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The Five Factor Model as an organizational framework for drunken comportment

Rachel P. Winograd

University of Missouri - Columbia

Andrew K. Littlefield

University of Missouri - Columbia

Amelia E. Talley

University of Missouri - Columbia

Julia A. Martinez

University of Missouri - Columbia

Kenneth J. Sher

University of Missouri - Columbia

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Introduction

- Acute effects of alcohol include (but are not limited to) increased aggression, increased sociability, lowered inhibitions, and decreased stress.
- The Five Factor Model (FFM) of personality:
 - Intellect, Conscientiousness, Extraversion, Agreeableness, Neuroticism
 - Could provide a common framework in which to organize alcohol effects
- Findings have linked certain outcomes to specific factors of the FFM (e.g. aggression to low agreeableness, sociability to high extraversion, decreased stress to low neuroticism)

Present Aims

- Determine if the five factor structure can be applied to self-reported drunken comportment
- Examine mean-level changes in each factor (sober vs. drunk)

Method

Participants

- 527 non-abstaining students at a large Midwestern university.
- Participants were assessed using an online survey.
- Mean age: 18.8 ($SD=.81$); 52.3% female; 83.9% white.

Measures

- *Goldberg's International Personality Item Pool (IPIP)* - Participants rated themselves on 52 items from the IPIP on a 9-point Likert scale (ranging from "extremely inaccurate" to "extremely accurate") for their normal sober state and their "typical" drunken state (e.g. hostile, intelligent, self-disciplined)

Analytic Procedure

- Using factor analysis we reduced the number of items to those with the highest loadings on the five factors
 - Some variables (e.g. hostile) were reverse-scored (as was done for Goldberg's IPIP analyses)
- We obtained the mean levels (of the selected IPIP items) to determine an overall mean factor score (both for sober and drunk states)
- We performed five separate paired t-tests to assess significant mean-level change from reported sober to drunken states

Figure 1: Sober Factor Loadings:

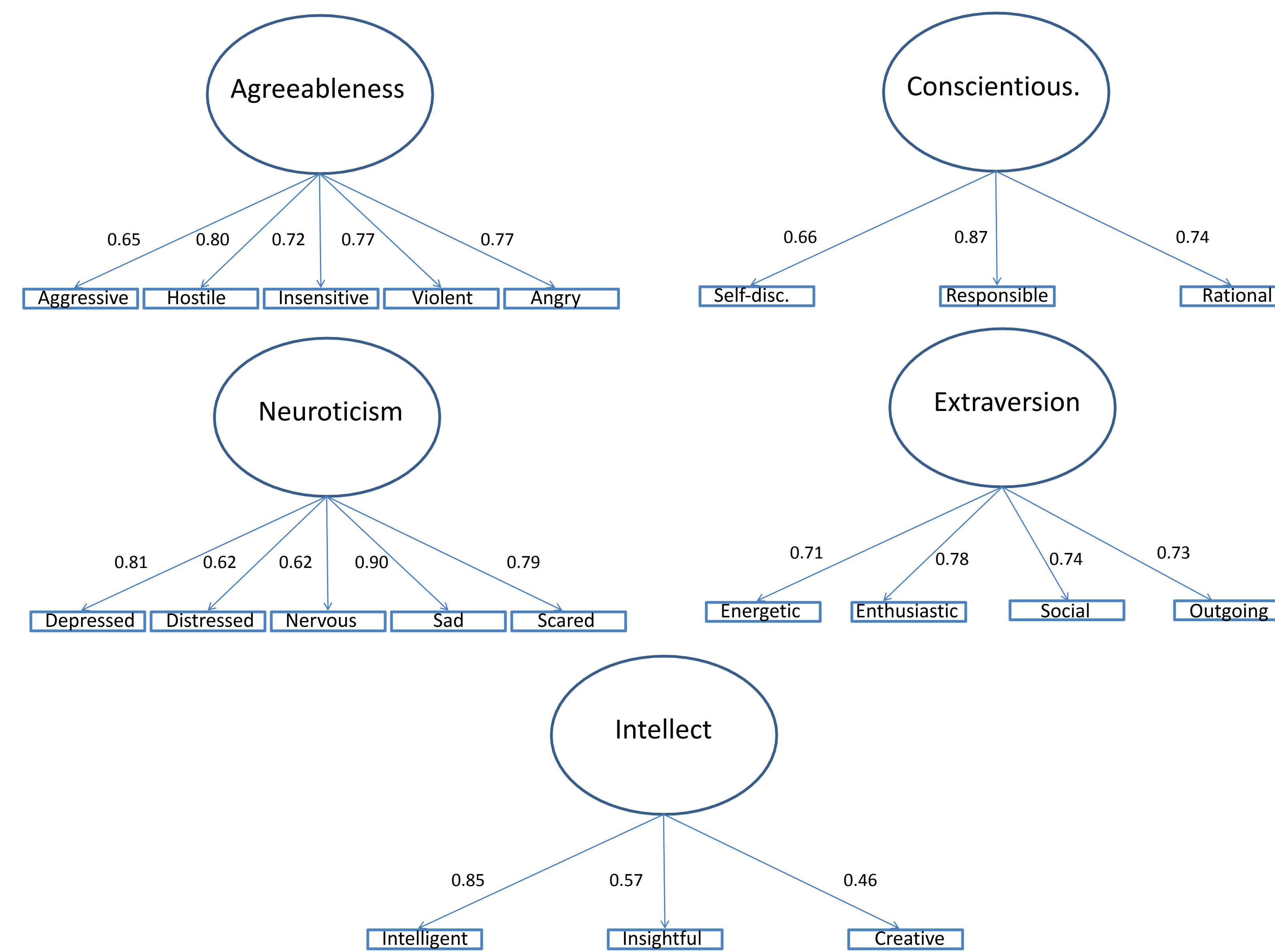


Figure 2: Drunk Factor Loadings:

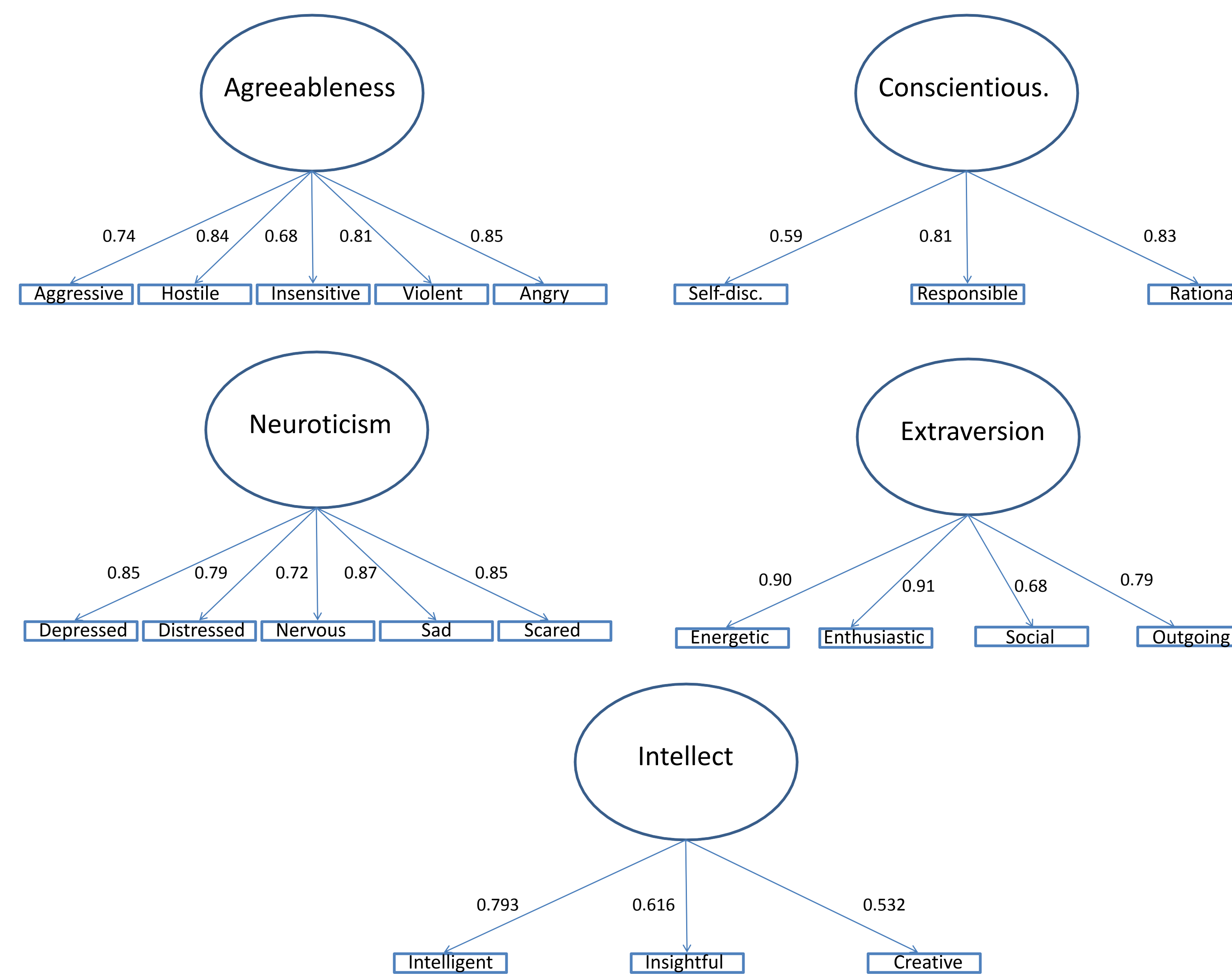


Table 1: Paired t-tests of Mean-level Changes in Factor Levels (Sober to Drunk):

| Factor | DF | t Value | Pr > t |
|-------------------|-----|---------|--------|
| Intellect | 511 | 13.9 | <.0001 |
| Conscientiousness | 527 | 20.84 | <.0001 |
| Extraversion | 501 | -6.6 | <.0001 |
| Agreeableness | 499 | 8.53 | <.0001 |
| Neuroticism | 522 | 2.76 | <.0061 |

Results

- Factor Analysis for sober items (see Figure 1)
 - CFI = .939, RMSEA = .051
- Factor Analysis for drunk items (see Figure 2)
 - CFI = .914, RMSEA = .065
- Paired t-tests were all significant ($p < .01$) when comparing mean-level changes (sober to drunk) (see Table 1)
 - Intellect, Conscientiousness, Agreeableness, & Neuroticism *decreased* when drunk
 - Extraversion displayed mean-level *increases*

Conclusions

- The five factor structure obtained using the sober items was replicated using the same organizational framework for drunken comportment that is used to assess sober comportment.
- Significant decreases in Conscientiousness and Agreeableness (due to drinking) provide a framework for assessing acute alcohol effects such as lowered inhibitions and increased aggression.
- *Future Directions:*
 - Further analyses will allow us to identify the "factor profiles" of those most likely to make certain harmful changes when under the influence of alcohol (e.g. Who is most likely to become the lowest on Agreeableness?).
 - A follow-up study using corroborating reports from friends or "drinking buddies" could provide more objective ratings of the personality items (than the current retrospective self-report method).
 - An alcohol administration study would allow us to observe actual personality changes as well as standardize dosage and BAC.