

# REFLECTION ON SELF-TRANSCENDENCE VALUES INVOLVES THE PRESUMED BRAIN SITE FOR THE CORE SELF REPRESENTATION: AN FMRI STUDY

EMILIA LESZKOWICZ, GREGORY R. MAIO, DAVID E.J. LINDEN, NIKAS IHSEN

UNIVERSITY OF GDANSK, UNIVERSITY OF BATH, MAASTRICHT UNIVERSITY, DURHAM UNIVERSITY, CARDIFF UNIVERSITY

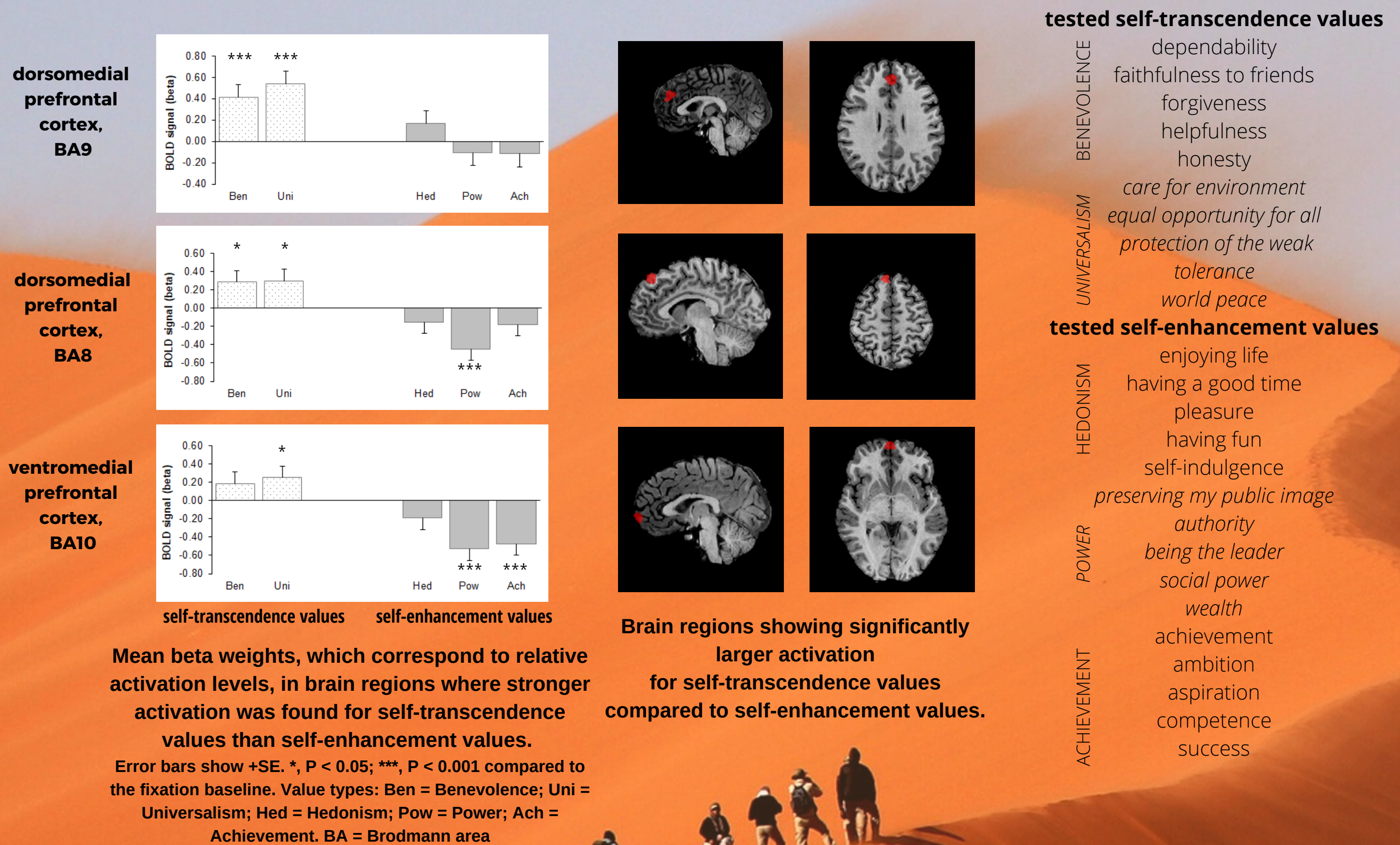
Human values, such as “world peace” or “helpfulness”, aim to preserve and enhance the welfare of others and of nature: They drive attitudes and behaviours which transcend selfish interests. Other values, such as “power” and “success”, focus on promotion of self-interest, and enhancement of the self. The aim of our study was to identify the neural signature of self-transcendence values, with particular attention to the putative role of the medial prefrontal cortex, which has been linked to a self-transcendent mindset, the ability to mentalize in the context of such mindset, and the representation of a “core self”.

## METHOD

We asked volunteers to rate different human values as their personal guiding principles in life, while brain activity was recorded with an fMRI scanner. BOLD signals during self-transcendence and self-enhancement values rating were compared (t-test between conditions, cluster defining threshold of 0.001; cluster-size thresholding: Monte Carlo simulations, BrainVoyager). The tested values belonged to the following types: benevolence and universalism (= self-transcendence); hedonism, power, and achievement (= self-enhancement).

## RESULTS

Processing of self-transcendence values was linked to higher activity in midline cortical regions of the brain, namely in the dorsomedial and ventromedial prefrontal cortices.



## CONCLUSIONS

The observed greater activity in brain regions associated with self-transcendent mindsets and mentalizing might suggest that prosocial tendencies expressed with self-transcendence values are linked to the appreciation of others' mental states. Thus, our data suggests that prosocial tendencies expressed by human values may arise from our capacity to understand the minds of others. What is also interesting, these values are associated with greater activity in a brain site where “a core self” is presumably represented.