Introduction
Once Mendeleyev *developed* the Periodic Table of Elements, future work could be focused in areas where Mendeleyev predicted yet-to-be-found entries (Stwertka, 2002). A mountain of seemingly unconnected facts and relationships almost immediately made sense, and more importantly, properties of all elements known and unknown were made clear. Future work in chemistry was suddenly able to build on this stable knowledge base.

Background

The behavioral sciences have no such stable knowledge base, just hundreds and thousands of seemingly disconnected theories, each with a large set of so-called constructs. As defined by Cronbach and Meehl, a construct is “an intellectual device by means of which one *construes* events. It is a means of organizing experience into categories” (1955, p. 464). Once found, these constructs are then woven into theories – or nomological networks – “the interlocking system of laws which constitute a theory” (Cronbach and Meehl 1955, p. 290). Unfortunately, because different researchers use different words to identify similar or even identical constructs, finding related constructs and theories eventually becomes a labor-intensive process requiring specialized knowledge, when it is even possible. One may say that the behavioral sciences exist in a pre-Mendeleyev world.

**Figure 1. The construct space.**

Because each construct is unobservable, it is generally measured by questionnaire items that are carefully developed and tested. The construct is generally considered the cause of the item...
score, that is, it caused an item or set of items to take on a certain score. An example of the available texts are shown in Figure 2.

| Construct Name: Affective Commitment |
| Construct Definition: Commitment based on identifications with involvement in and emotional attachment to the organization. |
| Construct Measurement Items: |
| • A strong acceptance of an organization’s goals |
| • Willingness to exert substantial effort on behalf of the organization |
| • A strong desire to maintain membership in the organization (Crossley 2007). |

Figure 2. Example of construct and available text.

Problem statement

Presently, little or no information exists about the relationships among constructs not currently tied together by citations or correlations. These may be found through new studies by behavioral researchers, with each link brought into existence only by extensive work by one or several researchers, and hundreds of survey respondents. We, however, believe that these links may also (at least partially) be found through knowledge discovery algorithms.

We propose to collect a large dataset of constructs along with all their textual and correlational evidence to share with the knowledge discovery community in order to build algorithms which may accomplish two separate but important goals:

1. Tie together similar or identical scales in such a way that future researchers may immediately utilize their results as if they had been published in the same paper.
2. Predict the correlations among constructs, including those that have never been examined by behavioral researchers.

References

