

# Computational Ego Level

Large data and new methods illuminate the construct of ego development

Rachel Pauletti<sup>1</sup>  
Daniel Lopez<sup>2</sup>  
Kevin Lanning<sup>2</sup>



<sup>1</sup>Lynn University, <sup>2</sup>Wilkes Honors College at Florida Atlantic University

## Introduction

Ego level has been called the "master trait," second only to intelligence in its importance for understanding individual differences in personality (Loevinger, 1966, p. 205). Ego level is typically assessed using one of several versions of the Washington University Sentence Completion Test (WUSCT; Hy & Loevinger, 1996). The WUSCT has been described as the most thoroughly validated projective measure of personality (Lilienfeld, Wood, & Garb, 2000). Because the construct of ego level is assessed by the analysis of samples of speech, and because the relationship between these speech samples and the construct has been extensively validated, ego level is an attractive candidate for applying computational or corpus linguistic methods. **In this project, we examine the relationship between language use and ego level.**

## The Sentence Completion Test

The Washington University Sentence Completion Test (WUSCT) is an 18- or 36-item measure which asks participants to respond to a series of stems (e.g., "Rules are", "A woman's place") by completing the sentence. Responses are coded using a scoring manual (Hy & Loevinger, 1996) and scores are rendered on a scale of one to nine, with each number representing a different stage of ego development. Individuals at the lower stages (e.g., Impulsive) are thought to be preoccupied with sex, manipulation, and self-serving behaviors. Individuals in the middle stages (Conformist) respect rules and feel a need to adhere to social norms. Individuals at the highest stages (Integrated) are thought to be reflective, autonomous, and realistic.

## Data Characteristics

Data include both exemplars (responses scanned from the 1996 *Manual*) and empirical responses. Empirical responses were collected over the course of various projects from 1989 to 2014. These projects used either the 18-item or 36-item version of the WUSCT. The analyses presented here include all data. The overall sample is large (167,325 words). A complete description of data cleaning and preparation of text can be found at <http://rpubs.com/kevinlanning/egolevel0915>.

## Language at Different Levels of Ego Development

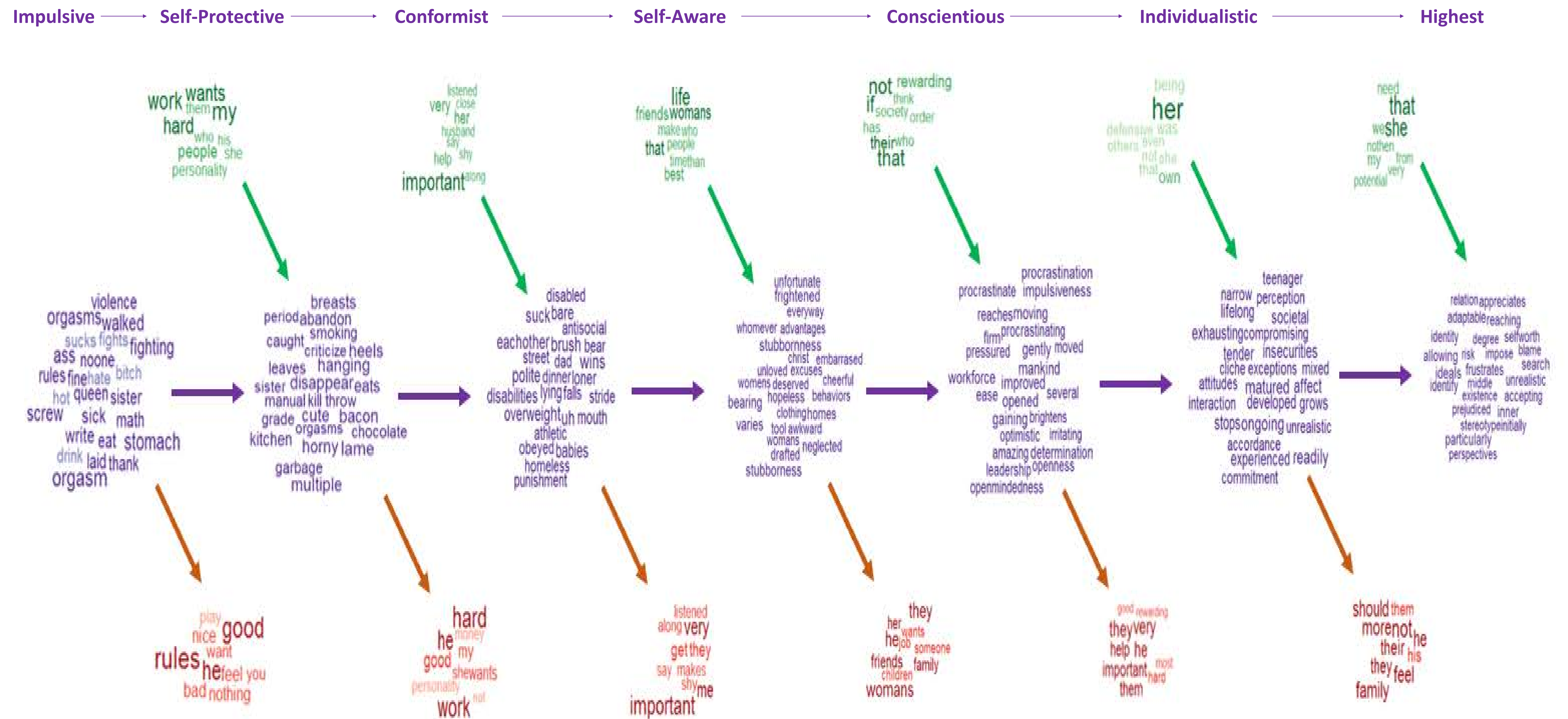


Figure 1. Words in purple are words most characteristic of each ego level (Impulsive through Highest). Words in green are words emergent at each ego level. Words in red are words less frequently used in the subsequent stage than the previous one.

## Features of Ego Levels

*In terms of language use, each stage appears qualitatively distinct from the previous one.*

- At the *Impulsive* stage, all but a few of the most common words deal with sex, aggression, and/or biological functions.
- At the *Self-protective* stage, the concern with biological functions is still present, but more muted, and is described increasingly in appetitive and sensory terms rather than in terms of consummation or drive-reduction. An emergent theme is that of abandonment or loss.
- At the *Conformist* stage, characteristic language is social, descriptive of persons or simple rules. People are seen in largely dichotomous terms, as adhering to social norms or violating them.
- At the *Self-Aware* stage, an emergent theme is language which suggests a questioning not just of the self but of the broader social system, and a questioning of a Just World.
- At the *Conscientious* stage, most of the characteristic terms appear concerned with achievement motivation. "Openness" also appears here, as well as related terms indicating optimism and a broadened scope of social concern.
- At the *Individualistic* stage, the most important group of terms is concerned with human development.
- At the highest stages, the most important themes are identity, perspective-taking, the resolution of goal-striving, the concern for human equality and, finally, probabilistic reasoning.

## Discussion

These analyses illustrate the complexity of language and ego level. But, more importantly, they demonstrate that language is a useful tool for characterizing development. **One potential application of this project would be to develop a "dictionary" of sorts that would characterize individuals at various stages of psychosocial development and apply that dictionary to modern texts, such as political speeches, autobiographies, and social media posts.** More work is needed before this "dictionary" can be developed, such as analyses of texts beyond the WUSCT and data from additional samples.