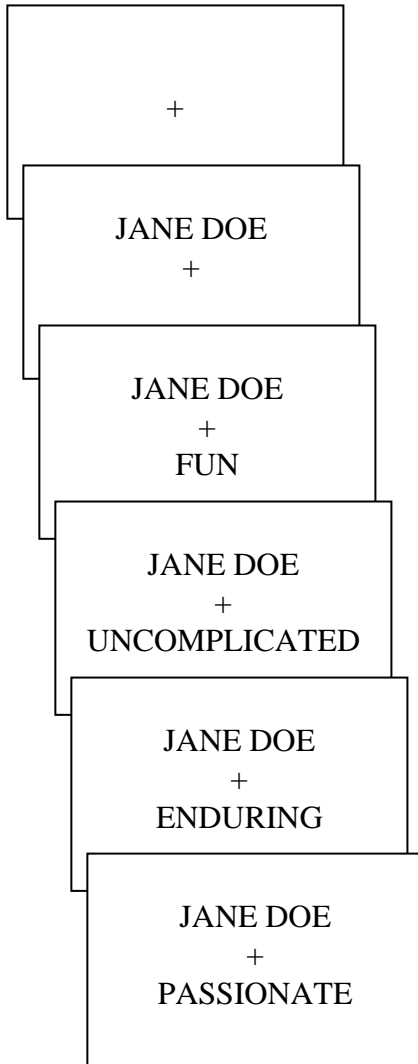
fMRI Session

□ 3 Functional runs

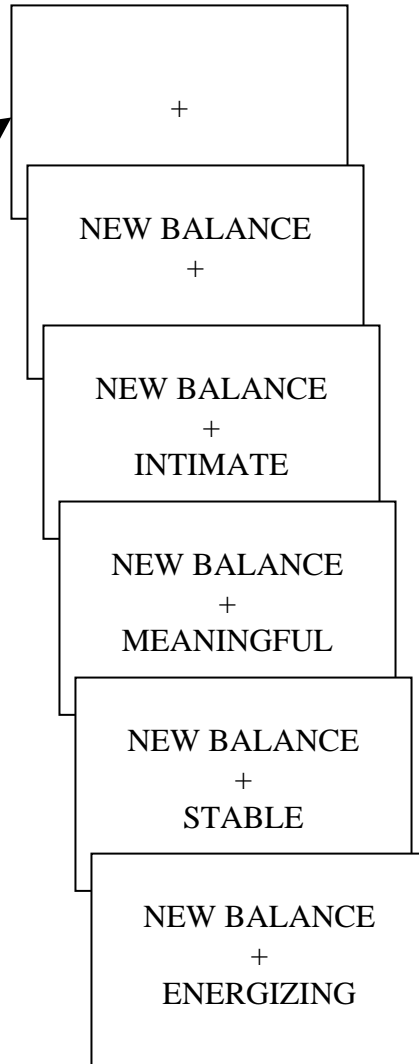
- Each functional run consisted of:
 - 8 randomized blocks: 4 different types of relationship partners (each type presented twice)
 - Within each block:
 - 4 consecutive trials included the same one brand (or one person) presented concurrently with 4 different relationship words
 - Each trial presented for 4500 *msec*
 - Replaced by a cross for the final 500 *msec*
 - Between each block:
 - Fixation crosses served as baseline
 - 20 sec

Procedure

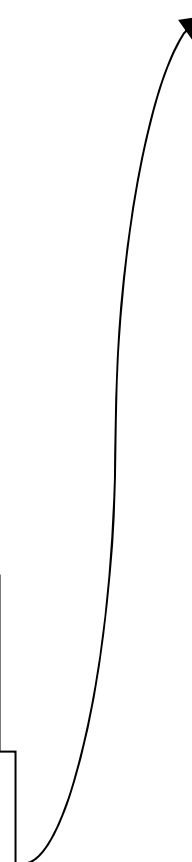
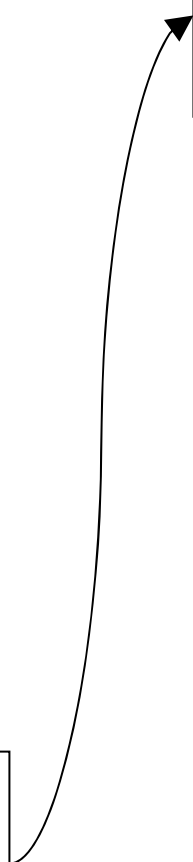
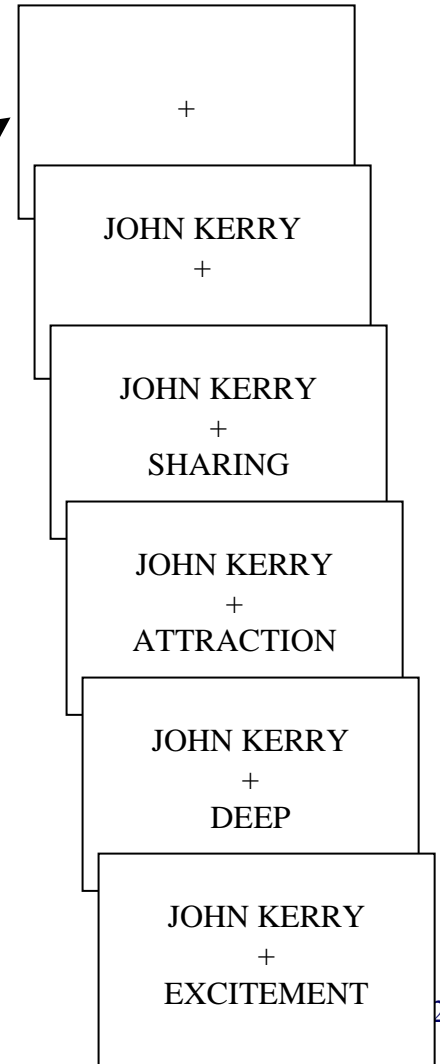
Block 1



Block 2



Block 3



Main fMRI Results

(Close – Distant Person) > (Close – Distant Brand)

Main fMRI Results

(Close – Distant Brand) > (Close – Distant Person)

Conclusions

- Are positive facets of close vs. distant relationships differentially rewarding with people compared to brands?
 - Yes
 - Judgments about relationships with brands, however, do not appear to be differentially rewarding relative to those about relationships with people

- To what extent do close brand relationships (compared to close relationships with people) generate emotional processing?
 - Not at all