Where does this scale fit anyway? Methods for incorporating personality scales into the Big Five

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Introduction
• Construct proliferation is prevalent in personality and social psychology (Goldberg, 1999).
• Multiple constructors measuring the same or closely related phenomena (i.e., the ‘jangle fallacy’) can make it hard for researchers to understand the theoretical networks of their constructs of interest.
• Yet many of these constructs appear to measure personality traits, so should be able to be located within the Big Five (or HEXACO).
• Relatively straightforward methods for incorporating scales into the Big Five are absent.
• Hence, we propose:

An ongoing study to expedite the process of incorporating constructs into the Big Five

A method to try and determine if particular scales can be incorporated into the Big Five

Research Questions
• How accurately can psychologists predict correlations with the Big Five?
• How accurately can psychologists predict which domain will have the highest correlation with each scale?
• What characteristics of psychologists affect prediction accuracy?

Predicting Correlations with the Big Five

Participant Tasks
• Examine five items per scale for a random selection of highly cited scales.
• Report what correlations they expect an aggregate of these items to have with each of the Big Five.
• Indicate if they know or can guess what the scale might be.
• Report their:
  - Years of experience in research
  - Level of academic achievement (e.g., permanent academic position, doctoral student etc.)
  - Familiarity with the Big Five
  - Relative interest in personality psychology.

Analysis
• The research questions will be answered for scales for which we do have data.
• Cross-validation will be used to determine accuracy.
• Predictions will be made for scales for which we do not have data based on cross-validated results.

Would you like to participate?
• Our prediction study is on-going and we would greatly appreciate it if you would participate.

You can opt to receive a personalised report of your accuracy

The report will be sent to your email after results are analysed.
• For more information:
  - Contact Tim Bainbridge at tfb@student.unimelb.edu.au or
  - Ask Tim Bainbridge or Luke Smillie at the conference.
• To participate navigate to the link to the right or scan the QR code.

Notes
1. Given that the Big Five and HEXACO were developed from the lexicons of languages, if these lexicons include words that describe most personality traits (i.e., the lexical hypothesis), then the Big Five and HEXACO do describe the major dimensions of personality.
2. As measured by the Big Five Inventory (Soto & John, 2016).
3. An ESEM is an Exploratory Factor Analysis embedded in an SEM.
4. The model assumes that the scale structure has been adequately identified and is well-described as a single dimension with no correlations between residual errors. If these conditions are not met, then we recommend using the identified scale structure in the right side of the model if the scale-structure has been adequately identified elsewhere. If the scale structure has not been adequately identified elsewhere then one might first identify the structure and insert it into the right side of the model or one may simply use the structure as presented here and take appropriate action to deal with the likely presence of interpretational confounding (Burt, 1976), which occurs when parameters change dramatically depending on if and what external variables are included in the model.
5. Using the IPIP-NEO-120 to measure the facets (Maples et al., 2014) and the BFI-2 to measure the Big Five (Soto & John, 2014).

A method to incorporate constructs into the Big Five
• We propose:

A scale can be considered part of the Big Five if it shares much variance with the Big Five as a typical facet of the Big Five.

Too many scales, not enough time
• Gathering data for for individual scales is time-consuming, so can only slowly deal with construct proliferation.
• Instead, we propose that:

A scale’s likely location in the Big Five may be identifiable by knowledgeable ‘experts’

Such a process may reduce the time to provide evidence that a new scale is likely either a facet of or redundant with a Big Five domain.

We are currently running a study to see how accurately psychologists can predict correlations with the Big Five

Figure 1: The right side of the model gives the scale’s likely overlap with and location in the Big Five

Table 1: R² of facets of the IPP-NEO-120 predicted by the BFI-2 factors

<table>
<thead>
<tr>
<th>Big Five Item</th>
<th>Mean</th>
<th>Median</th>
<th>27th facet (of 30)</th>
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<tbody>
<tr>
<td>Study 1</td>
<td>63.5%</td>
<td>62.5%</td>
<td>39.5%</td>
</tr>
<tr>
<td>Study 2</td>
<td>59.5%</td>
<td>58.5%</td>
<td>50.5%</td>
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<td>Average</td>
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<td>61.4%</td>
<td>33.4%</td>
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References

www.tinyurl.com/predictingcorrelations