

## Resolving Question Text Substitutions for Documentation Purposes Using the Blaise 4.8 API Component

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### **Abstract:**

The Health and Retirement Study (HRS) is a national longitudinal survey on the health and economics of aging and retirement. The HRS utilizes a CAI instrument for biennial interviews of one to two hours in length given to around twenty thousand participants. One of the prominent features of the HRS CAI instrument is that it makes uncommonly heavy use of text substitution in its question wording. In some HRS questions, the entire wording consists of text substitutions, and oftentimes multiple substitutions are used in succession and/or layered inside of others. While this situation provides for a more dynamic and streamlined interview experience, for the purposes of documentation it presents a steep challenge for anyone attempting to resolve and document the various permutations of question wording.

HRS has tried a number of schemes to resolve these text substitutions in the past. These range from manually tracing the logic of the substitutions to parsing the Blaise instrument source code in various ways. These past attempts have each proved deficient in some way. While no scheme is ever likely to be perfect, by making use of improvements in the Blaise API HRS has now written a program that can resolve these text substitutions accurately and efficiently. The key advance involves tracing variable assignments through parameters between blocks and procedures using the API.

To see how this works, it is first necessary to understand how HRS handles text substitutions in the code of its instrument, a subject that will be explored in some detail. The paper will then cover the kinds of functions needed to handle these traces in the abstract. It will also look at the specific API features used to do the tracing. It is hoped that this discussion will spur interest in resolving the remaining quirks.