

Midterm Takehome Project  
Psychology 594  
Multivariate Analysis

The Hare Psychopathy Checklist-Revised (PCL-R) is a twenty-item rating of traits and behaviors intended for use in a range of forensic settings. Evaluators rate the lifetime presence of each item on a 3-point scale (0-absent; 1-possibly or partially present; 2-definitely present), on the basis of an interview with the participant and a review of case history information. The twenty items are listed below; a more detailed discussion of these appear on the attached pages from the PCL-R technical manual (Chapter 3):

- 1: Glibness/Superficial Charm
- 2: Grandiose Sense of Self Worth
- 3: Need for Stimulation/Proneness to Boredom
- 4: Pathological Lying
- 5: Conning/Manipulative
- 6: Lack of Remorse or Guilt
- 7: Shallow Affect
- 8: Callous/Lack of Empathy
- 9: Parasitic Lifestyle
- 10: Poor Behavioral Controls
- 11: Promiscuous Sexual Behavior
- 12: Early Behavioral Problems
- 13: Lack of Realistic Long-Term Goals
- 14: Impulsivity
- 15: Irresponsibility
- 16: Failure to Accept Responsibility for Own Actions
- 17: Many Short-Term Marital Relationships
- 18: Juvenile Delinquency
- 19: Revocation of Conditional Release
- 20: Criminal Versatility

Hare's current thinking about the structure of the PCL-R is that four factors underlie the item interrelationships. Excluding the two items of Promis-

cuous Sexual Behavior (#11) and Many Short-Term Marital Relationships (#17), the four factor structure is as follows:

F1: Interpersonal

1. Glibness/Superficial Charm
2. Grandiose Sense of Self Worth
4. Pathological Lying
5. Conning/Manipulative

F2: Affective

6. Lack of Remorse or Guilt
7. Shallow Affect
8. Callous/Lack of Empathy
16. Failure to Accept Responsibility for Own Actions

F3: Lifestyle

3. Need for Stimulation/Proneness to Boredom
9. Parasitic Lifestyle
13. Lack of Realistic Long-Term Goals
14. Impulsivity
15. Irresponsibility

F4: Antisocial

10. Poor Behavioral Controls
12. Early Behavioral Problems
18. Juvenile Delinquency
19. Revocation of Conditional Release
20. Criminal Versatility

The fourth Antisocial Factor is what is at issue, with the argument that criminal behavior should only be a downstream correlate and not a central component of Psychopathy. Skeem, Cook, and others argue that Psychopathy should be restricted, essentially, to the thirteen items that remain once those in F4: Antisocial are removed. An attached article from *The New York Times* describes the controversy: *Academic Battle Delays Publication by 3 Years* (Benedict Carey, June 11, 2010).

A variety of items are at our multivariate web site:

[cda.psych.uiuc.edu/multivariate\\_fall\\_2010](http://cda.psych.uiuc.edu/multivariate_fall_2010)

skeem\_original.pdf: *Is Criminal Behavior a Central Component for Psychopathy? Conceptual Directions for Resolving the Debate*

hare.pdf: *The Role of Antisociality in the Psychopathy Construct*

skeem\_reponse.pdf: *One Measure Does Not a Construct Make: Directions for Reinvigorating Psychopathy Research*

There are also various forms of the same correlation matrix among 1212 adult male offenders:

skeem\_hare\_data.dat

skeem\_hare\_data.syz

skeem\_hare\_data.lt.dat

These are actually polychoric correlations based on the three ordered categories (0, 1, and 2) that score each item.

Task: Find something intelligent to say about this debate (and say it). I expect use of the Factor Module in Systat (and its various options), plus the Factoran program in Matlab. Also, use whatever rotation procedures you need in developing the intelligent observations you wish to make.

I don't care to see just an "output dump" of everything you tried. You can mention what you did in summary, but only provide those analyses that produced the insightful things you are saying.

---

Some additional directions from Nate:

1) It might be nice to give a nudge in the right direction. For example, you might add some instruction such as: "You may want to try a factor analysis (with a few different rotations) of the full correlation matrix and one of the reduced matrix without the five Antisocial items, which produces a 'better' solution."

2) I think you should provide a bit more direction on what to hand-in. For example, let them know that the write-up should only be a few paragraphs

containing what they tried and their conclusions (so that students don't end up handing in full length reports with literature reviews).

3) I would prefer it if students did not hand in ANY output from MATLAB or SYSTAT. Nathan spent a lot of time last semester making sure that everyone knows how to take output from a statistical program and create an APA-style table for publication in a paper. So, I suggest that we don't let students hand-in ANY analysis output, and tell them to make a table of their loading matrices to include with the report.

(Nate, so ordered)