DIG for WABA
User's Guide with Interpretations

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INTRODUCTION

The purpose of DIG (DETECT Interpretation Guide) for WABA (Within And Between Analysis) is to provide a user-friendly supplement to the DETECT MANUAL, other DETECT CD materials, and VARIENT BOOK. The focus is on guidelines, strategies, and key elements "to look for" in the various Pages and Tables of the DETECT output related to WABA results.

For each Page or Table in the DETECT/WABA output, the following is generally provided in DIG:

- Page or Table Title
- Key Purpose/Point of the Page or Table
- Main Elements of Information/Content in the Table
- Strategy for Viewing the Elements in the Table
- Examples and Interpretation of the Elements in the Table

For the majority of Pages and Tables here, the example output used is "Single (Dyad)-Level Analysis from Section 5.2" in the DETECT MANUAL, beginning on page 141. The program and data for this analysis are also contained on the DETECT CD, which when executed, will produce the same output. When a different program and output are used, readers will be referred to the relevant pages in the DETECT MANUAL for examples.

The intent here is not to be comprehensive about DETECT or WABA, as the DETECT MANUAL, VARIENT BOOK, and DETECT CD serve that purpose. Rather, the intent is to provide users with a "hands-on overview" and set of "interpretation guides" for the DETECT output of WABA.

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PROGRAMMING TABLES

The Programming Tables (see pages 141-142 of DETECT MANUAL) are the user interface with DETECT for running WABA. Specifically, these tables tell the user about the inputs that were specified, how the data will be analyzed, how the output will look, and so forth. Essentially, these tables replay back to users all of their programming inputs and/or the programming default options selected. There are six Programming Tables/Pages.

DETECT Page

The purpose of the DETECT Page (see page 141) is to display the title for a particular program/job that is being run. When programming in DETECT, a title line (of up to 80 characters) or a blank line is required. In writing a program, you provide the title or will be prompted to do so. If a user employs a title, it will appear below the DETECT banner; if not, a blank line will be below the banner. In this example, the title is, "Single (Dyad)-Level Analysis from Section 5.2."

General Information Line: Table I

The purpose of the General Information Line, Table I (see page 141), is to display the values input to DETECT. When programming in DETECT, a general information line with 15 entries is required. These entries, all provided by the user in their program or via prompts, will be shown on this output table.

Some comments about these 15 entries may help to avoid interpretation errors:

Entry 1 is where the data are coming from; with or separate from the program.

Entry 2 is where the output is being sent; generally to an output file that you specify.

Entry 3 controls the output tables – Do you want regular, abbreviated, or both?

Entry 4 also controls the output tables – Do you want all the tables, selected ones, or other options? If you choose "other options," you will need to also specify values for the "Detailed Information Line" (see below). If you choose "all" or "selected" tables, default values are triggered for the "Detailed Information Line."

Entry 5 is the position number of the first cell (or grouping) indicator (variable). Note: This is not the column(s) of the indicator, but its location in your data; i.e., first position, second position, third position, and so on. This entry will trigger single-level analysis.

Entry 6 is the position number of the second cell (or grouping) indicator (variable). Again, this is a slot or location in your data (e.g., first, second, or third position) and not the data column(s). This entry, along with entry 3, will trigger multiple (two)-level analysis.

Entry 7 is the number of cell (or grouping) indicators (variables) beyond two (from entries 5 and 6). Note: This is the number of additional levels, not columns or even positions in your data. This entry is needed if you are running multiple-level analysis for 3 or more levels, and you also need additional lines of code or answers to prompts in writing the program.

Entry 8 is for multiple-variable analysis – Do you want to run it, and if so, on within-cell, between-cell, or both sets of scores?

Entry 9 is for multiple-relationship analysis – Do you want to run it, and if so, what is the position number of the grouping (moderator) variable. Again, it's a slot or location and not column(s) in your data.

Entry 10 is the number of variables not to be analyzed. This entry will typically be the total number of all your grouping variables, cell indicators, higher-level moderators, etc.

Entry 11 is the number of variables to be analyzed. This entry will typically be the total number of all your measured variables; i.e., your "scores" rather than your grouping variables. The total number of variables for entries 10 and 11 must equal the total number of variables (grouping and measured) in your format statement.

Entry 12 allows you to label your variables or lets DETECT do it. If you do it, up to 8 characters per variable label are permitted. Label only the variables to be analyzed. If DETECT labels the variables, that are cleverly called Variable 1, Variable 2, and so on.

Entry 13 is for the data input and format statement – is the data free format, or is the format statement covering one or more lines?

Entry 14 provides options for handling missing data – No data are missing, or delete cases with missing data and show or don't show them. Additional program lines or prompts are needed for the later cases.

Entry 15 is for data transformations (e.g., summing scores from several variables, creating new variables from old ones). If you choose this option, additional program lines or prompts are needed.

Detailed Information Line: Table II

The purpose of the Detailed Information Line, Table II (see page 142), is to display the values that control the output for each table in DETECT. In this example, as is often typical, these are all default values, as Entry 4 on the General Information line did not request options. Nevertheless, several options are detailed in the DETECT MANUAL

Additional Information Line: Table III

The purpose of the Additional Information Line, Table III (see page 142), is to display the entries for optional programming lines in DETECT. In this example, as is often typical, variable labels, format statement, and the total number of cases analyzed are displayed. If other options were chosen, they would appear here.

Missing Data Table

The purpose of the Missing Data Table (see pages 157, 258, 262, 268, or 272 of DETECT MANUAL) is to display the frequencies of missing cases for each variable in the analysis. In any of the examples indicated, the following information is reported: number of cases read, retained, and deleted; and for each variable, its missing value and its frequency of occurrence as missing.

Report from Data Transformations

The purpose of the Report from Data Transformations (see pages 268-270, 272-274, or 292-297 of DEFECT MANUAL) is twofold: first, to list all variables that are input to and/or output from data transformations (e.g., recoding of variables, scaling of variables/items); and second, to list, as examples, the first and last cases input to and output from data transformations. In any of the examples indicated, all this information is provided so the user may check or verify that the data transformations have occurred. In the third example (see page 294), the codes used to transform the data are also provided for verification.

SINGLE-LEVEL ANALYSIS TABLES

The Single-Level Analysis Tables (see pages 143-155 of DETECT MANUAL) provide WABA results at a particular (i.e., single) level of analysis (e.g., results for within- and between-groups analysis or findings for within- and between-organizations analysis). There are eight Single-Level Analysis Tables, and users have options about whether to output all or only selected ones, and in either regular or abbreviated sizes. (Please refer to Programming Tables above.) In all these tables, the "level" number (e.g., 1, 2, 3) and "condition" number (e.g., 1, 2, 3) are shown in the header. These are determined by the various analyses you selected in programming.

Cell Frequencies (Table CF)

The purpose of the Cell Frequencies Table (CF) (see page 143) is to provide the number of cases in each cell (or level). The cell (or grouping) identification number is displayed as well as the number of cases in each cell. Here's a good opportunity to check things. For example, if you specified a dyad analysis, all cell sizes should be "2."

Averages and Dispersions Across All Cases (Table AT)

The purpose of the Averages and Dispersions Across All Cases Table (AT) (see page 143) is twofold: first, to provide the grand average (mean) for each variable; and second, to provide the average of the squared total, between-cell, and within-cell scores (i.e., average sums of squares) for each variable. The "average total score" here will be identical to the "grand mean" generated by other analysis packages. Also, if you calculate the square root of "average sums of squares – total," you'll get the standard deviation for the variable, another useful data check. "Average sums of squares-between" and "average sums of squares-within" will give you a good idea of the WABA results that follow. Why? Because these results are the between- and within-cell variances. So, in this example, the first and second variables vary primarily within cells (dyads here), while the third and fourth variables vary primarily between cells (dyads).

Averages and Dispersions by Cells (Table AC)

The purpose of the Averages and Dispersions by Cells Table (AC) (see pages 144-146) is the same as Table AT by variables for each cell. In other words, for each cell, the grand mean and total, between-cell, and within-cell variances for each variable are shown.

Averages and Dispersions by Variables (Table AV)

The purpose of the Averages and Dispersions by Variables Table (AV) (see pp. 147-149) is the same as Table AT by each cell for each variable. In other words, for each variable in each cell, the grand and total, between-cell, and within-cell variances are shown.

Within and Between Analysis I (Table WI)

The purpose of the Within and Between Analysis I Table (WI) (see page 150) is to focus on the variation of each variable separately at a particular level of analysis. Tests for variation to infer wholes, parts, equivocal, and inexplicable conditions for each variable are provided. The key indicators here – between and within eta correlations – are tested relative to one another with E and F ratios. If the between eta for a variable is larger than the within eta, a traditional F is computed; if the within eta for a variable is larger than the between eta, an inverse F (or 1/F) is computed. Strong effects here are when both the E and F ratios are significant. Variable 1 (NEGOTITN), for example, has a large within eta, significant E and F ratios, and indicates parts, or primarily within-dyads variation. Variable 3 (PERFORMC), for example, has a large between eta, significant E and F ratios, and indicates wholes, or primarily between-dyads variation. If either the E or F ratio is not significant, effects are weaker and should be interpreted cautiously. In these cases, the conservative interpretation is that the effects are equivocal, or variation is both within and between cells. If both the E and F are not significant, effects are equivocal (or may be null).

<u>Within and Between Analysis II Differences Tests (Table WIID)</u>

The purpose of the <u>Within and Between Analysis II Differences Test Table (WIID)</u> (see page 150) is to focus on the covariation among all variables, two at a time, at a particular level of analysis. Tests of differences between analogous within- and between-cell correlations to infer wholes, parts, equivocal, and inexplicable conditions for each relationship are provided. The key indicators here – between and within cell correlations – are tested relative to one another with A and Z tests. While the signs of the correlations (+ or -) indicate <u>direction</u> (as in traditional correlations), the signs of the A and Z tests, + or -, indicate parts (within-cell effects) or wholes (between-cell effects), respectively. For example, for the first relationship, NEGOTITN and SATISFTN, the between-cell correlation is negative and relatively small in magnitude, the within-cell correlation is positive and relatively large in magnitude; and the A and Z values are negative and significant, indicating parts or within-cell effects. Strong effects here are when both the A and Z values are significant. Weak effects are when the A or Z values are not significant and should be interpreted cautiously. The conservative interpretation is that effects are equivocal or null. When both the A and Z values are not significant, effects are clearly equivocal or null.

The determination of equivocal or null will be based in part on the results in the next table (see below). Here's something to keep in mind: Significant A and Z results do not guarantee a clear inference to parts or wholes. Why? The magnitudes of the between- and within-cell correlations also matter. So, it's possible to have significant and positive A and Z results, suggesting an inference of wholes but the magnitude of the between-cell correlation may not be sufficient to justify this interpretation OR the magnitude of the within-cell correlation may be too large to justify this interpretation. As a guide, consider the following:

- To strongly infer wholes, (1) A and Z values must both be positive and significant, (2) between-cell correlation must be significant, and (3) within-cell correlation must be nonsignificant.
- To strongly infer parts, (1) A and Z values must both be negative and significant, (2) within-cell correlation must be significant, and (3) between-cell correlation must be nonsignificant.
- In all other cases, the effects are conservatively interpreted as equivocal or null.

Within and Between Analysis II Magnitude Tests (Table WIIM)

The purpose of the Within and Between Analysis II Magnitude Tests Table (WIIM) (see page 151) is to test the significance of the magnitude of each within- and between-cell correlation separately. So, this table in conjunction with Table WIID permits the overall WABA II inference to be drawn. In Table WIIM, each within- and between-cell correlation is tested with R and t tests. If both the R and t values for a correlation are significant, then that correlation can be interpreted as "different from zero" and as having "sufficient magnitude to be meaningful." If either the R or t value for a correlation is not significant, the conservative interpretation is that the correlation is nonsignificant. If both the R and t values are not significant, the correlation is clearly null.

So, combining the results from the two WABA II tables (WIID and WIIM) can help in drawing overall WABA II inferences. Consider the following:

- To strongly infer wholes in WABA II: A and Z values from Table WIID are positive and significant; and R and t values from Table WIIM for the between-cell correlation are significant; and R and t values from Table WIIM for the within-cell correlation are not significant.

- To strongly infer parts in WABA II: A and Z values (Table WIID) are negative and significant; and R and t values (Table WIIM) for the within-cell correlation are significant; and R and t values (Table WIIM) for the between-cell correlation are not significant.
- In all other cases, the effects are conservatively interpreted as equivocal or null.

Total Correlation and Component Analysis (Table WTC)

The purpose of the Total Correlation and Component Analysis Table (WTC) (see page 151) is twofold: first, to test the significance of the magnitude of the total (raw score) correlation; and second, to present and draw inferences about the within- and between-cell components that add to the total correlation for each relationship. To accomplish this, the WABA I and WABA II results are combined via the WABA components (see VARIENT BOOK for details). The total correlation, traditional raw-score correlation, is tested with R and t tests. Again, if both the R and t values are significant, this correlation both "differs from zero" and is of "sufficient magnitude to be meaningful." All other combinations of R and t results (i.e., R or t is not significant, or both R and t are not significant) are conservatively interpreted as nonsignificant.

However, total correlations are not interpreted per se in WABA because of their ambiguity. The between and within components, resulting from the WABA I and WABA II correlations that comprise the total correlation, can be interpreted. In particular, for each relationship, the between and within components can be used to draw an overall inference, as shown in Table WTC. Specifically, consider the following:

- For a wholes induction for a relationship in the table, (1) the induction in WABA I (Table WI) for both variables involved must be wholes, and (2) the induction in WABA II (Tables WIID and WIIM) for the relationship must be wholes.
- For a parts induction for a relationship in the table, (1) the induction in WABA I (Table WI) for both variables involved must be parts, and (2) the induction in WABA II (Tables WIID and WIIM) for the relationship must be parts.
- In all other cases, the effects are conservatively interpreted as equivocal or null.

As a heuristic device, users may convert between- and within-cell components to their angular equivalents and compute a "Special A-test" of their difference. While this does not qualify as a "true test" because of the assumptions involved, and so is not included in Table WTC, it does provide a "ballpark" indicator of the relative difference between the within and between components. In this sense, it may help with interpretation in cases when an induction is not shown in the last column of the table or in cases where an induction is shown but the components seem similar in magnitude.

The following interpretation guide is useful:

Special A test = $\theta_{WC} - \theta_{BC}$, where θ_{WC} and θ_{BC} are the angles in radians associated with the within-cell and between-cell components, respectively.

Then, the results are interpreted as:

- Wholes – 15 Special A > OR = .26180 Radians
- Wholes – 30 Special A > OR = .52360 Radians
- Parts – 15 Special A < OR = -.26180 Radians
- Parts – 30 Special A < OR = -.52360 Radians
- All other Special A values are interpreted as equivocal or null.

Here is the calculation for the "Special A-test" for the first relationship (NEGOTITN and SATISFTN) in the table:

- Between Component = -.01562 → Angle in radians = 1.58642
- Within Component = .77722 → Angle in radians = .68056
- Within Component – Between Component = "Special A" = -.90586 Radians

So, in the example here, the within-cell component is significantly different from the between-cell component (-.90586 Radians, Parts 30) to support a parts inference.

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MULTIPLE-VARIABLE ANALYSIS TABLES

The Multiple-Variable Analysis Tables (see pages 160-162 of DETECT MANUAL) provide WABA results at a particular level of analysis for alternative networks of variables, considered three at a time. There are two Multiple-Variable Analysis Tables, and users may output them in regular or abbreviated sizes. (See Programming Tables for details.)

Multiple-Variable Analysis Within-Cell Correlations (Table MVAW)

The purpose of the Multiple-Variable Analysis Within-Cell Correlations Table (MVAW) (see pages 160-161) is to provide tests among alternative networks of variables based on within-cell scores. A and t' tests are computed among the within-cell scores for variables, in sets of three, to determine whether the variables are related, generally related, generally unrelated, or unrelated. To infer that variables are related, all three variables must be related, so all the A and t' values must be nonsignificant (indicating there are no differences among the variables). To infer that variables are unrelated, all three variables must be unrelated, so all the A and t' values must be significant (indicating there are differences among the variables). To infer that variables are generally related, X and Y as well as X and Z must be related, but Y and Z are not related. To infer that variables are generally unrelated, X and Y as well as X and Z must be unrelated, but Y and Z are related. To draw these conclusions for the generally related and generally unrelated cases, the pattern of the A and t' test results should be as specified in the VARIENT BOOK or DETECT MANUAL. In general, for a difference between variables to be considered significant, and so the variables would be unrelated, both the A and t' values should be significant. For the difference between variables to be considered nonsignificant, and so the variables would be related, both the A and t' values should be nonsignificant. In all other cases, the results should be interpreted with caution.

Multiple-Variable Analysis Between-Cell Correlations (Table MVAB)

The purpose of the Multiple-Variable Analysis Between-Cell Correlations Table (MVAB) (see pages 161-162) is to provide tests among alternative networks of variables based on between-cell scores. A and t' tests are computed among the between-cell scores for variables, in sets of three, to determine whether the variables are related, generally related, generally unrelated, or unrelated. The tests, inferences, and interpretations are the same as for Table MVAW except based on between-cell scores as input. The results from Table MVAW and Table MVAB can then be compared to determine the level (wholes, parts) where the effects hold.

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SUPPLEMENTARY TABLES

The Supplementary Tables (see pages 152-155 of DETECT MANUAL) provide, in an integrative format, the various correlations and deviation scores used in WABA. There are five Supplementary Tables, and the user has the option of whether to output them. (See Programming Tables above for details.)

Correlation Matrix Variable Numbering System (Table C.1)

The purpose of the Correlation Matrix Variable Numbering System Table (C.1) (see page 152) is to specify the location of the total, within-cell, and between-cell correlations in the output matrix. Note the total scores begin with single digits; the within-cell scores begin with the number 3 and have 5 digits; the between-cell scores begin with the number 6 and have 5 digits.

Correlation Matrix Correspondence of Variable Labels and Numbers (Table C.2)

The purpose of the Correlation Matrix Correspondence of Variable Labels and Numbers Table (C.2) (see page 152) is to specify the link between variable labels and the variable numbering system in the output matrix. This aligns the variable numbers in the correlation matrix with the value labels you specified for the total, within-cell, and between-cell scores.

Correlation Matrix

The purpose of the Correlation Matrix table (see page 152) is to provide the correlations among all variables based on total, within-cell, and between-cell scores. This matrix provides the same correlations from previous tables, as well as additional ones, in a traditional matrix format. In particular, from Table WI, within and between eta correlations are shown. The within etas are the single-digit variables correlated with the 5-digit variables that start with "3" and end with the same number as the single-digit variable. The between etas are the single-digit variables correlated with the 5-digit variables that start with "6" and end with the same number as the single-digit variable. From Table WIID, within- and between-cell correlations are shown. The within-cell correlations are those among the 5-digit variables that start with "3." The between-cell correlations are those among the 5-digit variables that start with "6." From Table WTC, the traditional raw score or total correlations are shown. These are the correlations among the single-digit variables.

The other correlations have not appeared previously in DETECT tables. Why? Simply because they provide no unique or new information. First, some of these are zero, because any correlation between a within-cell variable (e.g., 30001) and a between-cell variable (e.g., 60001 or 60004) must be zero. Second, some are "composite correlations" (see VARIENT BOOK) that are correlations of total scores on one variable (e.g., 1) with within- or between-cell scores (e.g., 30002 and 60002) from a different variable. These composites, while perhaps interesting, provide no new information for WABA as they are readily calculated from the correlation in Table WI and Table WIID.

<u>Position of Deviation Scores (Table D)</u>

The purpose of the <u>Position of Deviation Scores Table (D)</u> (see pages 152-153) is twofold: first, to provide the position location of the deviation scores (total, within-cell, and between-cell) as output to a file; and second, to provide the output format statement for the deviation scores. As shown in the example, identification (e.g., grouping) variables are output first, then total (raw) deviation scores, and finally within- and between-cell deviation scores. The format statement is useful for reading this output into another DETECT or other program or analysis package.

Deviation Scores

The purpose of the Deviation Scores table (see pages 153-155) is to provide a listing of all the deviation (total, within-cell, and between-cell) scores. These scores will appear as indicated by the format statement above.

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MULTIPLE-LEVEL ANALYSIS TABLES

The Multiple-Level Analysis Tables (see pages 162-168 or pages 169-178 of DETECT MANUAL) provide WABA results at several levels of analysis (e.g., group, organization, industry). Many previously described tables are relevant here.

Overall

There are no new unique tables for Multiple-Level Analysis. Essentially, Single-Level Analysis (Tables WI, WIID, WIIM, WTC) and Multiple-Variable Analysis Tables (MVAW, MVAB) described above are output for each of several levels of analysis of interest. Regular size tables clearly indicate the level of analysis to which the table applies. A two-level analysis example is provided on pages 162-168; a three-level analysis example is provided on pages 169-178. Note: When two or more levels are analyzed simultaneously in one DETECT program, raw (total) scores are input and partitioned into within- and between-cell scores for the first level; for the second and subsequent levels, however, between-cell scores from the previous (lower) level, not the original raw scores, are input and partitioned into within- and between-cell scores for the second and subsequent levels.

MULTIPLE-RELATIONSHIP ANALYSIS TABLES

The Multiple-Relationship Analysis Tables (see pages 179-186 of DETECT MANUAL) provide WABA results (single-level analysis, multiple-variable analysis, and multiple-level analysis) for any number of conditions (that are a higher level of analysis). For example, a user may wish to examine the relationship between two variables at the group level (single-level analysis) in two different organizations (two-condition multiple-relationship analysis). There are several previously described and one new table relevant here.

Overall

Essentially, in Multiple-Relationship Analysis, in a first phase, Single-Level Analysis (Tables WI, WIID, WIIM, WTC), Multiple-Variable Analysis (Tables MVAW, MVAB), and Multiple-Level Analysis (for two or more levels) tables are output for any number of conditions (see pages 179-185). Then a new table (below) is introduced in a second phase.

Multiple-Relationship Analysis (Table MRA)

The purpose of the Multiple-Relationship Analysis Table (MRA) (see page 186 of DETECT MANUAL) is to provide tests of the differences between the within- and between-cell correlations among two or more conditions. Recall, in Table WIID, the difference between within- and between-cell correlations is tested with A and Z tests. This table and these tests are first computed within or under each condition specified in MRA (e.g., in organization 1 and organization 2). In Table MRA, the A and Z tests of the differences among the within- and between-cell correlations across or between the conditions specified in MRA are shown. Specifically, the between-cell correlation from condition 1 is tested relative to (1) the between-cell correlation from condition 2 and (2) the within-cell correlation from condition 2. Likewise, the within-cell correlation from condition 1 is tested relative to (1) the within-cell correlation from condition 2 and (2) the between-cell correlation from condition 2. This process is conducted testing differences between all conditions taken two at a time. The purpose of this testing procedure is to determine whether the effect in one condition (e.g., wholes) is the same as or different from the effect in another condition. In the example here, the (dyad-level) parts inference for the NEGOTITN-SATISFTN relationship in condition 1 is similar to the (dyad-level) parts inference for this relationship in condition 2. If the effects are the same (or similar) in two conditions, they are called multiplexed. If the effects hold in one condition but not in another condition, they are called contingent. The specific patterns of results to draw these conclusions are detailed in the VARIENT BOOK and the DETECT MANUAL. Note two things: First, the A and Z tests in MRA are based on the magnitude of the correlations only, signs are not considered (so directionality is not involved). Second, to draw the strongest conclusion about a difference between correlations being significant, both the A and Z tests must be significant; to draw the strongest conclusion about a difference between correlations being nonsignificant, both A and Z tests should be nonsignificant . In all other cases, the results should be interpreted cautiously.

MULTIPLE REGRESSION

<u>Overall</u>

DETECT/ MULTIPLE REGRESSION (DETECT/MR) outputs all of the tables described thus far. But instead of displaying the results for a bivariate correlation, the output presents the results for a multiple regression equation. For example, the total correlation in Table WTC is a multiple correlation. Likewise, the within and between components add to the total multiple correlation. The same is holds for the between and within correlations in Tables WIIM and WIID. Finally, in Table WI, the variance is assessed using the independent variable. DETECT/MR automatically calculates all of the values for the regression and adjusts for degrees of freedom. Several published articles listed in the DETECT for Windows Manual provide more detail and examples of this approach.

In addition, DETECT/MR will analyze the multiple correlation at multiple levels of analysis in the same way as it does for a bivariate correlation, but with adjustments for degrees of freedom. Lastly, when Multiple Relationship analysis is called, DETECT/MR will automatically calculate multiple regressions in each of several conditions and perform all analyses in each condition.

The main requirement for DETECT/MR is that data are organized for each case as follows: Variables not to be analyzed, followed by the independent variables, followed by one dependent variable.

CONCLUSION

Dear DETECT and WABA Users:

If you have made it this far, you should have a good understanding of the Tables in DETECT for WABA! For a complete explanation of WABA and DETECT, you are strongly encouraged to consult the VARIENT BOOK, DETECT MANUAL, and DETECT CD, or one of the local "WABA Wiseguys" in your area. Our hope is that DIG for WABA has made the process of multi-level analysis more user friendly. So start to "DIG" WABA – We do!

Best Wishes and Happy Computing,

"The WABA Wiseguys"

Francis J. Yammarino • Fred Dansereau
Chester A. Schriesheim • Stephanie Castro
Claudia Cogliser • Leslie De Church
Xiaohua (Tracy) Zhou