Mapping Ambition Across the USA

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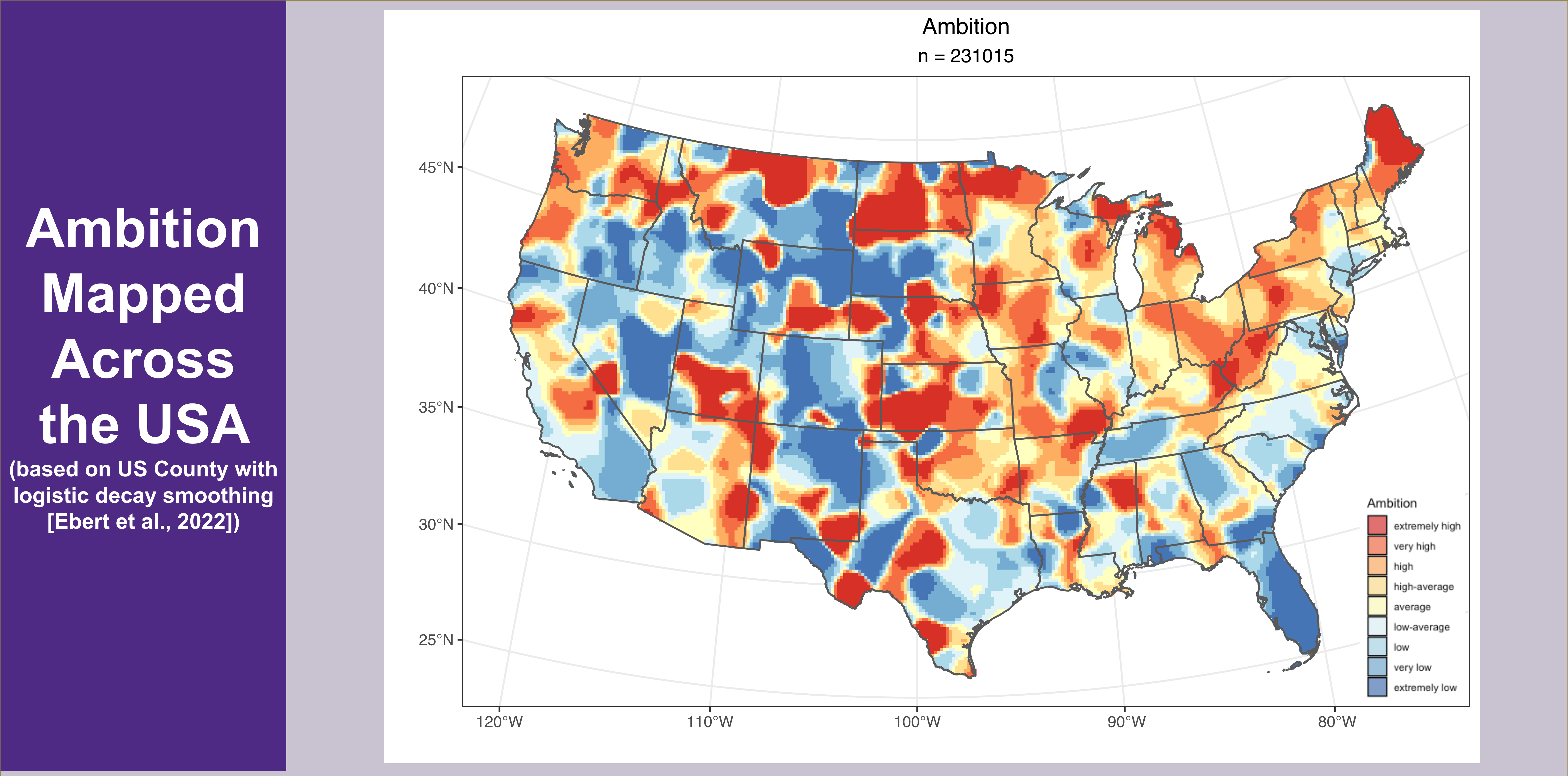
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Introduction

❖ Ambition is a broad personality construct with potential to inform studies of individual differences in upward mobility, career selection, and achievement orientation

❖ Ambition is an ambiguous personality construct not defined by the American Psychological Association (APA, 2022)

❖ Previous ambition measures relate positively to competitiveness, leadership, and confidence as well as extraversion and conscientiousness, negatively to neuroticism and agreeableness, and are typically unrelated to openness to experience (Jones et al. 2017)

❖ Robust and open-source ambition measures are needed

❖ The geographic aggregation of ambition across regions may also prove insightful, as understanding the spatial clustering of individual differences can elucidate environmental causes and consequences of individual differences (Ebert et al., 2022; Gotz et al., 2018; Rentfrow et al., 2009)

Method

❖ Participant data from the Synthetic Aperture Personality Assessment (SAPA) project (Condon, 2018), which collects personality data on over 6600 items were utilized to empirically construct an ambition scale

❖ SAPA uses a Massively Missing at Completely Random (MMCAR) sampling procedure, meaning participants are randomly administered only a small subset of the available SAPA project items (Revelle et al., 2017).

❖ SAPA project data from February 7, 2017, to November 18, 2019, were utilized for scale construction (N = 644,495) and geo-spatial mapping (N = 231,015)

❖ A target scale was created for Ambition through a key word search for relevant SAPA items.

❖ The items most correlated with the target scale were subsequently factor analyzed

❖ The emergent factor with the highest face validity for ambition was extracted and became the new target scale

❖ A second iteration of the aforementioned scale construction technique was performed on the new Ambition target

❖ This procedure resulted in a comprehensive 30-item measure for Ambition (ω_h = .69; α = .95; ω_t = .96) (Table 1), with three group factors that were arbitrarily labeled (e.g., Ambitious-like Diligence, Ambitious-like Energy & Motivation, and Ambitious-like Tenacity) (see Garner & Revelle, 2022)

❖ Multiple Correlation was used to generate a predicted Ambition score for each of the participants (N = 231,015)

❖ Before smoothing, each county with at least 2 participants was individually scored based on average ambition level of participants in the county

❖ To geographically map the ambition data across the USA, log-logistic decay smoothing (Ebert et al., 2022) was implemented to calculate spatial weights.

❖ Distances within approximately a 60-minute drive from a point in space were included

Ambition Mapped Across the USA

(based on US County with logistic decay smoothing [Ebert et al., 2022])

Ambition
n = 231015

Ambition legend: extremely high, very high, high, high-average, average, low-average, low, very low, extremely low

Omega Analysis of the Final Ambition Scale with 3 Factors, Showing Loadings on the General and Group Factors (e.g., Ambitious-like Diligence, Ambitious-like Energy & Motivation, and Ambitious-like Tenacity)

Conclusions and Future Directions

❖ Higher composite ambition appears to be most highly concentrated in the Midwest and Northeast Regions of the United States

❖ The geographical mapping of the ambition-like facets across counties has a similar pattern of aggregation to the composite ambition score

❖ Future analysis should determine how the aggregation of ambition and ambition-like facets across regions relate to various environmental features

❖ Specifically, it may be useful to assess the relation between the aggregation of ambition and ambition-like facets across counties and the geo-spatial distribution of various economic indices as well as environmental toxins

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