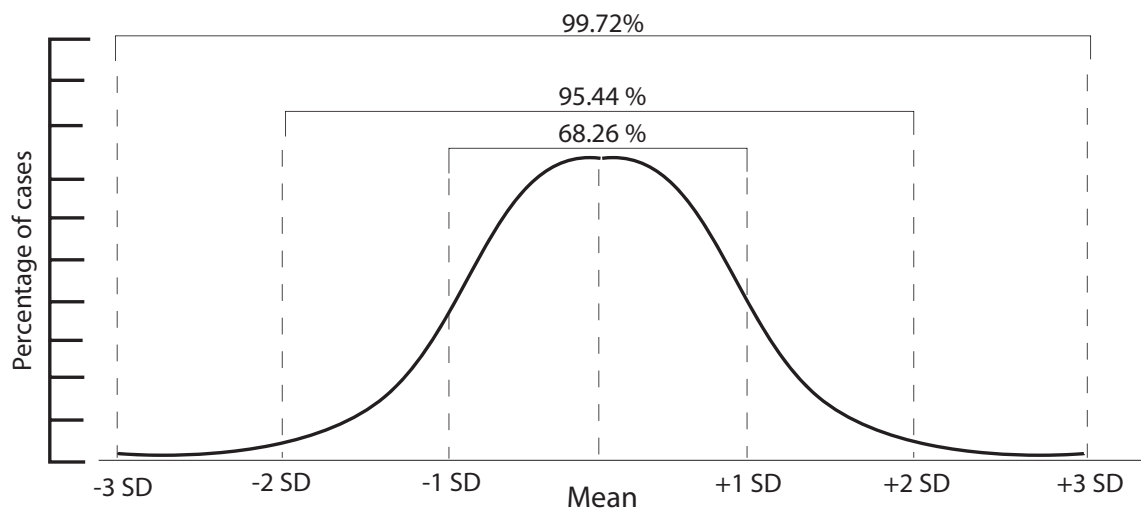


# Technical Manual

## INSIGHT Inventory®



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## RESEARCH AUTHORS

Patrick Handley, Ph.D., created and authored the *INSIGHT Inventory*®. Dr. Handley is a licensed psychologist and is professionally active as a management consultant to business and industry. In his organizational work, he specializes in team building, conflict management, and the testing and screening of employees. Dr. Handley has held faculty appointments at Virginia Polytechnic Institute and the University of Missouri and taught graduate level courses in psychological testing, career development, and organizational behavior. In business settings he has worked as a corporate trainer, career development manager, and productivity improvement specialist. His primary focus now is the research and development of testing inventories which help improve communications among people.

Thomas Krieshok, Ph.D., is a licensed psychologist and Professor in the Department of Counseling Psychology at the University of Kansas. Dr. Krieshok has chaired the department, teaches at both the graduate and undergraduate levels, maintains an active research program in the field of counseling psychology and serves on the dissertation committees of numerous doctoral students. Dr. Krieshok directed the statistical analyses and many of the independent studies cited in this manual. His supervision was sought to insure that the most up-to-date research methods would be used and to maintain strict adherence to APA (American Psychological Association) guidelines for testing and research.

# I. DESCRIPTION

The *Insight Inventory*® is a self-report personality inventory and interpretation booklet. Two versions are currently available, one for adults and one for students age 16-21. Both are self-scorable, self-interpreting and are published with both comprehensive and condensed interpretive booklets. The *Insight Inventory* provides users with a quick and relatively easy way of learning about their personalities. The information obtained helps individuals improve their communication with others, thereby enhancing teamwork and interpersonal relationships with co-workers, family, and friends.

The *INSIGHT Inventory* contains two identical lists of thirty-two descriptive adjectives yielding two style profiles. One of the profiles describes the person at work or school and the other profile describes the person at home in his/her personal world.

INSIGHT is unique among inventories in that it measures and interprets the style shift people make from one environment to another. This helps people 1) learn what shifts, if any, they make from one environment to another, 2) assess how well the style they are using in a particular environment is working for them, and 3) learn how to flex their style when doing so would improve relationships and/or reduce stress.

The development of environment-specific profiles, Work/Personal or School/Personal, results in an additional very positive outcome. Having two profiles reduce the defensiveness that some people feel upon seeing and sharing their personality profile results. It removes the disclaimer people often use, "I'm not like this all the time" and supports the possibility that they indeed may not be. For this reason, people using the *INSIGHT Inventory* more readily accept and invest effort in understanding their profiles.

Since the *INSIGHT Inventory* was designed to help people understand others better and appreciate other personality strengths, no negative phrases or terms were used in writing the descriptions of the different style extremes. Also no codes, colors, types, or quotients are used. The intent is to build an open, immediately understandable language that can even be understood by people who haven't taken the *INSIGHT Inventory*. Likewise, no labels such as "entrepreneur," "manager," "counselor," "salesperson," etc., were used in referring to the profile configurations. Such labels can create a problem in team building. Sometimes only the label, which may or may not be appropriate, is remembered and not the personality strengths. Every possible attempt was made during the development of the *INSIGHT* to emphasize that each profile shape has special strengths and desirable characteristics.

The *INSIGHT Inventory* is essentially a self-report program until the online feedback version, e-*INSIGHT* Observer assessment, is used. This report adds an extra dimension, "how others see you." The e-*INSIGHT* Observer provides the same basic assessment with the same 32 descriptive adjectives and is completed by individuals invited by the user. In work environments, it is recommended that at least five others complete the Observer assessment. The customized report compares the user's self rating to the observer's self rating and provides suggestions.

The *INSIGHT Inventory* was developed for use with normal populations of adults and students, therefore, the norms, reliability and validity are based on these population samples. The Inventory is written to encourage open communication and sharing of results, consequently, academic and technical language has intentionally been avoided.

The *INSIGHT Inventory* measures four ways a person expresses his/her personality. Each of the ways, or styles, has two opposite extremes. A score in either direction is okay, just as being either right- or left-handed is fine. The score indicates a way of behaving and interacting that the person has learned to use, probably is skillful at, and prefers to use most of the time. The following is the way the styles are defined in the participants booklets.

**Your personality is expressed in your style of:**

- Scale A.     Influencing** - (How you express your thoughts and opinions and influence others. The opposite preferences are: DIRECT and INDIRECT.)
- Scale B.     Responding** - (How you approach and respond to people, particularly groups. The opposite preferences are: OUTGOING and RESERVED.)
- Scale C.     Pacing** - (How you make decisions and burn energy. The speed or rhythm with which you act. The opposite preferences are: STEADY and URGENT.)
- Scale D.     Organizing** - (How you structure and order your life and handle details. The opposite preferences are: UNSTRUCTURED and PRECISE.)

The participants' booklet is designed to help users self-interpret their results. An emphasis is put on teaching participants how to flex (temporarily change) one's style when doing so would help improve communications with others. Users are guided through a process of looking at ways to flex on each of the four preferences when dealing with people who have opposite characteristics and when communicating with people who have the same preference.

The INSIGHT program is also designed to help participants understand what it may mean if their work style scores are different from their personal style scores. This is the feature of the *INSIGHT Inventory* that ties it to the field theory origins of its development. The underlying premise is that behavior is a function of the interaction between a person's personality and the environment the person is in at the time. Throughout the INSIGHT program, participants are asked to reflect on the impact their work and personal worlds has on their behavior. As participants discuss their behaviors in group exercises, they learn to understand each other, their responses to stress and their work environment better.

A more thorough description of each of the four scales and their opposite extremes is given on the following pages.

## SCALE A

## INFLUENCING

This scale is a measure of assertiveness and forcefulness. It identifies how people get their way and achieve results. Opposite preferences can both be successful achievers, but they get things done in quite different ways.

**DIRECT** people influence others by taking charge and pushing for action.

They:

- Will openly argue or debate their point of view or opinion
- Are:
  - Strong willed
  - Decisive – will make decisions quickly
  - Self-confident – believe in their decisions
  - Assertive (sometimes aggressive)
- Often convey a sense of being more confident in what they can do rather than what others can do
- Like to use power and authority to get things done
- Enjoy being the leader in groups
- Say what is on their mind, and are frank
- Are forceful and often not quite aware of how strong they come across
- Can take a tough-minded uncompromising position when necessary
- Will state their wishes in a telling straight forward manner

**INDIRECT** people influence others with strategy and careful planning.

They:

- Lead through quiet, behind the scenes example
- Are:
  - Modest
  - Non-intimidating
  - Agreeable
  - Supportive of others
- Don't like to confront others or get into arguments
- Are very approachable and non-demanding
- Will tend to avoid conflict if possible and are usually willing to compromise and negotiate
- Are very diplomatic and tend to under use their power
- Get ahead by tact and diplomacy
- Get irritated and put off by aggressive behavior in others
- Will state their wishes in a requesting or asking manner

## SCALE B

**RESPONDING**

The second scale is a measure of extroversion and introversion. It identifies whether people channel their attention toward others and activity or turn their attention inward in a reflective, self-contained manner.

**OUTGOING** people focus their energy outward toward people and activities.

They:

- Are:
  - Talkative
  - Openly friendly
  - Verbal
  - Enthusiastic
- Enjoy being the center of attention
- Have a cheerful, vibrant laugh which they openly express
- Like to talk things out - actually talk as a way of thinking through their thoughts
- Are playful and at ease with others and often are the “life of the party”
- Like to be liked by others, are comfortable behaving in ways that attract attention (wearing noticeable, stylish clothes; being in the center of a group; having a bright car, etc.)
- Are energized by other people and lots of stimulus

**RESERVED** people focus their energy inward to the world of ideas and thought.

They:

- Prefer to interact with others one-to-one or in small groups
- Are:
  - Quiet
  - Self-contained
  - Private
- Identify their favorite place as the world inside their head, their dreams and creative thoughts
- Tend to build a few close friends rather than have a large circle of acquaintances
- Need to have some quiet time alone each day to energize – they recharge their batteries by being away from noise and people
- Tend to choose careers that allow them to think, create, and work alone and in small groups
- Can get labeled “shy” when perhaps they weren’t comfortable talking at the time

## SCALE C

## PACING

The third scale measures how people burn their energy and the speed and rhythm with which they act.

**STEADY** people burn energy in an even-paced, very consistent manner.

They:

- Focus on maintaining harmony in relationships with others
- Are:       - Even-tempered  
              - Patient
- Get things done by “hanging in there” being persistent and determined
- Will wait for the right time for their move ... “Timing is everything”
- Have a long fuse – don’t get angry easily, but when that fuse burns out ... look out
- Take time to patiently listen to others
- Can adjust their pace to projects that require working for a long time in a steady fashion
- Will consider all options when deciding

**URGENT** people burn energy in a fast-paced and restless manner.

They:

- Like change, variety, action and are quick to decide
- Appear to always be in a hurry and like to do things fast
- Dislike routines and seek variety
- Can be poor listeners, especially when rushed. They will put words in a slow speaker’s mouth
- Are instantaneous and can be impulsive
- Often work best under the pressure of time
- Display a surging “crash and burn” manner of working at things – will go hard at it for a while then come to a near stop to recharge – they can accomplish a lot in a short time
- Hate to wait – example: stoplights, lines, traffic, etc.

## SCALE D

**ORGANIZING**

The fourth scale measures the degree of structure one prefers to have and/or is willing to adhere to.

**PRECISE** people strive to have their world very planned and predictable.

They:

- Focus on being right and want to perform as correctly and flawlessly as possible
- Are:
  - Systematic
  - Perfectionistic
  - Structured
  - Meticulous
- Like to make lists and will follow the list
- Don't like unexpected problems or changes
- Are not easily persuaded or talked into new ways of doing things – are cautious and want to see the facts and logical reasons for change
- Can be “worriers” or a bit compulsive at times
- Are likely to read directions and follow rules
- Get satisfaction and feel pride in having things organized

**UNSTRUCTURED** people prefer to act first and attend to detail later (if necessary).

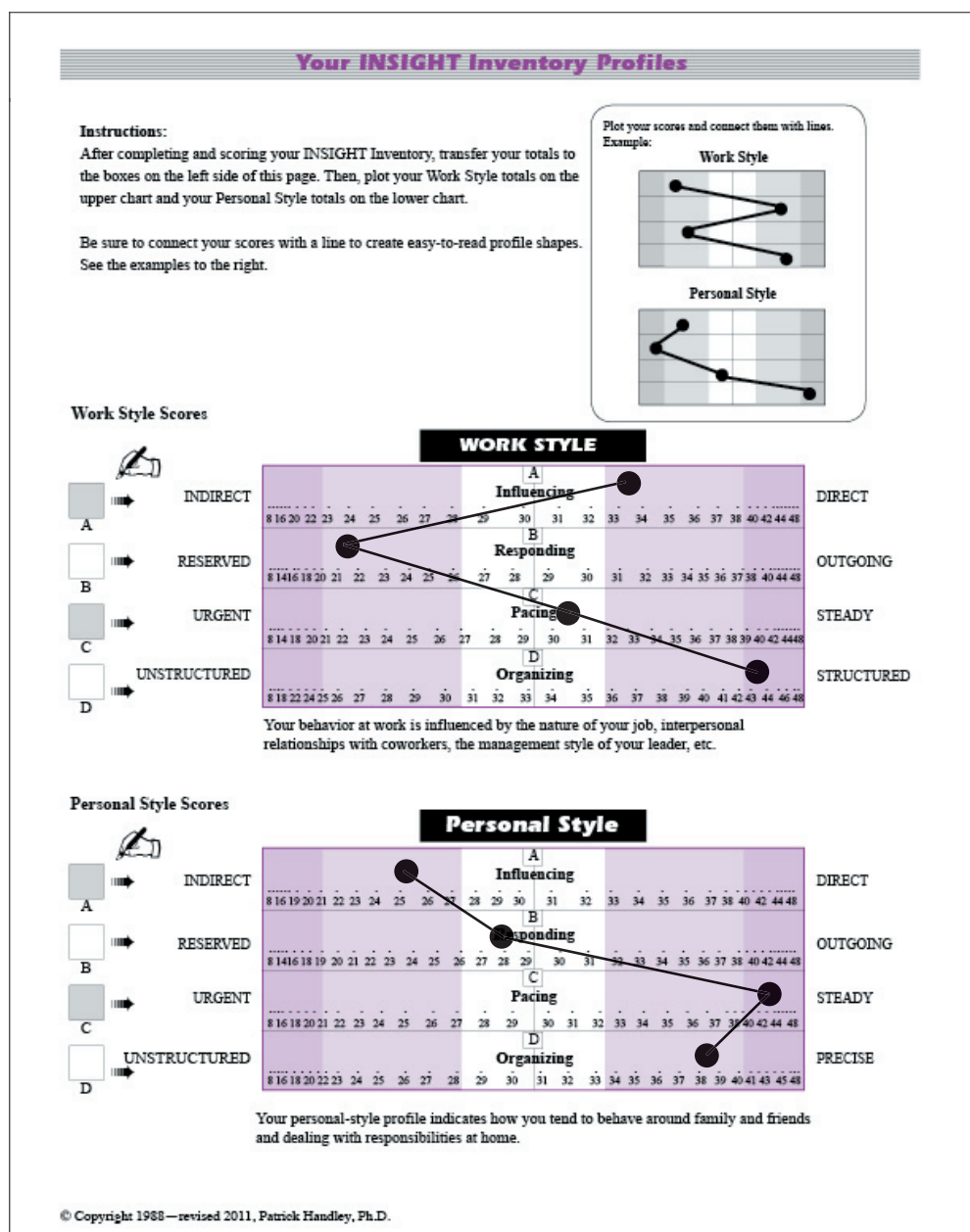
They:

- Are not detail oriented and will delegate detail if at all possible
- Are:
  - Nonconforming
  - Unstructured
- Have difficulty accepting close supervision or someone looking over their shoulder
- Will proceed on projects before carefully reading directions – enjoy just “figuring it out”
- Will try new things readily
- Have a strong desire to be on their own – independent
- Are able to tolerate ambiguity – sometimes even prefer it
- Are open and non judgmental – see things in shades of gray, options, possibilities, etc.
- Will accept the risk of action without approval



The four scales are relatively independent, therefore, the profile configuration or shape is very important. For example, an individual who is DIRECT, OUTGOING, URGENT and PRECISE is quite different from a person who is different even on two scales, i.e., INDIRECT, RESERVED, URGENT and PRECISE. The first individual would be characterized as very forceful, assertive, talkative and animated as well as urgent, restless, detailed and perfectionistic. The second person would be less forceful, non-assertive, quiet and unexpressive, yet similar to the first person in being urgent, restless, detailed and perfectionistic. For this reason, profile shapes and score intensity need to be considered when interpreting an individual's scores.

Some people also score differently on their Personal Style when this profile is compared to their Work Style (or School Style) profile. The assessment of people in two different environments is a unique feature of the *INSIGHT Inventory*. This allows for the processing of how different environmental pressures or stresses affect an individual. The example below shows how a person's scores in the two environments might be plotted on the profile charts.



When interpreting the results, watch for any differences between profiles. Should differences appear, and they do for over 80% of users, ask the user to discuss the reasons for the changes. Often times the change is understood and explained as a response to some pressure, stress or expectation. The richness and depth of the user's response will tell you a lot about his/her self awareness and self understanding.

## II. ADMINISTRATION & SCORING

The *INSIGHT Inventory* is self-administering both in paper-pencil and on-line versions. Instructions on the first page of the paper version tell users how to proceed. Slides explaining how to complete and score the inventory are available. These slides are particularly useful for helping large groups stay together when taking the paper version in a seminar.

Most people complete the paper assessment in 10 to 15 minutes or less and score it in approximately 10 minutes. A good rule of thumb is to allow approximately 20 minutes for the first three tasks: completing, scoring, and charting the profiles. The e-INSIGHT online version scores, plots, and generates the report instantly.

The e-INSIGHT online version provides extended descriptions when the curser is hovered over any term. In the paper version extended descriptions appear on the back of the carbonless form. Remind subjects that it is important that they not skip any items.

(the following content applies to the paper self-scoreable version only)

Participants should fill in or check one of the boxes to the right of each item according to how descriptive it is of them. The numbers 1,2,3,4 are provided to give participants a sense of scale but these are not the values that are used when scoring the results.

### SAMPLE ITEMS:

|                | not very<br>descriptive | 1                                   | 2                                   | 3                                   | 4                                   | very<br>descriptive |
|----------------|-------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------|
| 1. Competitive |                         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |                     |
| 2. Talkative   |                         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                     |
| 3. Patient     |                         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |                     |
| 4. Accurate    |                         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                     |

A copy of the *INSIGHT Inventory* is on the following page.

# INSIGHT Inventory®

Name \_\_\_\_\_ Date \_\_\_\_\_

**Instructions:** Shade in one of the blanks immediately to the right of each term as it best describes you.

not very descriptive      ←      →      very descriptive  
1      2      3      4

**Example:** 2. Talkative ..... ☐ ☐ ☒ ☐  
3. Patient ..... ☒ ☐ ☐ ☐

**Definitions:** If you are unsure about the meaning of any term, read the definitions on the back of the scoring sheet.

## WORK STYLE

Check the degree to which the words in the column below are descriptive of how you believe you are most of the time at work.

not very descriptive      ←      →      very descriptive  
1      2      3      4

- |                            |                          |                          |                          |                          |
|----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Competitive.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Talkative.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Patient.....            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Accurate.....           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Demanding.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Serene.....             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Animated.....           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Perfectionist.....      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Domineering.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Easygoing.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. High-spirited.....     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Structured.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Forceful.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Mild.....              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Systematic.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Convincing.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Good mixer.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Strong-willed.....     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Exacting.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Even-tempered.....     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. Enthusiastic.....      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Decisive.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. Detailed.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. Tolerant.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. Intense.....           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Life of the party..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. Daring.....            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. Restrained.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. Particular.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. Charming.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. Laid-back.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. Organized.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

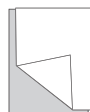
## PERSONAL STYLE

Some people (not all) behave differently away from work. Check the degree to which the words below describe the "at home" or personal you.

not very descriptive      ←      →      very descriptive  
1      2      3      4

- |                            |                          |                          |                          |                          |
|----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Decisive.....           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Enthusiastic.....       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Restrained.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Particular.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Intense.....            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Detailed.....           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Good mixer.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Serene.....             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Accurate.....           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Competitive.....       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Animated.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Organized.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. High-spirited.....     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Exacting.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Patient.....           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Talkative.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Easygoing.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Forceful.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Structured.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Life of the party..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. Mild.....              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Domineering.....       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. Systematic.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. Charming.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. Even-tempered.....     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Strong-willed.....     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. Perfectionist.....     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. Convincing.....        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. Laid-back.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. Demanding.....         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. Tolerant.....          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. Daring.....            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

When finished, tear off this cover sheet and follow scoring instructions.

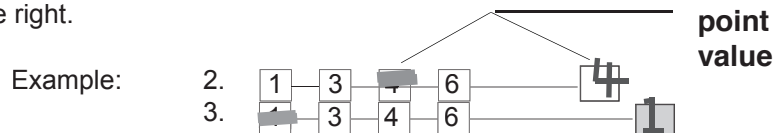


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The scoring instructions are included on the second NCR page. Remind subjects to follow these. A common error is for participants to try to total the scores by adding vertically before transferring the scores to the respective column on the right.

**SCORING INSTRUCTIONS: Follow the two steps below to score your INSIGHT Inventory results.**

- ① First, transfer the point value under each mark to the box on the right. Follow the horizontal lines to locate the correct box on the right.



- ② Second, add up all the points in each of the four vertical columns. Enter these sums in the large blocks—labeled A, B, C, and D—located at the bottom of the page. Follow the vertical arrows.

Use the same process for scoring both your WORK STYLE and PERSONAL STYLE responses.

Note that the point values which appear on the scoring sheet (1, 3, 4, 6) are different from the scale numbers (1, 2, 3, 4) on the first sheet of the inventory.

When statistically norming the inventory, it was discovered that a more representative, bell-shaped curve resulted from the 1, 3, 4, 6 point values. Apparently, when a person makes a selection of how descriptive an adjective is, the decision between the middle two boxes represents only one unit of perceived difference. The more extreme choice of selecting the box on either end represents a more significant statement, thus a two unit difference.

A copy of the NCR scoring sheet is included on the following page.

After the totals of each of the four scales are computed, the participants should plot their profile on the inside cover of the INSIGHT booklet. On that cover are two charts. The upper chart is used to plot the Work Style (or School Style) profile and the lower chart is used to plot the Personal Style profile.

A copy of the graphs also follows.

Note: The point distribution on the graphs in the participant's booklets may change slightly as new normative data is collected. The student version has some noticeable differences in the location of percentile scores, particularly on Scale B. Treat the enclosed version as an example of how the graphs are designed but refer to the actual inventory (adult or student version) for the most up-to-date normative data.

## INSIGHT Inventory Scoring Sheet

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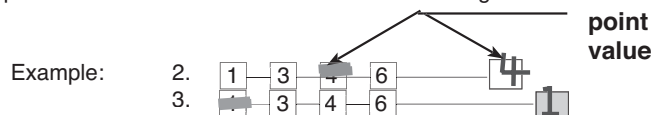
**OPTIONAL** The Insight Institute, Inc. retains scores (without names) for further research. To assist us please complete the following questions. Return this sheet to your instructor or mail. All information is kept confidential.  
Mail to: Insight Institute, Inc., Research and Development, 7205 N.W. Waukomis Dr., Kansas City, MO 64151 USA

Organization \_\_\_\_\_ Date \_\_\_\_\_ Sex \_\_\_\_\_ State (Prov) \_\_\_\_\_

Job title \_\_\_\_\_ Age \_\_\_\_\_ Race \_\_\_\_\_ Country/Nation \_\_\_\_\_

### SCORING INSTRUCTIONS: Follow the steps below to score your results.

- 1** First, transfer the point value under each mark to the box on the right. Follow the horizontal lines to locate the correct box.



- 2** Second, add up all the points in each of the four vertical columns. Enter these sums in the large blocks—labeled A, B, C, and D—located at the bottom of the page. Follow the vertical arrows.

Use the same process for scoring both your WORK STYLE and PERSONAL STYLE responses.

#### WORK STYLE

|     |   |   |   |   |  |  |  |  |
|-----|---|---|---|---|--|--|--|--|
| 1.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 2.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 3.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 4.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 5.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 6.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 7.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 8.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 9.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 10. | 1 | 3 | 4 | 6 |  |  |  |  |
| 11. | 1 | 3 | 4 | 6 |  |  |  |  |
| 12. | 1 | 3 | 4 | 6 |  |  |  |  |
| 13. | 1 | 3 | 4 | 6 |  |  |  |  |
| 14. | 1 | 3 | 4 | 6 |  |  |  |  |
| 15. | 1 | 3 | 4 | 6 |  |  |  |  |
| 16. | 1 | 3 | 4 | 6 |  |  |  |  |
| 17. | 1 | 3 | 4 | 6 |  |  |  |  |
| 18. | 1 | 3 | 4 | 6 |  |  |  |  |
| 19. | 1 | 3 | 4 | 6 |  |  |  |  |
| 20. | 1 | 3 | 4 | 6 |  |  |  |  |
| 21. | 1 | 3 | 4 | 6 |  |  |  |  |
| 22. | 1 | 3 | 4 | 6 |  |  |  |  |
| 23. | 1 | 3 | 4 | 6 |  |  |  |  |
| 24. | 1 | 3 | 4 | 6 |  |  |  |  |
| 25. | 1 | 3 | 4 | 6 |  |  |  |  |
| 26. | 1 | 3 | 4 | 6 |  |  |  |  |
| 27. | 1 | 3 | 4 | 6 |  |  |  |  |
| 28. | 1 | 3 | 4 | 6 |  |  |  |  |
| 29. | 1 | 3 | 4 | 6 |  |  |  |  |
| 30. | 1 | 3 | 4 | 6 |  |  |  |  |
| 31. | 1 | 3 | 4 | 6 |  |  |  |  |
| 32. | 1 | 3 | 4 | 6 |  |  |  |  |

#### WORK STYLE TOTALS

(sum of numbers in each column)

|   |   |   |   |
|---|---|---|---|
| A | B | C | D |
|---|---|---|---|

#### PERSONAL STYLE

|     |   |   |   |   |  |  |  |  |
|-----|---|---|---|---|--|--|--|--|
| 1.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 2.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 3.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 4.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 5.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 6.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 7.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 8.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 9.  | 1 | 3 | 4 | 6 |  |  |  |  |
| 10. | 1 | 3 | 4 | 6 |  |  |  |  |
| 11. | 1 | 3 | 4 | 6 |  |  |  |  |
| 12. | 1 | 3 | 4 | 6 |  |  |  |  |
| 13. | 1 | 3 | 4 | 6 |  |  |  |  |
| 14. | 1 | 3 | 4 | 6 |  |  |  |  |
| 15. | 1 | 3 | 4 | 6 |  |  |  |  |
| 16. | 1 | 3 | 4 | 6 |  |  |  |  |
| 17. | 1 | 3 | 4 | 6 |  |  |  |  |
| 18. | 1 | 3 | 4 | 6 |  |  |  |  |
| 19. | 1 | 3 | 4 | 6 |  |  |  |  |
| 20. | 1 | 3 | 4 | 6 |  |  |  |  |
| 21. | 1 | 3 | 4 | 6 |  |  |  |  |
| 22. | 1 | 3 | 4 | 6 |  |  |  |  |
| 23. | 1 | 3 | 4 | 6 |  |  |  |  |
| 24. | 1 | 3 | 4 | 6 |  |  |  |  |
| 25. | 1 | 3 | 4 | 6 |  |  |  |  |
| 26. | 1 | 3 | 4 | 6 |  |  |  |  |
| 27. | 1 | 3 | 4 | 6 |  |  |  |  |
| 28. | 1 | 3 | 4 | 6 |  |  |  |  |
| 29. | 1 | 3 | 4 | 6 |  |  |  |  |
| 30. | 1 | 3 | 4 | 6 |  |  |  |  |
| 31. | 1 | 3 | 4 | 6 |  |  |  |  |
| 32. | 1 | 3 | 4 | 6 |  |  |  |  |

#### PERSONAL STYLE TOTALS

(sum of numbers in each column)

|   |   |   |   |
|---|---|---|---|
| A | B | C | D |
|---|---|---|---|

**Note:**  
When finished,  
transfer your  
totals to the  
profile charts  
on the inside  
cover of this  
booklet.

## Your INSIGHT Inventory Profiles

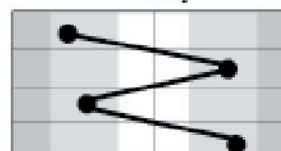
### Instructions:

After completing and scoring your INSIGHT Inventory, transfer your totals to the boxes on the left side of this page. Then, plot your Work Style totals on the upper chart and your Personal Style totals on the lower chart.

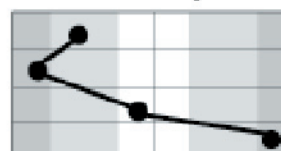
Be sure to connect your scores with a line to create easy-to-read profile shapes. See the examples to the right.

Plot your scores and connect them with lines.  
Example:

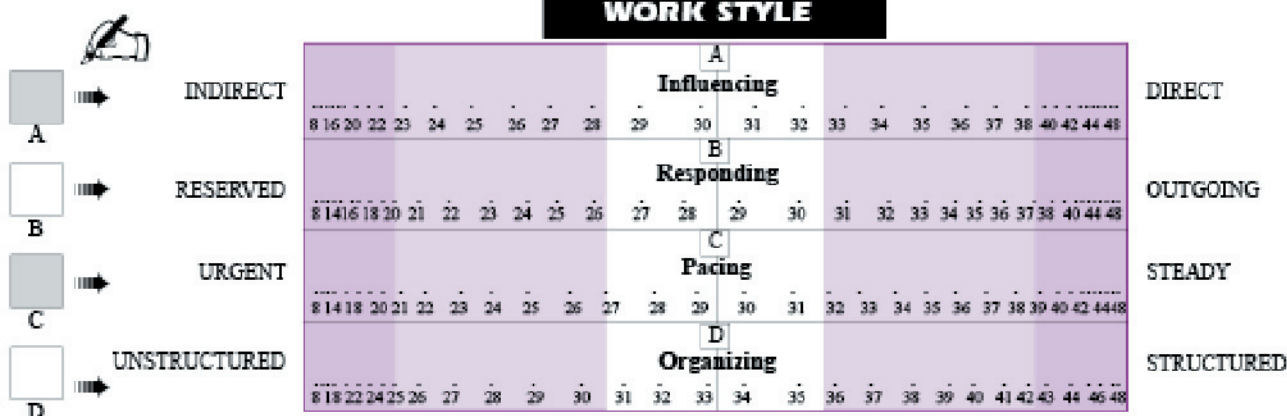
**Work Style**



**Personal Style**



### Work Style Scores



Your behavior at work is influenced by the nature of your job, interpersonal relationships with coworkers, the management style of your leader, etc.

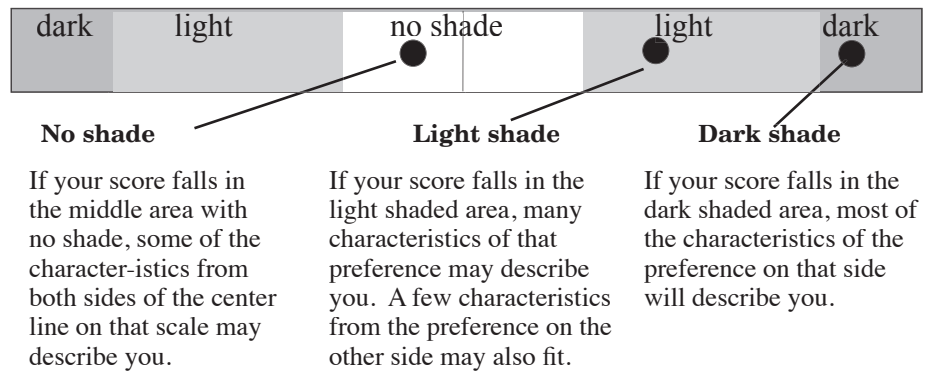
### Personal Style Scores



Your personal-style profile indicates how you tend to behave around family and friends and dealing with responsibilities at home.

## Score interpretation

Shaded areas have been overlaid on the graph to provide a simple way to understand the score intensity.



Percentile scores increase from left to right because each scale is a measure of the strength of preference for a particular use of one's personality. For example the first scale, Influencing, measures the degree of assertiveness, directness, and frankness. Low scores indicate a description of oneself as less direct and less forceful than the general population. High scores indicate a description of oneself as more forceful and assertive than the average person.

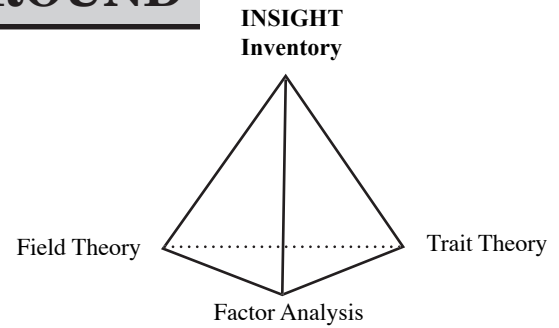
## Percentile Rankings



These norms are further explained in the chapter on norming statistics.



### III. THEORETICAL BACKGROUND



The *INSIGHT Inventory* owes its theoretical heritage to three primary sources: the work done by Kurt Lewin on *field theory*, Gordon Allport's use of adjectives in the measure of *personality* traits and his writings on insight as the cornerstone of mature personality, and Raymond Cattell's application of *factor analysis* for identifying personality traits and determining the relatedness of test items.

#### **Field Theory**

Field Theory, developed and popularized by Dr. Kurt Lewin (1890-1947) emphasized that behavior (B) can best be understood in the context of the personality of the individual (P) and the environment the behavior occurs in (E), or  $B = f(P, E)$ . The *INSIGHT Inventory* asks participants to describe how they are in two important environments, their world at work (or school) and their personal world. The two profiles obtained are used to help people assess how these different environments affect their behavior and helps them better understand why they behave the way they do.

#### **Trait Theory**

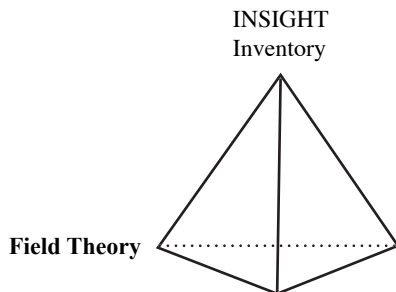
The use of adjectives as test items for the measure of personality traits was first formally studied and given scientific credence by Dr. Gordon Allport (1897-1967). Allport and Odbert (1936) identified over 4500 words in the English language which they felt described personality characteristics. These were divided into what was believed to represent various types of traits, dispositions, habits, attitudes, intentions, and motives. As a trait theorist, Allport wrote extensively about *insight* which he felt represented the mature personality, one characterized by self-awareness, acceptance, and good humor. The *INSIGHT Inventory* credits its name to Allport's emphasis on insight, which he called the most desirable of all traits.

#### **Factor Analysis**

Dr. Raymond Cattell (1905-present) pioneered the technique of using factor analysis to identify the most powerful factors of a personality test. Items (adjectives) on the *INSIGHT Inventory* were selected based on statistical analysis of their factor loadings. This resulted in the creation of personality scales that give people a meaningful and scientific way to compare themselves with others.

## Field Theory

### The Field Theory of Kurt Lewin

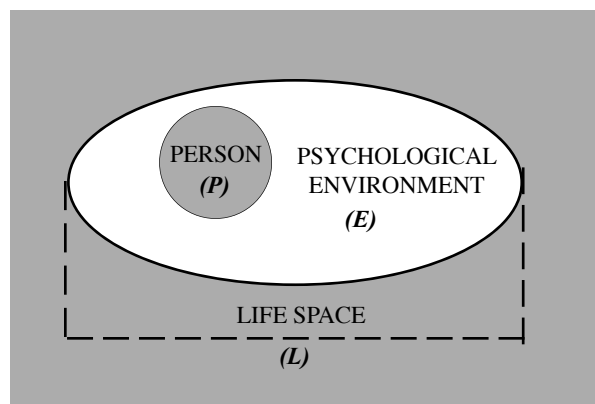


Kurt Lewin is credited with formalizing and popularizing Field Theory. He was a member of the Berlin Gestalt group and was influenced by Gestalt psychology's emphasis on looking at the whole as a composite of its parts, not analyzing the parts in isolation. Lewin expanded the nature of Gestalt to include the environment or field of forces a person was in at the time of any behavior. He had little confidence in explanations of behavior based merely on conditioning or past experiences. Lewin's "field theory," as it grew to be known, advocated that behavior was a mathematical function of the interaction between a person's personality and the environment:  $B = f(P, E)$ . His quantitative methods of research into the social psychology of behavior helped restore the analysis of subjective experience of personality to respectability in the 1920s.

To fully understand Lewin's development of field theory one must look at the *fields* or environments that influenced Lewin in his own professional development. Lewin received his psychological training in Berlin prior to the onset of WWII. Upon the rise of Nazi power Lewin fled to the United States. His early work in social psychology revolved around examining the influence of social culture on individual behavior. Lewin was particularly interested in how Nazi ideology had influenced children in Germany, resulting in aggressive behavior. This work led to the study of group dynamics and influences of the environment on personality and behavior.

Lewin called the psychological field of his theory the life space. A person's life space is the total set of facts that, at a given instant, affect a person's behavior. A person's life space might include, for example, their perceptions of others around them at the moment, their perception of whether they can live up to the demands of the task that needs to be done, their needs, wishes, memories of particular past events and their imaginings about future ones, any emotions they might be feeling, and so forth.

Behavior then becomes a function of both the individual's underlying personality and the environment they are in at the time,  $B = f(P, E)$ .



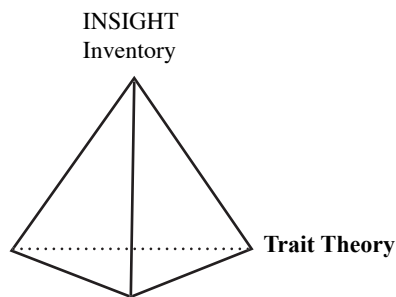
Consider for example the life space of a particular young woman, Lucy, a supervisor in a production department of a large company, as she approaches Andrew, one of the members of the work crew she is assigned to supervise. Lucy is faced with the problem that Andrew is not doing his work according to the procedures outlined in the policy manual. Characteristic of Lucy's underlying personality is her strong sense of self confidence and her assertive manner of approaching others. She remembers from past experience that she can stop problems by taking control and acting on them quickly. Therefore, upon detecting Andrew's manner of working, she approaches him and tells him in a self-assured manner to do the work differently, and she describes the consequence (being given a written reprimand) if he does not follow these instructions. The incident takes only a matter of seconds. In this situation Lucy's behavior could easily have been predicted, because her personality (P) and the environment (E) had been paired together before.

Now consider a second situation. Lucy goes on vacation and designates Mary as the temporary supervisor. Andrew again starts working in a manner that is inconsistent with agreed upon procedure. Mary notices it. Her underlying personality is to be very non-assertive and avoid any confrontational interactions with others. Andrew is probably counting on this. He again breaks policy. Seeing Andrew break the rules while she is in charge triggers a memory from the past of getting into trouble for not being forceful enough when left in charge, and thus having failed to live up to Lucy's expectations. This also triggers a memory of how her father dealt with disobedience with her and her siblings when growing up. She remembers him throwing a fit of anger, yelling loudly, and threatening some extreme punishment. She and her brothers and sisters would get scared and quickly obey whatever his wish. This memory flashes through Mary's mind as she encounters this situation with Andrew where she feels her authority is being threatened. So Mary walks up to Andrew, yells at him and tells him to do the work the right way or else he will be fired. This behavior surprises Andrew because it is so uncharacteristic of Mary.

Lewin's field theory would explain Mary's behavior as predictable but only understandable if one knew all the components of the life space that came into play at that moment. These included fear of failing as a supervisor, memories of her father's behavior, etc. At home, in her personal world when unthreatened, Mary may consistently be her non-assertive, easygoing self. Field theory emphasizes that personality alone does not predict behavior.

Lewin maintained that one does a disservice to the complexity of both personality and behavior by inferring that there is a direct link between the two. The pressures of the environment, he said, must be entered into the equation to fully understand the individual. The *INSIGHT Inventory* drew heavily on field theory in its development and was constructed to provide a measure of personality that allows for change between two important environments, Work (or School) and Personal. *INSIGHT* emphasizes that one must consider both the environment and personality to fully understand behavior patterns.

## The Trait Theory of Gordon Allport



## Trait Theory

Gordon Allport is characterized as a *trait theorist*, since much of his work revolved around identifying and defining the underlying traits that make up the personality of the individual. As such he represented, perhaps better than most 20th century theorists, the synthesis of traditional psychology with the study of the individual personality. Allport's work has even been called individual psychology and was considered rather radical in the 1930's when most of academic psychology was putting emphasis on quantitative study of behavior. But Allport stuck with his convictions about considering each person a unique organization of traits, dispositions, habits, attitudes, intentions and motives. He felt one's awareness of these dispositions within oneself constitutes *insight*, the cornerstone of a *mature personality*.

In many ways, Allport considered personality as more complex than previous trait psychologists. He broadened the conceptualization of personality to include dispositions, habits, attitudes, intentions and motives and, in doing so, allowed for overlap and fluid movement between the categories. Allport technically defined traits as: *neuropsychic structures having the capacity to render many stimuli functionally equivalent and to initiate and guide equivalent forms of expressive behavior*. In contrast, a personal disposition was defined as: *generalized neuropsychic structure (peculiar to the individual) with the capacity to render many stimuli functionally equivalent and to initiate and guide consistent (equivalent) forms of adaptive and stylistic behavior (1961)*. The *INSIGHT Inventory* borrows from Allport's definition of personal disposition since *INSIGHT* emphasizes a person's ability to adapt or *flex* one's style. *INSIGHT* also stresses, in accordance with Allport, that there is no sharp boundary that delimits one trait from another.

Whether talking in terms of traits or various levels of personal dispositions, Allport in the end wanted people to think in terms of a broader structure that allowed for the dynamic changing aspect of personality as affected both by growth and environment. His early work down played the role of environment, but in his characteristic open-minded manner he acknowledged in his paper, *Traits Revisited* (1966) that "*my earlier views seemed to neglect the variability induced by ecological, social and situational factors. This oversight needs to be repaired through an adequate theory that will relate the inside and outside systems more accurately.*"

Allport did not, however, provide such a theory or mechanism. *INSIGHT* attempts to present this concept by creating a way for people to rate their behavior in two different environmental fields. Therefore, both Allport's and Lewin's thinking were drawn upon in construction of *INSIGHT*. It is noteworthy that Allport acknowledged the effect of environment but invested his energy in breaking down the categories of personality and their effect on behavior in contrast to Lewin who focused on the effects of different categories of environment on the individuals' behavior. *INSIGHT* suggests a blending of the two approaches.

Allport's writing on the meaning of *insight* also had a strong influence in the development of the *INSIGHT Inventory* and the companion inventory, the *INSIGHT Style Feedback Set*. As mentioned earlier, Allport felt insight was the cornerstone of emotional maturity. "Good insight not only prevents a person from being deceived by his own rationalizations, but forces him to face objectively the weaknesses and strengths of his personal equipment

(1937).” He cites the old adage,

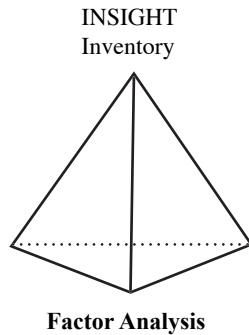
“Every man has three characters:

- (1) that which he has,
- (2) that which he thinks he has,
- (3) that which others think he has.”

Practically, according to Allport, the index of a person’s insight becomes the ratio between the second and third items, the relation of what we think we are to what others think we are. The *INSIGHT Inventory* produces a measure of what a person thinks they are in relation to four personality preferences while the Observer Feedback provides reflections of what others think they are like on these four preferences.

The four preferences are one’s style of: Influencing, Responding, Pacing, and Organizing. INSIGHT attends to Allport’s conceptualization of personality dispositions as dynamic and acknowledges that some of these could be a blend of what Allport labeled traits, dispositions, habits, attitudes, intentions, and motives. Allport’s broadening of the many facets of personality allowed for a creative way of looking at why people behave the way they do and indicates that what may be important in using a style inventory is that one must not deceive oneself in believing that any test results measure rigid traits.

## The Factor Analysis of Raymond Cattell



### Factor Analysis

Factor analysis provided the key to identification of the four style preferences measured by the *INSIGHT Inventory*. Raymond Cattell is credited with pioneering the application of factor analysis for use in the identification of psychological traits. He used the procedure to compare one person with group averages as a means of identifying personality differences.

Cattell was a colleague of Allport's at Harvard in the 1940's and it was reported that they were frequent lunch companions, openly debating the merits of their differing approaches, yet respecting each other's thinking. In fact, Cattell did some of his early research with the 4500 or so trait names that Allport and Odbert (1936) had selected as descriptive of personality characteristics. To this list Cattell applied the sophisticated statistical technique of factor analysis. He condensed the list to fewer than 200 items and then intercorrelated and further reduced the resulting group of terms to 35 traits. This work continued, resulting in the later development of the Sixteen Personality Factors Test (16PF).

In applying the technique of factor analysis in his research, Cattell isolated the fundamental factors that control variation of the surface variables and computed an estimate of the extent to which each factor contributed to each measure. This estimate is called the factor loading. Items with high factor loadings on a particular factor determine the psychological meaning of that factor.

Cattell cleverly describes this complex task with the following analogy:

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#### Stalking the Alligators: The Technique of Factor Analysis

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*Imagine that you are hacking your way through a dense, tropical forest. Strange cries reach your ears from every side. The sun's brilliance is heavily shaded by the green mass above you, and you can see only dimly. As you reach to cut through the next tangle of lianas, your eyes focus on three dark blobs a few yards away. You stop. What are they: Three rotting logs: You wait. Suddenly the blobs move - together. As the alligator approaches, you also move. (Adapted from Cattell 1966).*

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Cattell's analogy serves to introduce the purpose and general approach of factor analysis: in the jungle of human behavior, one needs to sort out what is important. One way to reduce the numbers of things one must deal with is to assign them to broad general categories, and to do this, one needs to know what "moves" with what.

The factor analyst begins with a set of scores from many different items for a large number of subjects. The *INSIGHT Inventory* began with an extensive list of adjectives (items) responded to on Likert rating scales (scores) by a large number of working adults (subjects). To make sense of all these scores, to identify a small number of basic factors whose operation accounts for most of the variation in them, the factor analyst tries to see which ones "move together," or are correlated with each other. After applying factor analysis to the *INSIGHT Inventory*, eight adjectives were found to *move* with each

other resulting in the scale labeled “Influencing.” In similar fashion three additional and independent sets (factors) of eight adjectives were selected. These identify one’s style of “Responding,” “Pacing,” and “Organizing.”

One of the most significant attributes of Cattell’s theory was his continuing effort to define terms in the simplest and clearest way possible. He was concerned with making concepts operational and thus worked toward clear and unambiguous empirical definitions. In a field long dominated by the clinically based, subjective, inferential approach, Cattell’s insistence on precision and testability introduced an aura of tough-mindedness. The development of the *INSIGHT Inventory* has followed Cattell’s lead, proceeding under the fundamental premise that the statistical relationships among items must be determined prior to assigning psychological meaning to the traits being measured.

Although a respected colleague of Allport’s, Cattell seems to have reversed Allport’s approach: Allport maintained that one must have a clear theoretical outline before one starts collecting a mass of possibly meaningless data. Cattell, on the other hand, believed that one must collect a mass of data and subject it to empirical analysis before one can devise a theory. Blending these two approaches was a challenge in the development of the *INSIGHT Inventory*. A middle of the road approach was ultimately taken. A general list of adjectives describing behavior that was noticeably different among people was first constructed. This list was then subjected to factor analysis to determine which test items were interrelated and therefore measured the same personality characteristic. Finally, these factors were correlated with other known inventories to help determine the appropriate label for the factors.

This blending of trait theory and factor analysis and finally the adding two specific environments in line with field theory resulted in the development of the *INSIGHT Inventory*.



## IV. TEST DEVELOPMENT

### Historical Use of Adjectives as Test Items

Adjective checklists can be traced to work done in 1930 by Hartshore and May. These psychologists were the first to use the adjective checklist as a measure of personality (or character, as they called it). They published a book titled *Studies in the Nature of Character* and purported the use of 80 pairs of antonyms as a way to measure character.

Allport and Odbert (1936) expanded this theory and attempted to identify all the English adjectives which would describe personal behavior. They identified 17,953 words and stimulated a good deal of research in how these could be reduced into a smaller list that would be manageable as a personality measure.

Cattell, in the 1940's, used a newly-developed statistic, factor analysis, to reduce Allport's work to a smaller, more manageable list which resulted in 12 primary traits.

Gough followed with research in the 1940's and then published the first widely used adjective checklist in 1950. His inventory used a yes/no response format.

### INSIGHT Item Selection

Allport and Odbert's (1936) descriptive list of adjectives provided the base for item selection. This was followed with a review of the literature on personality differences to create a list of adjectives more commonly used in today's language. Added to this list were adjectives used by both professionals and lay people in everyday language to describe the differences between people. Descriptive reports of established and validated psychological inventories such as the Minnesota Multiphasic Personality Inventory, Sixteen Personality Factors, Strong-Campbell Interest Inventory, and Myers-Briggs Type Indicator were also reviewed. A master list was generated from a combination of all of these.

The first master list of words was screened to select those words commonly used by people when describing others and which were considered neither latently positive nor negative. Also, words were chosen that had a clearly bipolar nature in their everyday use. For example, the word "talkative" was selected because a person can conceivably be either "talkative" or "not talkative," and both descriptions would fit into the flow of normal conversation. After the master list was reduced by this criterion, the resulting list of words was submitted to the formal statistical procedure of factor analysis.



## Factor Analysis

Factor analysis is a technique used to reduce a set of items to a smaller set of “factors” that explain the variance among the items. The statistical result of this procedure is a list of correlations of each test item with each factor (factor loadings). Essentially, this provides a way to define the smaller number of underlying traits the adjectives measure and a way to eliminate adjectives which do not contribute to a key trait.

## Factors

Form F of the INSIGHT Inventory contained 36 items which were submitted to principal components factor analysis, once each for the Work Style items and for the Personal Style items. Using a sample of 1,540 adults, eight factors were identified with eigenvalues greater than one for each solution. Using an oblique rotation of the factors, the four theoretical factors (Getting One’s Way, etc.) were each accounted for by two of the eight factors found through the factor analysis. Six items from each of the Work Style and Personal Style analyses failed to load well enough on any of the factors and were discarded. At that time, two new items were added, leading to the final 32 item version of the INSIGHT Inventory currently in use.

The 32 item inventory was then resubmitted to factor analysis using new samples of 589 adults and 1,021 high school and college students. Separate analyses were run on each sample, but those yielded identical factor structures. Thus, the results which are reported are for a combined sample of adults and students. That four factor solution is reported below, which accounts for 42 and 43.6 percent of item variance respectively for the Work and Personal Styles. An oblique rotation of the factors was performed, which allows for factor intercorrelation.

Factor loadings of each item with each of the four primary factors are listed below. Tables 1 and 2 list item loadings for the pattern matrices, giving an indication of the relative importance each item carries for a particular factor. Tables 3 and 4 show factor intercorrelations.

Subsequently, four scales were developed based on the factor loadings, with eight separate items loading on each of the four scales. Loadings are given for each item with each factor, but are sorted according to the scale with which they are associated. As can be seen from Tables 1 and 2, in nearly all cases, the items load highest with the scale to which they were eventually assigned, although there are some minimal differences between the Work/School Style and Personal Style factor analyses. In the end, parsimony and consistency of scoring were additional issues in arriving at each item’s assignment to its scale. Table 5 shows correlations of all 8 and students for Adult and School Forms.

Table 1

| Work Style Factor Analysis<br>Pattern Matrix |                                      |   |                                  |   |
|--|--------------------------------------|---|----------------------------------|---|
| Adjective                                    | Factor 1                             | Factor 2                                  | Factor 3                         | Factor 4                                |
|  | Getting One's Way<br>Indirect-Direct | Responding to People<br>Reserved-Outgoing | Pacing Activity<br>Urgent-Steady | Dealing with Detail<br>Unstruc.-Precise |
| W5 – Demanding                               | .65                                  | -.04                                      | -.16                             | .11                                     |
| W13 – Forceful                               | .64                                  | -.06                                      | -.17                             | -.02                                    |
| W9 – Domineering                             | .62                                  | .09                                       | -.19                             | -.03                                    |
| W25 – Intense                                | .49                                  | -.02                                      | -.01                             | .11                                     |
| W1 – Competitive                             | .49                                  | .07                                       | -.05                             | .10                                     |
| W18 – Strong-Willed                          | .46                                  | .25                                       | -.01                             | .09                                     |
| W16 – Convincing                             | .39                                  | .25                                       | .24                              | .08                                     |
| W22 – Decisive                               | .28                                  | .13                                       | .09                              | .31                                     |
| W11 – High Spirited                          | .01                                  | .75                                       | .02                              | .09                                     |
| W21 – Enthusiastic                           | -.07                                 | .71                                       | -.02                             | .22                                     |
| W17 – Good Mixer                             | .01                                  | .70                                       | .06                              | .02                                     |
| W2 – Talkative                               | .03                                  | .68                                       | -.12                             | -.05                                    |
| W26 – Life of the Party                      | .18                                  | .63                                       | .06                              | -.22                                    |
| W7 – Animated                                | .02                                  | .50                                       | -.09                             | -.06                                    |
| W30 – Charming                               | .21                                  | .50                                       | .32                              | -.06                                    |
| W27 – Daring                                 | .34                                  | .45                                       | .12                              | -.18                                    |
| W31 – Laid-Back                              | -.12                                 | .22                                       | .63                              | -.16                                    |
| W10 – Easygoing                              | .07                                  | -.04                                      | .62                              | -.27                                    |
| W6 – Serene                                  | .09                                  | -.21                                      | .58                              | -.02                                    |
| W24 – Tolerant                               | -.29                                 | .10                                       | .56                              | .16                                     |
| W14 – Mild                                   | -.09                                 | -.30                                      | .55                              | .01                                     |
| W20 – Even-Tempered                          | -.25                                 | .11                                       | .52                              | .22                                     |
| W3 – Patient                                 | -.23                                 | .03                                       | .49                              | .23                                     |
| W28 – Restrained                             | .07                                  | -.47                                      | .30                              | .12                                     |
| W32 – Organized                              | -.15                                 | .06                                       | -.08                             | .72                                     |
| W15 – Systematic                             | -.08                                 | -.01                                      | -.02                             | .71                                     |
| W12 – Structured                             | -.04                                 | .04                                       | -.05                             | .66                                     |
| W23 – Detailed                               | .13                                  | -.03                                      | .04                              | .66                                     |
| W4 – Accurate                                | .07                                  | -.06                                      | .04                              | .63                                     |
| W8 – Perfectionistic                         | .22                                  | -.05                                      | -.04                             | .59                                     |
| W19 – Exacting                               | .26                                  | -.04                                      | .03                              | .58                                     |
| W29 – Particular                             | .27                                  | -.21                                      | .08                              | .42                                     |
| W19 – Exacting                               | .26                                  | -.04                                      | .03                              | .58                                     |
| W29 – Particular                             | .27                                  | -.21                                      | .08                              | .42                                     |

General population sample: N = 1601 adults and students

Table 2

| Personal Style Factor Analysis<br>Pattern Matrix |                                      |   |                                  |   |
|--|--------------------------------------|---|----------------------------------|---|
| Adjective  | Factor 1                             | Factor 2                                  | Factor 3                         | Factor 4                                |
|  | Getting One's Way<br>Indirect-Direct | Responding to People<br>Reserved-Outgoing | Pacing Activity<br>Urgent-Steady | Dealing with Detail<br>Unstruc.-Precise |
| P30 – Demanding                                  | .71                                  | -.03                                      | -.11                             | .08                                     |
| P18 – Forceful                                   | .70                                  | -.02                                      | -.05                             | .05                                     |
| P22 – Domineering                                | .69                                  | -.06                                      | -.10                             | .06                                     |
| P26 – Strong Willed                              | .47                                  | .21                                       | .06                              | .11                                     |
| P5 – Intense                                     | .37                                  | .06                                       | -.01                             | .27                                     |
| P10 – Competitive                                | .35                                  | .20                                       | -.01                             | .09                                     |
| P28 – Convincing                                 | .31                                  | .30                                       | .20                              | .11                                     |
| P1 – Decisive                                    | .14                                  | .16                                       | .03                              | .32                                     |
| P13 – High Spirited                              | -.01                                 | .75                                       | -.02                             | .07                                     |
| P2 – Enthusiastic                                | -.01                                 | .74                                       | -.05                             | .01                                     |
| P16 – Talkative                                  | -.12                                 | .73                                       | -.06                             | .17                                     |
| P7 – Good Mixer                                  | .01                                  | .70                                       | .06                              | -.05                                    |
| P20 – Life of the Party                          | .16                                  | .64                                       | .02                              | -.15                                    |
| P11 – Animated                                   | .08                                  | .54                                       | .30                              | .01                                     |
| P24 – Charming                                   | .12                                  | .49                                       | -.01                             | -.05                                    |
| P32 – Daring                                     | .30                                  | .48                                       | .08                              | -.11                                    |
| P21 – Mild                                       | -.03                                 | -.29                                      | .65                              | -.01                                    |
| P29 – Laid-Back                                  | .08                                  | .10                                       | .62                              | -.26                                    |
| P8 – Serene                                      | .14                                  | -.18                                      | .60                              | .04                                     |
| P25 – Even-Tempered                              | -.10                                 | .32                                       | .60                              | -.09                                    |
| P17 – Easygoing                                  | -.28                                 | .05                                       | .57                              | .16                                     |
| P31 – Tolerant                                   | -.34                                 | .15                                       | .53                              | .13                                     |
| P15 – Patient                                    | -.37                                 | .09                                       | .50                              | .16                                     |
| P3 – Restrained                                  | .17                                  | .49                                       | .32                              | .05                                     |
| P14 – Exacting                                   | .10                                  | -.01                                      | -.03                             | .72                                     |
| P12 – Organized                                  | -.20                                 | .04                                       | -.06                             | .72                                     |
| P19 – Structured                                 | .05                                  | -.01                                      | -.01                             | .71                                     |
| P9 – Accurate                                    | -.02                                 | -.11                                      | .04                              | .71                                     |
| P27 – Perfectionistic                            | -.01                                 | -.02                                      | .02                              | .69                                     |
| P23 – Systematic                                 | -.01                                 | .01                                       | .11                              | .66                                     |
| P6 – Detailed                                    | .11                                  | -.03                                      | -.09                             | .66                                     |
| P4 – Particular                                  | .18                                  | -.08                                      | -.03                             | .57                                     |

General population sample: N = 1601 adults and students

| Table 3                   |                               |                                  |                             |                                 |
|---------------------------|-------------------------------|----------------------------------|-----------------------------|---------------------------------|
| Work Style                |                               |                                  |                             |                                 |
| Factor Correlation Matrix |                               |                                  |                             |                                 |
|                           | Factor 1<br>Getting One's Way | Factor 2<br>Responding to People | Factor 3<br>Facing Activity | Factor 4<br>Dealing With Detail |
| Factor 1                  | 1.00                          |                                  |                             |                                 |
| Factor 2                  | -.09                          | 1.00                             |                             |                                 |
| Factor 3                  | .00                           | .09                              | 1.00                        |                                 |
| Factor 4                  | .26                           | .18                              | -.13                        | 1.00                            |

| Table 4                   |                               |                                  |                             |                                 |
|---------------------------|-------------------------------|----------------------------------|-----------------------------|---------------------------------|
| Personal Style            |                               |                                  |                             |                                 |
| Factor Correlation Matrix |                               |                                  |                             |                                 |
|                           | Factor 1<br>Getting One's Way | Factor 2<br>Responding to People | Factor 3<br>Pacing Activity | Factor 4<br>Dealing With Detail |
| Factor 1                  | 1.00                          |                                  |                             |                                 |
| Factor 2                  | .01                           | 1.00                             |                             |                                 |
| Factor 3                  | .08                           | -.09                             | 1.00                        |                                 |
| Factor 4                  | .21                           | .16                              | -.10                        | 1.00                            |

## V. RELIABILITY

**Reliability** is the degree of consistency with which a test measures what it is said to measure. Error in test measurement can be caused by mood, fatigue, misunderstanding of instructions, nervousness, or familiarity with the same or similar tests. No test can measure psychological traits so accurately that each time an individual takes it they score exactly the same. However, some tests are more reliable than others, and this can be determined by reviewing the reliability statistics.

Reliability coefficient is a generic term. Different reliability coefficients and estimates of measurement error can be based on various types of evidence; each suggests a different meaning.

### **Test - Retest**

Test-retest reliability involves administering the same test on two separate occasions, typically a few weeks apart, and computing a coefficient that indicates how similar the scores were.

### **Alternate Forms**

Alternate forms reliability is computed by creating two parallel forms of the test and administering them both to the same people. (The INSIGHT Inventory has no alternate form.)

### **Internal Consistency**

Internal consistency can be measured by computing a coefficient alpha. This compares the response to each item of a trait to the response on every other item measuring that same trait. It answers the question as to how well the items are measuring the same trait. This is a statistical computation and does not require alternate forms or test-retest.

Reliability of test scores can vary by population make up, size of sample, and form of reliability computed. Results should be interpreted specific to this data.

Internal consistency reliabilities for all scales of the INSIGHT Inventory are listed in Table 6. They range from .71 to .85 with an average of .77. Test-retest reliability was examined on a group of 90 college students, with six weeks between administrations. These are listed in Table 7 and range from .54 to .82 with an average of .73.

Corrected item to scale correlations can be found in Table 8.

Nunnally (1978) states that reliability coefficients in the 70's and 80's are acceptable for purposes for which the INSIGHT Inventory is used. All the coefficient alphas are in that range, as are the test-retest reliabilities for the School Scales. Several of the Personal Scales' test-retest coefficients fall

below .70. This could suggest less stability for those scales, but even those results are based on a fairly small sample and should be viewed with this in mind. The coefficient alphas are based on a much larger sample and, in general, are quite high for this type of instrument.

Also listed in Table 6 are the standard errors of measurement. Based on the scale's standard deviation and its reliability, standard areas of measurement can be used to define a range around a person's score within which the "true" score is likely to fall. This allows us to say, for example, that since the S.E.M. for Work Scale D is 3.0, 19 times out of 20, when a person's test shows 32, their actual score would be between 29 and 35. We know that there is some variation in the way people fill out such instruments, thus the score on a particular day may not be their "True" score. The S.E.M. gives us a way of estimating how close to their true score a given score is likely to be.

| <b>Table 6</b>  |                          |          |          |          |                       |          |          |          |
|---|--------------------------|----------|----------|----------|-----------------------|----------|----------|----------|
| <b>Internal Consistency Reliability<br/>and Standard Error of Measurement</b> |                          |          |          |          |                       |          |          |          |
|   | <b>Work/School Style</b> |          |          |          | <b>Personal Style</b> |          |          |          |
|   | <b>A</b>                 | <b>B</b> | <b>C</b> | <b>D</b> | <b>A</b>              | <b>B</b> | <b>C</b> | <b>D</b> |
| Coeff. $\alpha$   | .73                      | .81      | .71      | .81      | .71                   | .82      | .71      | .85      |
| S.E.M.  | 3.1                      | 3.2      | 3.5      | 3.0      | 3.4                   | 3.2      | 3.5      | 2.9      |
| N= 1602 Adults and Students   |                          |          |          |          |                       |          |          |          |

| <b>Table 7</b>  |                     |          |          |          |                       |          |          |          |
|---|---------------------|----------|----------|----------|-----------------------|----------|----------|----------|
| <b>Test - Retest Reliability<br/>INSIGHT Inventory</b>  |                     |          |          |          |                       |          |          |          |
|   | <b>School Style</b> |          |          |          | <b>Personal Style</b> |          |          |          |
|   | <b>A</b>            | <b>B</b> | <b>C</b> | <b>D</b> | <b>A</b>              | <b>B</b> | <b>C</b> | <b>D</b> |
|   | .78                 | .75      | .82      | .76      | .64                   | .77      | .54      | .69      |
| Time period between administrations: Six weeks          |                     |          |          |          |                       |          |          |          |
| Sample: 90 Undergraduate students; University of Kansas |                     |          |          |          |                       |          |          |          |

Table 8

| Corrected item-scale correlations               |                   |                            |     |                          |     |
|---|-------------------|----------------------------|-----|--------------------------|-----|
|   | Item              | Correlation                |     |                          |     |
|   |                   | With Work/<br>School Scale |     | With Per-<br>sonal Scale |     |
| SCALE A<br><br>Getting One's<br>Way             | Competitive       | W1                         | .41 | P10                      | .30 |
|   | Demanding         | W5                         | .51 | P30                      | .52 |
|   | Domineering       | W9                         | .49 | P22                      | .52 |
|   | Forceful          | W13                        | .47 | P18                      | .49 |
|   | Convincing        | W16                        | .33 | P28                      | .31 |
|   | Strong Willed     | W18                        | .42 | P26                      | .44 |
|   | Decisive          | W22                        | .33 | P1                       | .26 |
|   | Intense           | W25                        | .37 | P5                       | .36 |
| SCALE B<br><br>Responding<br>to People          | Talkative         | W2                         | .57 | P16                      | .61 |
|   | Animated          | W7                         | .41 | P11                      | .42 |
|   | High Spirited     | W11                        | .62 | P13                      | .64 |
|   | Good Mixer        | W17                        | .57 | P7                       | .61 |
|   | Enthusiastic      | W21                        | .53 | P2                       | .55 |
|   | Life of the Party | W26                        | .63 | P20                      | .59 |
|   | Daring            | W27                        | .46 | P32                      | .45 |
|   | Charming          | W30                        | .48 | P24                      | .49 |
| SCALE C<br><br>Pacing<br>Activity               | Patient           | W3                         | .43 | P15                      | .47 |
|   | Serene            | W6                         | .40 | P8                       | .35 |
|   | Easygoing         | W10                        | .43 | P17                      | .45 |
|   | Mild              | W14                        | .45 | P21                      | .46 |
|   | Even Tempered     | W20                        | .44 | P25                      | .50 |
|   | Tolerant          | W24                        | .48 | P31                      | .48 |
|   | Restrained        | W28                        | .23 | P3                       | .12 |
|   | Laid-back         | W31                        | .37 | P29                      | .38 |
| SCALE D<br><br>Dealing<br>with Detail           | Accurate          | W4                         | .53 | P9                       | .56 |
|   | Perfectionistic   | W8                         | .54 | P27                      | .59 |
|   | Structured        | W12                        | .52 | P19                      | .58 |
|   | Systematic        | W15                        | .56 | P23                      | .61 |
|   | Exacting          | W19                        | .56 | P14                      | .65 |
|   | Detailed          | W23                        | .59 | P6                       | .62 |
|   | Particular        | W29                        | .43 | P4                       | .51 |
|   | Organized         | W32                        | .53 | P12                      | .56 |
| n = 1602 General population Adults and Students |                   |                            |     |                          |     |

## VI. VALIDITY

The **validity** of a test estimates what the test measures and how well it does this. Simply put, it answers the question, “Does the test measure what it says it measures?” Several different types of validity exist, each addressing a slightly different form of the above question. Several of those include:

**Face Validity:** Do the items appear to be related to what the test is about? In other words, would someone familiar with the area agree that the items on the “Dealing With Detail” scale have something to do with dealing with detail?

**Content Validity:** For a test such as the *INSIGHT Inventory*, face validity is closely related to content validity, or the degree to which an instrument fully measures the content of a subject matter or behavior. Typically, content validity is discussed in terms of item selection, and on the *INSIGHT Inventory*, items were developed by psychologists familiar with personality and its manifestations in the workplace and in school. Initial items were chosen by this method, and further statistical analyses were carried out to select the best items.

**Criterion Validity:** Is the test able to predict the behavior of an individual in a specific situation, i.e., can a profile associated with successful sales persons successfully predict the likelihood of someone who takes the test and receives that same profile becoming a successful salesperson? To this point, no studies have attempted to utilize the *INSIGHT Inventory* in a predictive fashion.

**Concurrent Validity:** How well a test relates to other measures with which it theoretically should relate.

**Discriminant Validity:** The converse of concurrent validity, how well a test consistently differs from tests with which it is theoretically different. This manual provides several measures of concurrent and discriminant validity for the *INSIGHT Inventory*.

**Construct Validity:** All of these types of validity taken together, along with measures of reliability and factor analyses, form what is called construct validity. This is the ability of an instrument to adequately define, measure, and predict a particular construct. The *INSIGHT Inventory* attempts to deal with four separate constructs, all important dimensions of personality in the workplace, in school, and at home. Establishing construct validity is a never ending process, with each new study adding or taking away from our confidence in a test’s construct validity.

The *INSIGHT Inventory* is still fairly young in terms of personality measures, and thus statistical data is still being collected. The data that are available, in terms of reliability, factor analysis, and concurrent and discriminant validity, are encouraging, and should lead to additional research projects in academic institutions and corporate settings.



As part of the validation process, the scores on the four scales of the *INSIGHT Inventory* have been compared to scores on other tests known to measure similar personality characteristics.

The personality and interest tests used in the validity research were:

**Myers-Briggs Type Indicator, MBTI  
Sixteen Personality Factors, 16PF  
Self-Directed Search, SDS**

A brief review of each inventory is provided to familiarize the reader with the purpose and format of each test. Pearson product moment correlations were used to compare each of the style scores of the *INSIGHT Inventory* with each trait measured by the other tests.

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### SIXTEEN PERSONALITY FACTORS (16PF)

The 16PF is a 187-item, multiple choice inventory first developed in 1949 by Raymond Cattell (1950). This personality test has undergone over thirty years of extensive research and norming and is used widely in organizations and educational institutions.

Results yield the following sixteen factor scores and descriptions of extreme scorers:

| <b>Factor</b>   |                                    |   |
|---|------------------------------------|---|
| Reserved, quiet, retiring,<br>private, detached             | <i>A - Warmth</i>                  | Outgoing, personal,<br>participating, sharing<br>of feelings            |
| Dull, concrete thinking                                     | <i>B - Intelligence</i>            | Bright, abstract,<br>conceptual   |
| Easily upset, affected by<br>feelings, easily distracted    | <i>C - Emotional<br/>Stability</i> | Calm, relaxed, satis-<br>fied, persistent                               |
| Accommodating,<br>modest, agreeable,<br>submissive          | <i>E - Dominance</i>               | Assertive, dominant,<br>aggressive, competi-<br>tive, forceful          |
| Reflective, serious,<br>pensive, inhibited                  | <i>F - Impulsivity</i>             | Expressive, lively,<br>enthusiastic, lots of<br>friends, enjoys parties |
| Nonconforming,<br>independent, unstruc-<br>tured, frivolous | <i>G - Conformity</i>              | Responsible,<br>conscientious, respect-<br>ful of authority, rigid      |
| Cautious, personally<br>less sure, hesitant                 | <i>H - Boldness</i>                | Venturesome, bold,<br>energetic, daring                                 |
| Tough minded,<br>practical, logical                         | <i>I - Sensitivity</i>             | Tender minded, sensi-<br>tive, artistic, senti-<br>mental               |

|  |                             |  |
|--|-----------------------------|--|
| Trusting, adaptable, free of jealousy, easygoing | <i>L - Suspiciousness</i>   | Guarded, suspecting, questioning, skeptical        |
| Practical, down to earth, dependable             | <i>M - Imagination</i>      | Creative, fanciful, absorbed, absentminded         |
| Forthright, natural, genuine, unpretentious      | <i>N - Shrewdness</i>       | Calculating, insightful, shrewd                    |
| Secure, assured, confident, self-satisfied       | <i>O - Insecurity</i>       | Apprehensive, anxious, concerned, moody            |
| Conservative, traditional, respectful            | <i>Q1- Radicalism</i>       | Liberal, innovative, experimenting, unconventional |
| Group-oriented, seeking others                   | <i>Q2- Self-Sufficiency</i> | Self-sufficient, loner, independent                |
| Uncontrolled, nonconforming, unplanned           | <i>Q3 - Self-Discipline</i> | Controlled, socially aware, organized              |
| Relaxed, tolerant, composed                      | <i>Q4 - Tension</i>         | Tense, easily frustrated                           |

#### SAMPLE ITEM

24. When talking I like:
- a) to say things just as they occur to me
  - b) in between
  - c) to get my thoughts well organized first

Table 9

Validity

| Pearson Correlation Coefficients  |    |                            |                              |                          |                                 |
|---|----|----------------------------|------------------------------|--------------------------|---------------------------------|
| <i>INSIGHT Inventory and 16PF - Sixteen Personality Factors</i>           |    |                            |                              |                          |                                 |
| INSIGHT – School Style  |    |                            |                              |                          |                                 |
| 16PF  |    | A                          | B                            | C                        | D                               |
|   |    | Indirect (-)<br>Direct (+) | Reserved (-)<br>Outgoing (+) | Urgent (-)<br>Steady (+) | Unstructured (-)<br>Precise (+) |
| Warmth  | A  | .23*                       | .25*                         | -.09                     | .17*                            |
| Intelligence  | B  | .10                        | -.08                         | -.06                     | .11                             |
| Emotional Stability   | C  | .13                        | .10                          | .08                      | .11                             |
| Dominance   | E  | .35*                       | .21*                         | -.22*                    | .00                             |
| Impulsivity   | F  | .26*                       | .48*                         | -.15                     | -.06                            |
| Conformity  | G  | .12                        | -.10                         | -.04                     | .40*                            |
| Boldness  | H  | .40*                       | .48*                         | -.16                     | .00                             |
| Sensitivity   | I  | -.20                       | -.09                         | .07                      | .04                             |
| Suspiciousness  | L  | .14                        | .03                          | -.19*                    | -.07                            |
| Imagination   | M  | -.15                       | -.03                         | .10                      | -.05                            |
| Shrewdness  | N  | .04                        | -.08                         | -.06                     | .23*                            |
| Insecurity  | O  | -.24                       | -.19*                        | -.12                     | -.08                            |
| Radicalism  | Q1 | .14                        | .11                          | .05                      | -.09                            |
| Self-Sufficiency  | Q2 | -.11                       | -.26*                        | .04                      | -.14                            |
| Self-Discipline   | Q3 | .07                        | -.17*                        | .21*                     | .35*                            |
| Tension   | Q4 | -.02                       | -.09                         | -.24*                    | -.05                            |
| INSIGHT – Personal Style  |    |                            |                              |                          |                                 |
| Warmth  | A  | .10                        | .15                          | .02                      | .16                             |
| Intelligence  | B  | -.01                       | -.15                         | -.04                     | .03                             |
| Emotional Stability   | C  | .02                        | .08                          | -.02                     | .05                             |
| Dominance   | E  | .30*                       | .20*                         | -.05                     | .05                             |
| Impulsivity   | F  | .11                        | .39*                         | -.07                     | -.04                            |
| Conformity  | G  | .18*                       | -.05                         | -.01                     | .46*                            |
| Boldness  | H  | .22*                       | .36*                         | -.11                     | -.06                            |
| Sensitivity   | I  | -.21*                      | -.02                         | .03                      | .06                             |
| Suspiciousness  | L  | .14                        | .14                          | -.10                     | -.03                            |
| Imagination   | M  | -.14                       | -.07                         | .07                      | -.07                            |
| Shrewdness  | N  | .09                        | -.17*                        | -.06                     | .28*                            |
| Insecurity  | O  | -.07                       | -.12                         | -.20*                    | -.04                            |
| Radicalism  | Q1 | .08                        | .10                          | .08                      | -.04                            |
| Self-Sufficiency  | Q2 | .11                        | -.15                         | .00                      | -.10                            |
| Self-Discipline   | Q3 | .07                        | -.22*                        | .18                      | .27*                            |
| Tension   | Q4 | .07                        | -.00                         | -.24*                    | -.09                            |
| N = 169 College Freshmen/Sophomores Westminster College, Fulton, MO, 1987 |    |                            |                              |                          |                                 |
| * = Significant at the .05 level  |    |                            |                              |                          |                                 |

**Discussion:** *Relationship between the 16PF and the INSIGHT Inventory*

Table 9 outlines correlations of the INSIGHT School and Personal Style Scales with the 16 PF scales.

---

|                 |   |
|-----------------|---|
| <b>Direct</b>   | The first scale (A) of the <i>INSIGHT Inventory</i> measures one's style of Influencing and yields two preferences, Direct and Indirect. Scale A correlated significantly with six of the 16 PF factors. A person having high Direct scores would be characterized by the 16PF as: outgoing, personal, participating (Factor A); assertive, dominant, aggressive, competitive, and forceful (Factor E); expressive, lively, enthusiastic, friendly (Factor F); responsible, respectful of authority, rigid (Factor G); and tough-minded, practical, logical (Factor I).                       |
| <b>Indirect</b> | The Indirect preference is identified by increasingly lower scores on scale A of the <i>INSIGHT Inventory</i> . Significant correlations on Scale A with the 16PF indicate the Indirect preference would be described by the 16PF as: detached, retiring, quiet and reserved (Factor A); accommodating, modest, agreeable, and submissive (Factor E); reflective, serious, pensive and inhibited (Factor F); non-conforming, independent and unstructured (Factor G); cautious, personally less sure, hesitant (Factor H); and tender-minded, sensitive, artistic and sentimental (Factor I). |

---

Scale B of the *INSIGHT Inventory* measures one's style of Responding. Opposite preferences are Outgoing and Reserved. High scores represent the Outgoing preference, low scores reflect the Reserved preference. Six significant correlations were found with the 16PF Factors.

|                 |  |
|-----------------|--|
| <b>Outgoing</b> | An Outgoing individual on INSIGHT would be described by the 16PF as: personable, participating, outgoing, and expressive (Factor A); assertive, dominant, aggressive, competitive, and forceful (Factor E); expressive, lively, enthusiastic, having lots of friends, enjoying parties (Factor F); venturesome, bold, energetic, daring (Factor H); secure, assured, confident, self-satisfied (Factor O); group-oriented, a joiner, seeking social approval and fashionable (Factor Q2); and impulsive, non-conforming, unplanned (Factor Q3).  |
| <b>Reserved</b> | In parallel fashion, comparing the opposite tendencies, Reserved individuals (low scores on INSIGHT) would be characterized by the 16PF as: quiet, retiring, private and detached (Factor A); accommodating, modest, agreeable and submissive (Factor E); introspective, reflective, serious, pensive, incommunicative (Factor F); emotionally cautious, personally less sure and hesitant (Factor H); apprehensive, anxious, concerned, and moody (Factor O); self-sufficient, a loner, seclusive, having a limited number of close friends and dissatisfied with group interaction (Factor Q2); and controlled, socially aware, and ordered (Factor Q3). |

Scale C on the *INSIGHT Inventory* measures one's style of Pacing. Opposite styles are Urgent and Steady. Low scores are indicative of Urgency; high score of Steadiness.

|               |  |
|---------------|--|
| <b>Steady</b> | High scores on INSIGHT Scale C (Steady) would be characterized by the 16PF as: accommodating, modest, agreeable and submissive (Factor E); trusting, understanding, permissive, tolerant, conciliatory and easygoing (Factor L); secure, self-satisfied, placid, resilient, and confident (Factor O); controlled, of strong will power, socially precise, persistent and considerate (Factor Q3); and relaxed, tolerant, and composed (Factor Q4). |
| <b>Urgent</b> | Low scores on Scale C, Urgent, are characterized by the 16 PF as: assertive, competitive, and forceful (Factor E); guarded, suspecting; questioning and skeptical (Factor L); apprehensive, anxious, concerned, and moody (Factor O); and tense, easily frustrated and nervous (Factor Q4).  |

Scale D on the *INSIGHT Inventory* measures ones preference for Organizing. Opposite preferences are Precise and Unstructured.

|                     |  |
|---------------------|--|
| <b>Precise</b>      | High scores on Scale D (Precise) would be characterized by the 16 PF as conforming, conscientious, respectful of authority, responsible and rigid (Factor G); calculating, insightful, and shrewd (Factor N); and controlled, self-disciplined, and organized (Factor Q3).                         |
| <b>Unstructured</b> | The Unstructured preference indicated by low scores on Scale D would be characterized by the 16 PF as non-conforming, independent, unstructured and frivolous (Factor G); forthright, natural, genuine, and unpretentious (Factor N); and uncontrolled, non-conforming, and unplanned (Factor Q3). |

The descriptions of the factors of the 16 PF that correlate with the scales on the *INSIGHT Inventory* match very closely with the descriptions provided by the *INSIGHT Inventory*. INSIGHT attempts to use only positive terms in its scale descriptions and the comparison with the 16 PF adds some descriptions which demonstrate the problems or negative sides to each preference. All in all, the 16 PF, which was developed through factor analysis much the same as was the *INSIGHT Inventory* and provides solid construct validity support for the INSIGHT scale descriptions.

## MYERS-BRIGGS TYPE INDICATOR

The MBTI is a multiple choice personality inventory which yields scores on four personality dimensions: Extroversion - Introversion (EI), Sensing - Intuition (SN), Thinking - Feeling (TF), and Judgement - Perception (JP). The MBTI was developed by Isabel B. Myers and Katherine C. Briggs to make the theory of psychological types described by C.G. Jung understandable and useful in people's lives.

The Abbreviated Version (form AV) was used in this study. This is a 50 item self-scoring version that can be taken in less time and has been statistically demonstrated to produce essentially the same scores as the longer Form G. (Kaiser, 1981; Macdaid, 1983, Myers, 1977).

The four scales measure the following psychological preferences:

|   |   |
|---|---|
| <b>Extroversion .....</b>   | <b>Introversion</b>   |
| preference for being with people, outgoing, talkative, open, sociable, communicative        | preference for internal focus, quiet, reserved, idea and thought-oriented, private                        |
| <b>Sensing .....</b>  | <b>Intuition</b>  |
| practical, concrete, trusts senses for information, focused on present and immediate        | theoretical, abstract, trusts hunches and intuition for information, future-minded                        |
| <b>Thinking .....</b>   | <b>Feeling</b>  |
| logical, rational, decisions made based on analytical thinking; cause and effect, objective | emotional, warm, makes decisions based on feelings and personal values, subjective                        |
| <b>Judging .....</b>  | <b>Perceiving</b>   |
| seeks closure, see things in black and white, likes decisions made, prefers closure         | open, seeks new information, sees things in shades of gray, postpones decision making, likes options open |

Scores are grouped into sixteen "type" categories which represent dichotomous classification of each of the four scales.

### 16 Types

|      |      |      |      |
|------|------|------|------|
| ISTJ | ISFJ | INFJ | INTJ |
| ISTP | ISFP | INFP | INTP |
| ESTP | ESFP | ENFP | ENTP |
| ESTJ | ESFJ | ENFJ | ENTJ |

Continuous scale scores were used in computing the relationship between each of the four MBTI scales and the four *INSIGHT Inventory* scales.

Table 10

**PEARSON CORRELATION COEFFICIENTS**  
Myers-Briggs Type Indicator with *INSIGHT Inventory* (Student)

|    | School Style             |                            |                        |                               |
|----|--------------------------|----------------------------|------------------------|-------------------------------|
|    | A<br>Indirect/<br>Direct | B<br>Reserved/<br>Outgoing | C<br>Urgent/<br>Steady | D<br>Unstructured/<br>Precise |
| EI | -.15                     | -.26*                      | .25*                   | -.00                          |
| SN | -.04                     | .20*                       | -.00                   | -.32*                         |
| TF | -.29*                    | -.02                       | .11                    | -.22*                         |
| JP | -.09                     | -.18*                      | .06                    | -.39*                         |

|    | Personal Style      |                       |                   |                          |
|----|---------------------|-----------------------|-------------------|--------------------------|
|    | Indirect/<br>Direct | Reserved/<br>Outgoing | Urgent/<br>Steady | Unstructured/<br>Precise |
| EI | -.15                | -.36*                 | .20*              | .00                      |
| SN | .00                 | .23*                  | -.03              | -.34*                    |
| TF | -.02                | .03                   | .02               | -.19*                    |
| JP | .07                 | -.06                  | -.02              | -.32*                    |

\* = Significant at .01 level

N = 241 167 males, 74 females; College Freshmen/Sophomores, Career Planning Class, University of Kansas, 1987, 1988

**Discussion:** *Relationship between Myers-Briggs Type indicator and the INSIGHT Inventory.*

Direct scores on the *INSIGHT Inventory* would be characterized by the MBTI as Thinking (logical, rational, preferring to use logical processes for decision-making, trusting data rather than feelings). In turn, Indirect scores on *INSIGHT* would relate to the Feeling preference on the MBTI being characterized as emotional, warm, and trusting feelings when making decisions.

The Outgoing style on *INSIGHT* would be characterized by the MBTI as Extroverted (expressive, talkative, open, outgoing, preferring to be with people), Intuitive (theoretical, abstract, trusting of hunches, future-minded), and Judging (seeking closure, seeing things in black and white, liking decisions closed). Reserved scores on *INSIGHT* relate to Introversion on the MBTI, being characterized as quiet, internally focused, reserved, idea and thought oriented, Sensing (practical, concrete, trusting senses for information, focused on the present and immediate) and Perceiving (open, seeking new information, seeing things in shades of gray, postponing decision making).

Scale three, Pacing Activity (Urgent/Steady), of the *INSIGHT Inventory* was related to MBTI preferences in the following way: Urgent scores on the *INSIGHT Inventory* would be characterized as Extroverted (preferring to be with people, talkative, sociable, and communicative). In turn Steady scores would relate to Introversion (preferring an internal focus, quiet, private, idea and thought oriented).

The fourth scale of the *INSIGHT Inventory* measures one's style of Dealing with Detail and produces two opposite tendencies, Unstructured and Precise. High scores on Dealing with Detail (Precise) would be characterized by the MBTI as Sensing (practical, concrete, trusting observable reality for information), Thinking (rational, analytical, objective, trusting logic over feelings), and Judging (seeking closure, seeing things in black and white, preferring to narrow options and make decisions). Low scores on Dealing with Detail (Unstructured) would be described by the MBTI as Intuitive (theoretical, abstract, trusting hunches and intuition for information) Feeling (emotional, warm, subjective, trusting feelings over logic) and Perception (open, seeking additional information, seeing things in shades of grey, and preferring to expand options).

The data obtained from this study indicate that the *INSIGHT Inventory* and MBTI measure some very similar personality dimensions. Each scale of the MBTI had a significant relationship with one or more of the *INSIGHT Inventory* scales. Therefore, the inventories could be used together to provide a double check of the strength of each personality preference or they might be used interchangeably when limited test taking time is available or when a slightly different framework or language would be helpful.

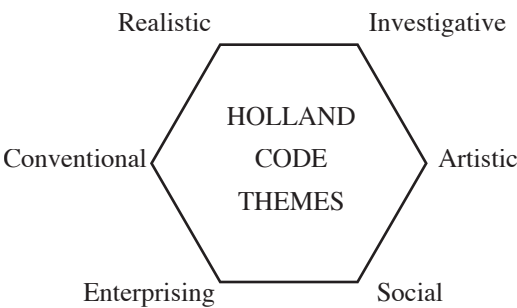


SELF-DIRECTED SEARCH (SDS)

The SDS was developed by John Holland, Ph.D. It is a self-scoring interest personality inventory designed to provide users with an understanding of their career interests in relation to their personality characteristics. The SDS is used widely in schools and colleges for career planning and vocational counseling and in corporate settings for career development.

The SDS was originally developed as an expansion of Holland's Vocational Preference Inventory (VPI) and has undergone numerous revisions since its 1974 publication. It is noted for the extensive research that it has generated and the practical usefulness of its concepts. The most thorough reference is Holland’s book, *Making Vocational Choices* (1985).

The SDS provides six scores which indicate the relative strength of the users' preference for each of six interest/personality themes. These are typically represented in a hexagon.



|                                 |  |
|---------------------------------|--|
| <b>R</b> - <i>Realistic</i>     | Preference for careers employing work with the hands, manual labor, outdoor activities. Personality descriptors: practical, stable, frank, materialistic, shy, normal and conforming.  |
| <b>I</b> - <i>Investigative</i> | Preference for careers involving study and investigation of the sciences and people. Personality descriptors: analytical, cautious, critical, intellectual, introspective, reserved, passive and precise.  |
| <b>A</b> - <i>Artistic</i>      | Preference for careers that entail creative, free, unsystematized activities. Personality descriptors: imaginative, disorderly, independent, introspective, non-conforming, intuitive and original.  |
| <b>S</b> - <i>Social</i>        | Preference for careers that involve helping, training, developing, caring, enlightening others and socializing. Personality descriptors: co-operative, friendly, generous, helpful, kind, persuasive, understanding and sociable.                |
| <b>E</b> - <i>Enterprising</i>  | Preference for careers that involve selling or leading others, power, status, achieving and risk-taking. Personality descriptors: acquisitive, adventurous, ambitious, argumentative, dependent, energetic, pleasure-seeking and self-confident. |
| <b>C</b> - <i>Conventional</i>  | Preference for careers that entail explicit, ordered, systematic manipulation of data, records and materials. Personality descriptors: conscientious, conforming, efficient, obedient, orderly, persistent and controlled.                       |

**Pearson Correlation Coefficients**  
Holland Self-directed Search with *INSIGHT Inventory*

| <b>School Style</b> |                             |                               |                           |                                  |
|---------------------|-----------------------------|-------------------------------|---------------------------|----------------------------------|
|                     | <b>Indirect/<br/>Direct</b> | <b>Reserved/<br/>Outgoing</b> | <b>Urgent/<br/>Steady</b> | <b>Unstructured/<br/>Precise</b> |
| Realistic           | .24*                        | .08                           | .11                       | -.04                             |
| Investigative       | -.02                        | -.08                          | .06                       | .15                              |
| Artistic            | .13                         | .29*                          | .02                       | -.02                             |
| Social              | .18*                        | .17                           | -.01                      | -.01                             |
| Enterprising        | .57*                        | .33*                          | -.36*                     | .24*                             |
| Conventional        | .19*                        | .05                           | -.12                      | .44*                             |

| <b>Personal Style</b> |                             |                               |                           |                                  |
|-----------------------|-----------------------------|-------------------------------|---------------------------|----------------------------------|
|                       | <b>Indirect/<br/>Direct</b> | <b>Reserved/<br/>Outgoing</b> | <b>Urgent/<br/>Steady</b> | <b>Unstructured/<br/>Precise</b> |
| Realistic             | .37*                        | -.03                          | .15                       | .05                              |
| Investigative         | .05                         | .01                           | .09                       | -.01                             |
| Artistic              | .16                         | .26*                          | .13                       | -.09                             |
| Social                | .07                         | .19*                          | .07                       | -.08                             |
| Enterprising          | .37*                        | .12                           | .06                       | .18*                             |
| Conventional          | .14                         | -.08                          | --.12                     | .36*                             |

N = 241 Undergraduate students, Career Planning Class, University of Kansas, 1988

\* significant at .01 level

NOTE: A positive correlation signifies a relationship between the Holland type and the following INSIGHT descriptors: Direct, Outgoing, Steady, Precise.

Individuals scoring Direct on Scale A of the *INSIGHT Inventory* would be described as Realistic (practical, stable, frank, materialistic) and Enterprising (adventurous, ambitious, argumentative, energetic and self-confident) on the SDS.

Individuals who score Outgoing are described as Enterprising (adventurous, ambitious, argumentative, energetic and self-confident) on the SDS.

Urgent scores on INSIGHT also were significantly related to Enterprising scores on the SDS. It is noteworthy that the Enterprising code of the SDS could be characterized by INSIGHT terms as Direct, Outgoing and Urgent. This closely resembles the language used by Holland in describing the Enterprising individual.

Individuals scoring Precise on INSIGHT would be described by the SDS as Conventional (conscientious, conforming, efficient, obedient, orderly, persistent and controlled).

The comparison of INSIGHT scores to the SDS produces some good concurrent and discriminant validity for the *INSIGHT Inventory*. This encourages its use in conjunction with the SDS in career planning. Since the inventories are different yet related, a user could gain helpful information using both.

## Summary on Validity

Descriptions of what each scale of the *INSIGHT Inventory* measures are provided below using data from the construct validity studies. To make this information as helpful as possible, the descriptions of each INSIGHT scale and its opposite preferences will first be given. These are followed by the descriptions of the traits from the 16-PF, MBTI and SDS that were significantly correlated with each INSIGHT preference.

### SCALE A

#### INFLUENCING

##### DIRECT

### Get their way by taking charge and pushing for action.

They:

Like to use power and authority to get things done  
 Are: Strong willed  
 Forceful and sometimes blunt  
 Project an air of self-confidence  
 Are assertive (tend to tell rather than persuade)  
 Will openly argue or debate their point of view or opinion  
 Are frank, will say what's on their mind

*They are stressed by:*

losing power, being controlled

*Their initial reaction to stress is to:*

get demanding, blunt, aggressive

When the significant correlations on the 16 PF, MBTI and SDS are brought together, the following descriptors emerge:

... outgoing, personal, participating (16 PF-A)  
 ... assertive, dominant, aggressive, competitive, forceful (16 PF-E)  
 ... expressive, lively, enthusiastic, and friendly (16 PF-F)  
 ... responsible, respectful of authority and rigid (16 PF-G)  
 ... venturesome, bold, energetic and daring (16 PF-H)  
 ... tough-minded, practical and logical (16 PF-H)  
 ... enterprising, self-confident, argumentative, ambitious, adventurous and energetic (SDS – Enterprising)  
 ... thinking, objective, rational, preferring to use logical processes for decision-making (MBTI-TF)

Most of these statements support those given by the *INSIGHT Inventory* for the DIRECT style. It is noteworthy that several of these descriptions also attribute some extroversion characteristics to DIRECT scores. When correlated, high DIRECT scores on INSIGHT were related to high OUTGOING scores on Scale B. It would appear that assertiveness and extroversion, while not exactly the same, tend to be related traits.

Low scores on Scale A indicate a preference for being INDIRECT. Individuals who score INDIRECT are described in the *INSIGHT Inventory* as:

### INDIRECT

#### **Get their way through strategy and careful planning.**

They:

- Lead through quiet, behind-the-scenes example
- Tend to under use their power preferring to negotiate and compromise
- Will delegate authority

Are: Modest

Non-intimidating

Agreeable

Approachable and non-demanding

*They are stressed by:*

conflict and confrontation

*Their initial reaction to stress is to:*

avoid, become hesitant and unsure

The following descriptions emerge from the correlations with the 16 PF, MBTI and SDS.

- ... reserved, quiet, retiring, private, detached (16 PF-A)
- ... accommodating, modest, agreeable, submissive (16 PF-E)
- ... reflective, serious, pensive, inhibited (16 PF-F)
- ... non-conforming, independent, unstructured (16 PF-G)
- ... cautious, personally less sure, hesitant (16 PF-H)
- ... tender-minded, sensitive, artistic, sentimental (16 PF-I)
- ... emotional, warm, trusts feelings when making decisions (MBTI-TF)

## SCALE B

## RESPONDING

## OUTGOING

**Direct their energy outward toward people and activities.**

They:

Get results accomplished through persuading people

Are: Talkative and openly friendly

Enthusiastic and expressive

Enjoy being the center of attention

Are energized by other people and lots of stimulus

Like to talk things out – actually talk as a way of thinking through

their thoughts

Are playful and at ease with others

*They are stressed by:*

disapproval, not being liked

*Their initial reaction to stress is to:*

become emotionally explosive and upset or withhold usual friendliness

When the correlations with the 16 PF, MBTI, and SDS are analyzed, the following descriptions emerge:

... personal, participating, sharing of feelings, attentive to people, laughs readily (16 PF–A)

... assertive, dominant, aggressive, competitive (16 PF–E)

... expressive, lively, enthusiastic, having lots of friends, enjoying parties, animated (16 PF–F)

... cheerful, assured, confident, self-satisfied (16 PF–O)

... talkative, outgoing, expressive, open, animated (MBTI–EI)

... intuitive, trusting of hunches, abstract (MBTI–SN)

... judging, seeking closure, seeing things in black and white (MBTI–JP)

... enterprising, self-confident, argumentative, ambitious, adventurous,

## RESERVED

**Turn their energy inward to the world of ideas and thoughts**

They:

Prefer to interact with others one-to-one or in small groups

Are: Quiet in large groups

Self-contained

Recharge their batteries by being away from noise and people

Tend to choose careers that allow them to think, create, and work alone or in small groups

*They are stressed by:*

group pressure, being public or center of attention, lack of private time

*Their initial reaction to stress is to:*

withdraw and become overly quiet

When significant correlations with the 16 PF, MBTI, and SDS are summarized, the following descriptions result:

... reserved, quiet, retiring, private, detached (16 PF-A)

... accommodating, modest, agreeable, submissive (16 PF-E)

... reflective, serious, pensive, inhibited (16 PF-F)

... cautious, personally less sure, hesitant (16 PF-H)

... apprehensive, anxious, concerned, moody (16 PF-O)

... self-sufficient, loner, independent (16 PF-Q2)

... controlled, socially aware, organized (16 PF-Q3)

... introverted, preference for internal focus, quiet, idea and thought oriented, private (MBTI-EI)

... sensing, practical, concrete, trusting senses for information (MBTI-SN)

... perceiving, open, seeking new information for decisions, seeing things in shades of grey (MBTI-JP)

... not likely to be enterprising or seeking of power, not likely to enjoy selling or promoting (SDS – Enterprising)

## SCALE C

## PACING

The third scale of *INSIGHT Inventory* is a measure of the pace, speed or rhythm with which people act and burn energy. Opposite preferences are STEADY and URGENT.

## STEADY

**Burn energy in an even-paced, very consistent manner**

They:

Get things done by “hanging in there,” being persistent and determined

Are: Even-tempered

Patient and easygoing

Consider all options when deciding

Will wait for the right time for their move, “Timing is everything”

Have a long fuse – don’t get angry easily

Take time to patiently listen to others

*They are stressed by:*

pressure to make fast decisions, unpredictable change

*Their initial reaction to stress is to:*

become anxious and nervous when unusually calm or may hesitate to make decisions

When significant correlations with the 16 PF, MBTI, and SDS are summarized, the following descriptions of the STEADY preference emerge:

... accommodating, modest, agreeable (16 PF–A)

... trusting, adaptable, free of jealousy, easygoing (16 PF–L)

... conservative, traditional, respectful (16 PF–Q1)

... controlled, self-disciplined, organized (16 PF–Q3)

... relaxed, tolerant, composed (16 PF–Q4)

... introverted, quiet, private, idea and thought oriented (MBTI–EI)

... not likely to be enterprising or seeking of power, not likely to enjoy selling or promoting (SDS–E)

**URGENT****Burn their energy in a fast-paced, restless manner**

They:

Like change, variety, action, are quick to decide  
 Appear to always be in a hurry - like to do things fast  
 Dislike routines - seek variety  
 Are instantaneous and can be impulsive  
 Often work best under the pressure of time  
 Are:    Reactive  
           Impulsive  
           Restless

*They are stressed by:*

lack of action, indecision, delays

*Their initial reaction to stress is to:*

get impatient, short-tempered, frustrated

When significant correlations with the 16 PF, MBTI, and SDS are summarized, the following descriptions of the URGENT preference for Pacing Activity emerge:

... assertive, competitive, forceful (16 PF-E)  
 ... suspecting, questioning, skeptical (16 PF-L)  
 ... liberal, innovative, experimenting (16 PF-Q1)  
 ... uncontrolled, non-conforming, unplanned (16 PF-Q3)  
 ... tense, easily frustrated (16 PF-Q4)  
 ... extroverted, talkative, preferring to be with people, social (MBTI-EI)  
 ... enterprising, seeking status and power, enjoy promoting and selling (SDS-E)



## SCALE D

## ORGANIZING

The fourth scale of the *INSIGHT Inventory* measures an individual's manner of ordering or structuring the world.

## PRECISE

**Strive to have their world very planned, predictable and ordered.**

They:

Focus on being right, want to perform as correctly and flawlessly as possible

Are: Systematic  
Perfectionistic  
Meticulous

Like to make lists and will follow the list

Are likely to read directions and follow rules

Get satisfaction and feel pride in having things organized

*They are stressed by:*

making errors, not being able to get organized

*Their initial reaction to stress is to:*

become perfectionistic, compulsive and overly structured.

When the significant correlations with the 16 PF, MBTI and SDS are summarized, the following descriptions of the PRECISE preference emerge:

- ... reserved, quiet, retiring, private (16 PF-A)
- ... responsible, conscientious, respectful of authority, rigid, conforming (16 PF-G)
- ... calculating, insightful, shrewd (16 PF-N)
- ... controlled, self-disciplined, organized (16 PF-Q3)
- ... sensing, practical, concrete, trusting observable reality (MBTI-SI)
- ... thinking, rational, analytical, objective, using logic for decision making (MBTI-TF)
- ... judging, seek closure, see things in black and white, like decisions made (MBTI-JP)
- ... conventional, ordered, conforming, efficient, persistent and controlled (SDS-C)

**UNSTRUCTURED**

**Strive to have their world open, unstructured, non-conforming, aren't detail oriented – will delegate detail if at all possible**

They:

Prefer to act first and attend to details later

Are: Non-conforming

Flexible

Will accept the risk of action without approval

Will proceed on projects before carefully reading directions – enjoy just “figuring it out”

Are able to tolerate ambiguity – sometimes even prefer it

*They are stressed by:*

too many rules, excessive details

*Their initial reaction to stress is to:*

look for loopholes in rules, operate independently

When significant correlations with the 16 PF, MBTI, and SDS were summarized, the following descriptions of the UNSTRUCTURED preference emerged:

... outgoing, personal, participating (16 PF-A)

... non-conforming, independent, unstructured (16 PF-G)

... forthright, natural, genuine, unpretentious (16 PF-N)

... uncontrolled, non-conforming, unplanned (16 PF-Q3)

... intuitive, theoretical, abstract, trusting hunches (MBTI-SN)

... emotional, warm, subjective, trusting feelings over logic (MBTI-TF)

... perceiving, open, seek new information, see things in shades of grey, postpone decision-making, like options open (MBTI-JP)

... not conventional, non-conforming, less structured, not likely to enjoy ordering and organizing (SDS-C)

## Summary

In summary, when *INSIGHT Inventory* scales are compared to three well-established measures of personality type, traits and interests, consistent support is garnered for the constructs measured by the *INSIGHT Inventory*. These studies do not unequivocally establish construct validity, but they begin such a process and strengthen the case for the instrument's utility.

Anecdotal evidence of the usefulness of the *INSIGHT Inventory* and its supporting materials gives further support to its utility, particularly in team building and other interpersonal situations where appreciation of different styles is called for. Over time, further studies will help expand and strengthen the validity data.

## VII. NORMING

Norms provide a basis for interpreting a person's score in relation to a defined group of people. A person's score has meaning primarily in terms of its relation to how other people score.

For example, a second grader's score of 12 on a spelling test of 20 words says very little. If, however, you learned that the child was in a class for the gifted and the mean (average) score was 18 with 90% of the students scoring within 2 points of the mean, then you could conclude that the child did not do very well compared to those gifted students. If, however, you learned that this child was in a normal second grade class and the average score was 6 with most students scoring within 2 points of the mean, you could safely conclude that this same child, with a score of 12, did exceptionally well compared to their classmates.

To understand the meaning of test scores, normative data are essential, and an inventory should be suspect if norms are not provided. However, normative data aren't everything. Norms do not tell what is being measured. Norms do not tell how well something is being measured. But, norms do describe what a person's score means in relation to other people's scores. Statistical norms often include percentile scores with median, first and third quartiles ( $Q_1$  and  $Q_3$ ), means, and standard deviations.

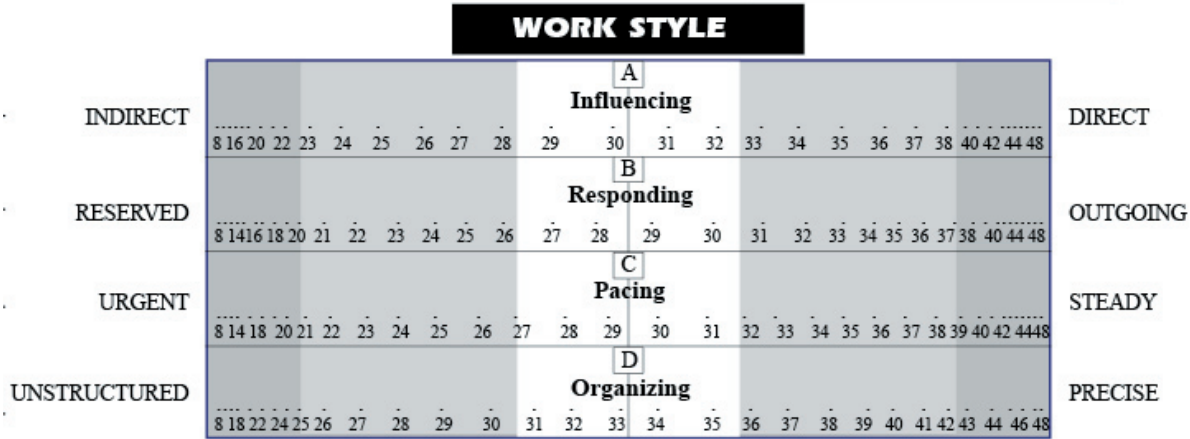
### Percentiles

Percentile scores are expressed in terms of the percentage of persons in the samples who fall below a given test score. A percentile indicates the individual's relative position in the sample. For example, if an inventory score of 31 is given the rank of 40th percentile, this would mean 60% of the other people in the sample scored greater than 30 and 40% scored less than 30.

The profile charts for the *INSIGHT Inventory* scores are constructed with the distribution of raw scores placed according to their percentile location. This makes it possible for test takers to plot their scores directly on the chart and see the percentile relationships without actually converting the score to a percentile. The advantage of this is that percentiles are easily understood and can be used equally well with different populations.

The chief drawback of percentile scores arises from the marked inequality of their units, especially at the extremes of the distribution. If the distribution of raw scores approximates the normal curve (as is the case with the *INSIGHT Inventory*), the score differences near the center are exaggerated in percentile transformation, whereas raw scores near the ends of the distribution are greatly shrunk (Anastasi, 1976). This explains why the points on the profile charts are irregularly spaced with the tight grouping of points on either end and the wide spacing near the center.

The example below shows how irregular spacing develops when raw scores are charted in relation to their percentile equivalent. Refer however to the norm tables and most recent printing of the participant's booklets for the most up-to-date normative data.



The following tables present norms for Adult and School samples (Tables 12 and 13), and for Adult and School samples broken down by gender (Tables 14 and 15). For most purposes, the combined norms are adequate since differences are not large. Combined norms are utilized on the materials provided for charting.

When norms were developed for the Style Feedback Inventory (ratings done on persons other than oneself), they were found to be very similar to those for the Work Style and Personal Style Inventories. For consistency in use, the norms are close enough to be considered equal.

Table 12

Norming

## Adult Percentile Scores from Raw Scores

|                     |    | Percentile |  |    |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |
|---------------------|----|------------|--|----|----|----|----|----|----|----|----|----|----|--|----|----|----|----|----|----|----|----|
|                     |    | 1          | 5  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60   | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 99 |
| Work Style          |    |            |  |    |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |
| Scale               |    |            |  |    |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |
| A                   | 18 | 21         | 24   | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 30 | 31 | 32 | 33   | 34 | 35 | 36 | 37 | 38 | 40 | 46 |    |
| B                   | 13 | 17         | 20   | 22 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 29 | 30 | 31   | 32 | 33 | 34 | 36 | 37 | 39 | 45 |    |
| C                   | 14 | 19         | 21   | 23 | 24 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 32   | 33 | 34 | 35 | 37 | 39 | 41 | 44 |    |
| D                   | 20 | 24         | 26   | 27 | 28 | 29 | 30 | 31 | 32 | 32 | 33 | 34 | 34 | 36   | 37 | 38 | 40 | 42 | 44 | 46 | 48 |    |
| Personal Style      |    |            |  |    |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |
| Scale               |    |            |  |    |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |
| A                   | 15 | 20         | 22   | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 30 | 31 | 32   | 33 | 34 | 35 | 37 | 38 | 41 | 46 |    |
| B                   | 13 | 18         | 20   | 22 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 31 | 31   | 33 | 34 | 35 | 37 | 38 | 41 | 46 |    |
| C                   | 14 | 19         | 22   | 23 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 31 | 32   | 33 | 34 | 36 | 38 | 39 | 43 | 47 |    |
| D                   | 12 | 19         | 23   | 25 | 26 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 32 | 33   | 34 | 35 | 36 | 38 | 42 | 46 | 48 |    |
|                     |    |            |  |    |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |
| Sample composition: |    | 13         | Bank commercial lending officers                   |    |    |    |    |    |    |    |    |    | 65 | Elementary teachers                              |    |    |    |    |    |    |    |    |
|                     |    | 76         | Mid-level managers - corporate headquarters office |    |    |    |    |    |    |    |    |    | 21 | Supervisors - automotive assembly plant          |    |    |    |    |    |    |    |    |
| N = 589 Adults      |    | 12         | Home center hardware sales staff                   |    |    |    |    |    |    |    |    |    | 99 | Auto assembly plant employees                    |    |    |    |    |    |    |    |    |
|                     |    | 24         | Protestant ministers                               |    |    |    |    |    |    |    |    |    | 9  | Hotel hospitality                                |    |    |    |    |    |    |    |    |
|                     |    | 12         | Technical trainers - engineering firm              |    |    |    |    |    |    |    |    |    | 67 | Public utility employees                         |    |    |    |    |    |    |    |    |
|                     |    | 10         | Engineers  |    |    |    |    |    |    |    |    |    | 22 | Clerical/Operational employees - Fortune 100 Co. |    |    |    |    |    |    |    |    |
|                     |    | 8          | Credit Supervisors                                 |    |    |    |    |    |    |    |    |    | 34 | Fish products packaging/warehousing              |    |    |    |    |    |    |    |    |
|                     |    | 16         | Credit Union managers                              |    |    |    |    |    |    |    |    |    | 27 | Highway maintenance employees                    |    |    |    |    |    |    |    |    |
|                     |    | 11         | Mental Health professionals                        |    |    |    |    |    |    |    |    |    | 35 | Small Business managers and spouses              |    |    |    |    |    |    |    |    |
|                     |    | 4          | Jazz musicians                                     |    |    |    |    |    |    |    |    |    | 19 | Manufacturing employees                          |    |    |    |    |    |    |    |    |
|                     |    | 3          | College English professors                         |    |    |    |    |    |    |    |    |    | 2  | Occupation unavailable                           |    |    |    |    |    |    |    |    |

**Table 13**

## Student Percentile Scores from Raw Scores

*Percentile*

|                       | <i>1</i> | <i>5</i> | <i>10</i> | <i>15</i> | <i>20</i> | <i>25</i> | <i>30</i> | <i>35</i> | <i>40</i> | <i>45</i> | <i>50</i> | <i>55</i> | <i>60</i> | <i>65</i> | <i>70</i> | <i>75</i> | <i>80</i> | <i>85</i> | <i>90</i> | <i>95</i> | <i>99</i> |
|-----------------------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Scale</b>          |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| <b>School Style</b>   |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| <b>A</b>              | 17       | 21       | 23        | 25        | 26        | 27        | 28        | 29        | 29        | 30        | 31        | 32        | 33        | 33        | 34        | 35        | 37        | 38        | 40        | 42        | 46        |
| <b>B</b>              | 15       | 20       | 23        | 25        | 26        | 27        | 29        | 29        | 30        | 31        | 32        | 33        | 34        | 36        | 37        | 38        | 39        | 40        | 42        | 44        | 46        |
| <b>C</b>              | 16       | 20       | 23        | 25        | 26        | 27        | 28        | 28        | 29        | 30        | 31        | 31        | 32        | 33        | 34        | 35        | 36        | 37        | 38        | 41        | 45        |
| <b>D</b>              | 15       | 20       | 23        | 25        | 26        | 27        | 28        | 29        | 30        | 30        | 31        | 32        | 33        | 34        | 35        | 36        | 37        | 39        | 41        | 44        | 48        |
| <b>Scale</b>          |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| <b>Personal Style</b> |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| <b>A</b>              | 18       | 22       | 24        | 25        | 26        | 27        | 28        | 29        | 30        | 31        | 31        | 32        | 33        | 34        | 34        | 36        | 37        | 38        | 40        | 43        | 46        |
| <b>B</b>              | 15       | 23       | 25        | 27        | 28        | 29        | 30        | 31        | 32        | 33        | 34        | 35        | 37        | 38        | 39        | 40        | 41        | 43        | 44        | 46        | 48        |
| <b>C</b>              | 16       | 19       | 22        | 24        | 25        | 26        | 27        | 28        | 29        | 29        | 30        | 31        | 32        | 33        | 33        | 34        | 35        | 37        | 39        | 41        | 44        |
| <b>D</b>              | 12       | 18       | 20        | 23        | 24        | 25        | 26        | 27        | 28        | 29        | 29        | 30        | 31        | 32        | 33        | 34        | 36        | 38        | 40        | 44        | 48        |

Sample composition: 72 College freshmen and sophomores – University of Kansas – Career Development class

169 College freshmen and sophomores – Westminster College

N = 1031 students 59 High School students – Blue Valley, Missouri

22 4H members – high school juniors/seniors Missouri

709 Leadership camp participants – American Youth Foundation

**Table 14**  
Percentile Scores – Gender Differences for Adult Sample

| Male-Adult Percentile Scores                           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| <i>Percentile</i>                                      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|  | 1  | 5  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 99 |
| <b>Work Style</b>                                      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>Scale</b>   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>A</b>   | 18 | 22 | 24 | 26 | 27 | 28 | 28 | 29 | 29 | 30 | 31 | 32 | 32 | 33 | 34 | 35 | 36 | 37 | 39 | 41 | 48 |
| <b>B</b>   | 14 | 17 | 20 | 22 | 23 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 30 | 31 | 32 | 34 | 35 | 37 | 39 | 42 |
| <b>C</b>   | 14 | 19 | 21 | 24 | 24 | 26 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | 32 | 30 | 34 | 36 | 37 | 39 | 42 | 44 |
| <b>D</b>   | 20 | 24 | 26 | 27 | 28 | 29 | 30 | 31 | 31 | 32 | 32 | 33 | 34 | 35 | 36 | 38 | 40 | 41 | 44 | 46 | 48 |
| <b>Personal Style</b>                                  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>Scale</b>   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>A</b>   | 15 | 20 | 23 | 25 | 26 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | 32 | 32 | 33 | 34 | 35 | 37 | 38 | 40 | 48 |
| <b>B</b>   | 12 | 17 | 20 | 22 | 23 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 36 | 38 | 40 | 46 |
| <b>C</b>   | 15 | 20 | 23 | 24 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 37 | 38 | 40 | 43 | 48 |
| <b>D</b>   | 15 | 21 | 24 | 25 | 26 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 32 | 34 | 35 | 36 | 38 | 40 | 44 | 46 | 48 |
| Norms: General Population Sample: 403 males; July 1988 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

| Female-Adult Percentile Scores                           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| <i>Percentile</i>  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|  | 1  | 5  | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 99 |
| <b>Work Style</b>  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>Scale</b>   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>A</b>   | 14 | 19 | 21 | 23 | 25 | 26 | 27 | 27 | 28 | 29 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 39 | 43 |
| <b>B</b>   | 9  | 17 | 21 | 23 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 32 | 33 | 34 | 35 | 36 | 37 | 39 | 41 | 48 |
| <b>C</b>   | 11 | 19 | 21 | 22 | 23 | 25 | 26 | 26 | 27 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 34 | 38 | 41 | 46 |
| <b>D</b>   | 14 | 25 | 26 | 27 | 28 | 30 | 30 | 32 | 32 | 33 | 34 | 35 | 36 | 38 | 38 | 40 | 42 | 44 | 46 | 46 | 48 |
| <b>Personal Style</b>                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>Scale</b>   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| <b>A</b>   | 13 | 17 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 32 | 32 | 35 | 36 | 38 | 42 | 46 |
| <b>B</b>   | 13 | 19 | 21 | 23 | 24 | 26 | 27 | 28 | 29 | 30 | 30 | 31 | 32 | 34 | 35 | 36 | 37 | 38 | 40 | 44 | 47 |
| <b>C</b>   | 12 | 20 | 21 | 23 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 30 | 31 | 32 | 33 | 35 | 37 | 38 | 41 | 47 |
| <b>D</b>   | 11 | 16 | 24 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 30 | 32 | 32 | 34 | 36 | 37 | 39 | 42 | 44 | 48 | 48 |
| Norms: General Population Sample: 144 Females; July 1988 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

**Table 15**  
Percentile Scores – Gender Differences for School Sample

| Male Student Percentile Scores                 |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|--|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <i>Percentile</i>                              |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|  | <i>1</i> | <i>5</i> | <i>10</i> | <i>15</i> | <i>20</i> | <i>25</i> | <i>30</i> | <i>35</i> | <i>40</i> | <i>45</i> | <i>50</i> | <i>55</i> | <i>60</i> | <i>65</i> | <i>70</i> | <i>75</i> | <i>80</i> | <i>85</i> | <i>90</i> | <i>95</i> | <i>99</i> |
| <b>Males – School Style</b>                    |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| <b>A</b>                                       | 19       | 22       | 25        | 26        | 27        | 28        | 29        | 29        | 30        | 31        | 31        | 32        | 33        | 34        | 35        | 36        | 37        | 38        | 40        | 42        | 46        |
| <b>B</b>                                       | 15       | 20       | 23        | 24        | 26        | 27        | 28        | 29        | 29        | 30        | 31        | 32        | 33        | 34        | 35        | 36        | 38        | 39        | 41        | 44        | 46        |
| <b>C</b>                                       | 16       | 21       | 24        | 25        | 26        | 27        | 28        | 29        | 29        | 30        | 31        | 32        | 33        | 33        | 34        | 35        | 36        | 38        | 39        | 43        | 48        |
| <b>D</b>                                       | 17       | 21       | 24        | 25        | 26        | 27        | 28        | 29        | 30        | 30        | 31        | 32        | 33        | 33        | 34        | 35        | 36        | 38        | 40        | 44        | 48        |
| <b>Males – Personal Style</b>                  |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| <b>A</b>                                       | 20       | 23       | 25        | 26        | 27        | 28        | 29        | 29        | 30        | 31        | 32        | 32        | 33        | 34        | 35        | 36        | 37        | 38        | 40        | 43        | 46        |
| <b>B</b>                                       | 15       | 23       | 25        | 26        | 28        | 29        | 30        | 30        | 31        | 32        | 33        | 34        | 35        | 37        | 38        | 40        | 41        | 42        | 44        | 46        | 48        |
| <b>C</b>                                       | 17       | 21       | 23        | 26        | 26        | 27        | 28        | 29        | 30        | 30        | 31        | 32        | 33        | 33        | 34        | 35        | 36        | 38        | 39        | 41        | 45        |
| <b>D</b>                                       | 12       | 18       | 22        | 24        | 25        | 26        | 27        | 27        | 28        | 29        | 29        | 30        | 31        | 32        | 33        | 34        | 36        | 38        | 40        | 44        | 48        |
| Norms: General Student Sample; N = 355 Males   |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| Female Student Percentile Scores               |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| <i>Percentile</i>                              |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|  | <i>1</i> | <i>5</i> | <i>10</i> | <i>15</i> | <i>20</i> | <i>25</i> | <i>30</i> | <i>35</i> | <i>40</i> | <i>45</i> | <i>50</i> | <i>55</i> | <i>60</i> | <i>65</i> | <i>70</i> | <i>75</i> | <i>80</i> | <i>85</i> | <i>90</i> | <i>95</i> | <i>99</i> |
| <b>Females – School Style</b>                  |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| <b>A</b>                                       | 17       | 21       | 23        | 25        | 26        | 26        | 27        | 28        | 29        | 30        | 31        | 31        | 32        | 33        | 34        | 35        | 36        | 38        | 39        | 42        | 44        |
| <b>B</b>                                       | 14       | 20       | 24        | 26        | 27        | 28        | 29        | 30        | 31        | 32        | 33        | 34        | 36        | 36        | 37        | 39        | 40        | 41        | 42        | 44        | 47        |
| <b>C</b>                                       | 16       | 19       | 22        | 24        | 25        | 26        | 27        | 28        | 28        | 29        | 30        | 31        | 32        | 32        | 33        | 34        | 35        | 36        | 38        | 40        | 44        |
| <b>D</b>                                       | 15       | 20       | 23        | 25        | 26        | 27        | 28        | 29        | 30        | 30        | 31        | 32        | 33        | 34        | 35        | 37        | 38        | 39        | 42        | 44        | 48        |
| <b>Females – Personal Style</b>                |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| <b>A</b>                                       | 17       | 20       | 23        | 24        | 26        | 26        | 28        | 29        | 30        | 31        | 31        | 32        | 33        | 33        | 34        | 35        | 37        | 39        | 40        | 43        | 46        |
| <b>B</b>                                       | 14       | 23       | 26        | 27        | 29        | 30        | 31        | 32        | 33        | 34        | 35        | 37        | 38        | 39        | 40        | 41        | 42        | 43        | 44        | 46        | 48        |
| <b>C</b>                                       | 13       | 18       | 21        | 22        | 24        | 25        | 26        | 26        | 27        | 28        | 29        | 30        | 31        | 31        | 32        | 33        | 34        | 36        | 38        | 40        | 44        |
| <b>D</b>                                       | 12       | 17       | 20        | 22        | 24        | 25        | 26        | 27        | 28        | 28        | 29        | 30        | 31        | 32        | 33        | 34        | 36        | 37        | 39        | 43        | 48        |
| Norms: General Student Sample; N = 362 Females |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |



## Means

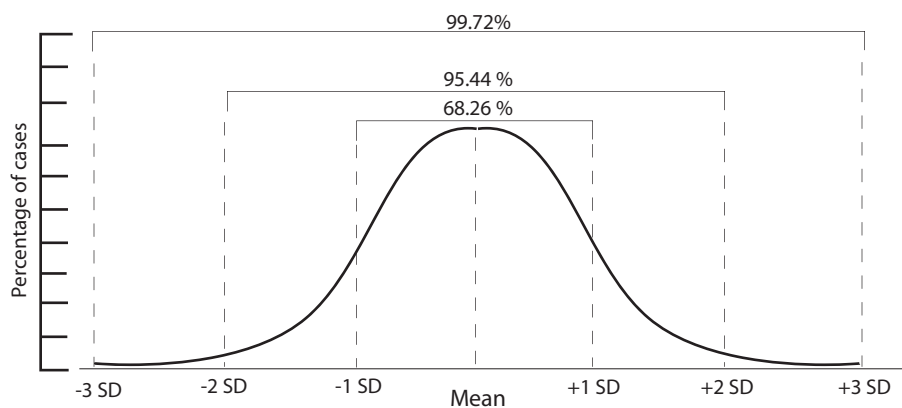
The **mean** of a set of scores is their arithmetic average. It is found by adding all the scores in a sample and dividing by the total number of subjects in that sample.

The *INSIGHT Inventory* does not produce a single mean score. It is composed of eight individual scales, four Work (or School) Style scales and four Personal Style scales. Therefore, eight scale means exist.

## STANDARD DEVIATIONS

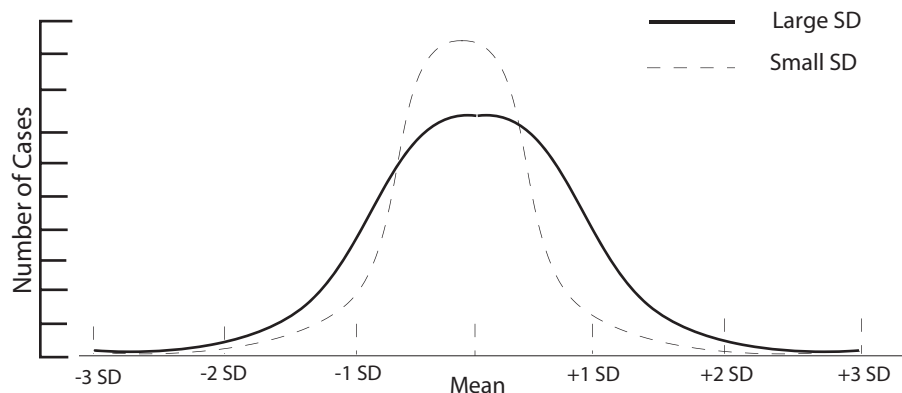
Another type of normative statistic is the **standard deviation**. This is a measure of variability or dispersion of scores.

The bell-shaped curve is often thought of when the term standard deviation is used. The bell curve represents a normal distribution, i.e., the distribution that occurs when the largest number of cases cluster in the center of the range and the numbers drop off gradually in both directions as the extremes are approached. For a perfectly normal distribution, approximately two-thirds (68.3 percent) of the scores are within the range from one standard deviation below the mean to one standard deviation above the mean.



Percentage Distribution of Cases in a Normal Curve

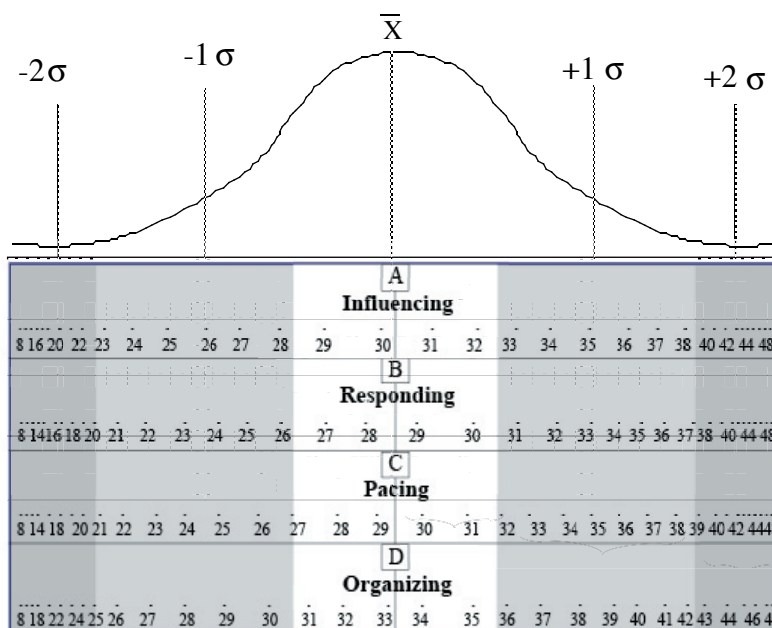
The more scores that cluster around the mean, the smaller the standard deviation. This would make the distribution of scores more peaked or pointed. The larger the standard deviation, the flatter the distribution curve.



Frequency Distributions with the Same Mean but Different Variability.

To create a simplified model for participants to use to understand the relevance of their scores, halftones of varying intensities have been overlaid on the graphs. Although the standard deviation of each scale varies, the center of each tonal area is approximately one standard deviation from the mean. The mean is located in the center of the unshaded area. Plus or minus one standard deviation falls in the center of the light gray tone and two standard deviations falls approximately in the center of the dark gray tone.

The graphs on which scores on the *INSIGHT Inventory* are plotted is a combined sex average. There are small but noteworthy variations between gender. These variations are provided in Tables 16 and 17.



Means and standard deviations are listed for each of the four INSIGHT scales for both Adult and School samples in Tables 16 and 17. Those same tables also list means and standard Deviations broken down by gender.

**Table 16**

| Means and Standard Deviations – Adult Sample |           |            |       |       |                |       |       |
|--|-----------|------------|-------|-------|----------------|-------|-------|
| Scale  |           | Work Style |       |       | Personal Style |       |       |
|  |           | Men        | Women | Total | Men            | Women | Total |
| <b>A</b>                                     | $\bar{X}$ | 31.2       | 29.6  | 30.8  | 30.4           | 28.7  | 30.0  |
|  | S.D.      | 5.7        | 6.0   | 5.8   | 6.2            | 6.8   | 6.3   |
| <b>B</b>                                     | $\bar{X}$ | 28.3       | 30.3  | 28.8  | 28.6           | 30.7  | 29.1  |
|  | S.D.      | 6.2        | 7.3   | 6.5   | 6.8            | 7.4   | 6.9   |
| <b>C</b>                                     | $\bar{X}$ | 29.9       | 28.7  | 29.5  | 30.7           | 29.3  | 30.1  |
|  | S.D.      | 6.6        | 6.5   | 6.5   | 6.8            | 6.7   | 6.8   |
| <b>D</b>                                     | $\bar{X}$ | 33.5       | 34.8  | 33.8  | 31.8           | 31.9  | 31.6  |
|  | S.D.      | 6.4        | 7.1   | 6.6   | 7.3            | 8.2   | 7.5   |

Men N = 403 General population working adults.

Women N = 144 General population working adults.

Total N = 587 (gender not available for all cases)

**Table 17**

| Means and Standard Deviations – Student Sample |           |            |       |       |                |       |       |
|--|-----------|------------|-------|-------|----------------|-------|-------|
| Scale  |           | Work Style |       |       | Personal Style |       |       |
|  |           | Men        | Women | Total | Men            | Women | Total |
| <b>A</b>                                       | $\bar{X}$ | 32.0       | 30.7  | 31.3  | 32.1           | 31.2  | 31.6  |
|  | S.D.      | 5.9        | 6.2   | 6.1   | 5.8            | 6.5   | 6.2   |
| <b>B</b>                                       | $\bar{X}$ | 31.5       | 33.1  | 32.4  | 33.8           | 35.0  | 34.4  |
|  | S.D.      | 7.1        | 7.3   | 7.3   | 7.3            | 7.4   | 7.4   |
| <b>C</b>                                       | $\bar{X}$ | 31.2       | 30.1  | 30.6  | 31.1           | 29.0  | 30.1  |
|  | S.D.      | 6.3        | 6.2   | 6.2   | 6.0            | 6.5   | 6.4   |
| <b>D</b>                                       | $\bar{X}$ | 31.5       | 31.8  | 31.7  | 30.3           | 29.6  | 29.9  |
|  | S.D.      | 6.6        | 7.2   | 6.9   | 7.4            | 7.5   | 7.5   |

Men N = 445

Women N = 517

Total N = 1028 (gender not available for all cases).

## Profile Analysis

Once norms have been established, it becomes possible to compare a person's relative position on one scale to their relative position on the other scales. This is known as profile analysis, and it allows the examination of an individual's outstanding personality characteristics. The plotting of one's profile, as described with the materials given to each examinee, is the product of these efforts.

In Table 18 can be found percentages of all adults and then all men and women who have each of the eight possible scales as a high point. Table 19 provides the same information on the school sample.

Finally, Tables 20-21 provide similar information for two point codes, i.e., the highest scale followed by the second highest scale.

In the adult sample, 45% scored the same high point on both work and personal style profiles. While 40% of the school sample shows that consistency, only 3% of adults and 2% of students show an opposite high point (e.g. Direct vs. Indirect) or work (or school) and personal style profiles.

**Table 18**

| Percentage of Adult Sample Scoring with each high point |            |          |             |          |               |          |
|---|------------|----------|-------------|----------|---------------|----------|
|   | All Adults |          | Adult Males |          | Adult Females |          |
|   | Work       | Personal | Work        | Personal | Work          | Personal |
| Direct  | 10.9       | 9.5      | 13.5        | 11.3     | 5.6           | 4.9      |
| Outgoing  | 10.5       | 12.1     | 8.2         | 9.8      | 18.8          | 21.0     |
| Steady  | 13.9       | 11.7     | 16.0        | 14.0     | 7.6           | 6.3      |
| Precise   | 15.4       | 13.2     | 12.7        | 13.5     | 22.2          | 14.7     |
| Indirect  | 10.2       | 10.5     | 8.0         | 8.3      | 17.4          | 18.9     |
| Reserved  | 10.5       | 13.6     | 12.2        | 16.0     | 7.6           | 7.7      |
| Urgent  | 12.6       | 14.6     | 13.2        | 13.5     | 11.1          | 16.8     |
| Unstructured  | 15.1       | 13.8     | 16.2        | 13.8     | 9.7           | 9.8      |

| Percentage of Student Sample Scoring with each high point |              |          |               |          |                 |          |
|---|--------------|----------|---------------|----------|-----------------|----------|
|   | All Students |          | Male Students |          | Female Students |          |
|   | School       | Personal | School        | Personal | School          | Personal |
| Direct  | 10.8         | 11.1     | 14.2          | 13.1     | 7.8             | 9.3      |
| Outgoing  | 13.7         | 12.5     | 9.9           | 14.0     | 17.1            | 12.6     |
| Steady  | 11.8         | 13.2     | 13.3          | 15.3     | 9.9             | 11.2     |
| Precise   | 13.7         | 13.2     | 11.3          | 15.1     | 16.0            | 12.0     |
| Indirect  | 11.2         | 11.3     | 9.2           | 6.5      | 13.4            | 15.5     |
| Reserved  | 12.5         | 14.4     | 15.5          | 18.0     | 10.7            | 10.8     |
| Urgent  | 12.4         | 11.3     | 11.3          | 7.0      | 13.2            | 15.7     |
| Unstructured  | 13.7         | 12.5     | 15.3          | 10.8     | 11.9            | 13.0     |

Table 20

## Percentage of Adult Sample Scoring with each two point profile

|                   | All Adults        |          | Men               |          | Women               |          |
|-------------------|-------------------|----------|-------------------|----------|---------------------|----------|
|                   | Work              | Personal | Work              | Personal | Work                | Personal |
| Direct/Outgoing   | 3.4 %             | 2.2 %    | .4 %              | .3 %     | 2.1 %               | 0 %      |
| Direct/Steady     | .7                | .5       | .1                | .5       | 0                   | .7       |
| Direct/Precise    | 3.2               | 3.6      | 4.5               | 4.0      | .7                  | 2.8      |
| Direct/Reserved   | .5                | .5       | .7                | .5       | 0                   | .7       |
| Direct/Urgent     | 2.4               | 1.7      | 2.5               | 1.8      | 2.8                 | .7       |
| Direct/Unstruc.   | .7                | 1.0      | .7                | 1.5      | 0                   | 0        |
| Outgoing/Direct   | 1.7               | 2.9      | 1.7               | 1.8      | 2.1                 | 5.6      |
| Outgoing/Steady   | 1.2               | 1.5      | .5                | 1.3      | 2.8                 | 2.8      |
| Outgoing/Precise  | 1.4               | 1.0      | 1.0               | 1.5      | 2.1                 | 0        |
| Outgoing/Indirect | .8                | 1.2      | .5                | .8       | 2.1                 | 2.8      |
| Outgoing/Urgent   | 2.2               | 1.7      | 1.7               | 1.0      | 4.2                 | 4.2      |
| Outgoing/Unstruc. | 3.2               | 3.7      | 2.7               | 3.5      | 5.6                 | 5.6      |
| Steady/Direct     | .7                | .3       | 1.0               | .5       | 0                   | 0        |
| Steady/Outgoing   | 2.4               | 2.2      | 2.5               | 2.5      | 2.8                 | 1.4      |
| Steady/Precise    | 2.7               | 2.2      | 3.2               | 3.0      | 1.4                 | .7       |
| Steady/Indirect   | 3.2               | 2.5      | 3.7               | 2.5      | 2.1                 | 3.5      |
| Steady/Reserved   | 2.7               | 2.4      | 3.0               | 2.8      | 0                   | .7       |
| Steady/Unstruc.   | 2.2               | 2.0      | 2.5               | 2.8      | 1.4                 | 0        |
| Precise/Direct    | 3.7               | 2.5      | 2.0               | 2.8      | 7.6                 | 2.8      |
| Precise/Outgoing  | 1.5               | 2.0      | 1.5               | 1.8      | .7                  | 3.5      |
| Precise/Steady    | 2.2               | 2.5      | 2.5               | 3.5      | 2.1                 | 0        |
| Precise/Indirect  | 1.5               | 1.4      | .5                | 1.3      | 4.2                 | 1.4      |
| Precise/Reserved  | 3.9               | 2.2      | 4.2               | 2.3      | 3.5                 | 2.8      |
| Precise/Urgent    | 2.5               | 2.5      | 2.0               | 2.0      | 4.2                 | 4.2      |
| Indirect/Outgoing | .8                | .7       | .5                | .3       | 1.4                 | 2.1      |
| Indirect/Steady   | 2.5               | 2.2      | 2.2               | 2.3      | 4.2                 | 2.8      |
| Indirect/Precise  | 1.4               | .5       | 1.0               | .5       | 2.1                 | .7       |
| Indirect/Reserved | 1.9               | 3.4      | .7                | 3.0      | 5.6                 | 4.9      |
| Indirect/Urgent   | 1.0               | .5       | .5                | .3       | 2.8                 | 1.4      |
| Indirect/Unstruc. | 2.5               | 3.2      | 3.0               | 2.0      | 1.4                 | 7.0      |
| Reserved/Direct   | .2                | .8       | .2                | 1.0      | 0                   | 0        |
| Reserved/Steady   | 1.9               | 1.9      | 2.5               | 2.5      | .7                  | .7       |
| Reserved/Precise  | 1.7               | 1.9      | 1.5               | 2.0      | 2.8                 | 2.1      |
| Reserved/Indirect | 3.2               | 3.7      | 3.7               | 5.0      | 1.4                 | 1.4      |
| Reserved/Urgent   | 1.4               | 3.7      | 1.0               | 3.8      | 2.8                 | 2.1      |
| Reserved/Unstruc. | 2.2               | 1.5      | 3.2               | 1.8      | 0                   | 1.4      |
| Urgent/Direct     | 3.2               | 4.2      | 4.5               | 4.5      | 0                   | 2.8      |
| Urgent/Outgoing   | 2.7               | 2.7      | 2.5               | 2.3      | 4.2                 | 3.5      |
| Urgent/Precise    | 1.4               | 1.4      | 1.2               | .8       | 2.1                 | 3.5      |
| Urgent/Indirect   | .5                | 1.4      | .2                | 1.0      | 1.4                 | 2.8      |
| Urgent/Reserved   | 1.0               | 1.9      | .7                | 1.5      | 1.4                 | 2.1      |
| Urgent/Unstruc.   | 3.7               | 3.1      | 4.0               | 3.5      | 2.1                 | 2.1      |
| Unstruc./Direct   | 1.7               | .5       | 2.0               | .8       | .7                  | 0        |
| Unstruc./Outgoing | 2.5               | 2.4      | 2.0               | 2.5      | 3.5                 | 2.1      |
| Unstruc./Steady   | 1.9               | 1.4      | 2.0               | 1.0      | .7                  | 1.4      |
| Unstruc./Indirect | 5.3               | 3.6      | 5.5               | 3.0      | 2.8                 | 4.2      |
| Unstruc./Reserved | 1.7               | 2.2      | 2.2               | 2.5      | .7                  | 1.4      |
| Unstruc./Urgent   | 2.0               | 3.7      | 2.5               | 4.0      | 1.4                 | .7       |
|                   | N = 589<br>1% = 6 |          | N = 401<br>1% = 4 |          | N = 144<br>1% = 1.4 |          |

Table 20

## Percentage of School Sample Scoring with each two point profile

|                   | All Students |          | Men                   |          | Women  |          |
|-------------------|--------------|----------|-----------------------|----------|--------|----------|
|                   | School       | Personal | School                | Personal | School | Personal |
| Direct/Outgoing   | 3.9 %        | 2.1 %    | 4.7 %                 | 2.5 %    | 3.1 %  | 1.9 %    |
| Direct/Steady     | .7           | 1.5      | .7                    | 1.8      | .2     | 1.2      |
| Direct/Precise    | 2.6          | 3.1      | 2.9                   | 4.1      | 2.7    | 1.9      |
| Direct/Reserved   | .7           | 1.2      | 1.1                   | 1.8      | .2     | .8       |
| Direct/Urgent     | 1.8          | 2.2      | 3.2                   | 1.6      | 1.0    | 3.1      |
| Direct/Unstruc.   | 1.1          | 1.0      | 1.6                   | 1.4      | .6     | .4       |
| Outgoing/Direct   | 3.1          | 2.8      | 2.7                   | 3.4      | 3.3    | 2.5      |
| Outgoing/Steady   | 2.2          | 3.0      | 2.3                   | 3.6      | 2.5    | 2.7      |
| Outgoing/Precise  | 1.5          | 1.6      | .7                    | .9       | 2.1    | 2.3      |
| Outgoing/Indirect | 1.3          | 1.1      | .5                    | .9       | 2.1    | 1.4      |
| Outgoing/Urgent   | 2.9          | 1.2      | 1.8                   | 2.0      | 3.7    | .6       |
| Outgoing/Unstruc. | 2.7          | 2.9      | 2.0                   | 3.2      | 3.3    | 3.1      |
| Steady/Direct     | .8           | 1.4      | 1.1                   | 1.4      | .6     | 1.2      |
| Steady/Outgoing   | 1.4          | 3.1      | 1.6                   | 2.7      | 1.2    | 3.7      |
| Steady/Precise    | 2.3          | 2.3      | 2.7                   | 1.8      | 1.9    | 2.5      |
| Steady/Indirect   | 3.2          | 2.5      | 3.2                   | 3.2      | 3.5    | 2.1      |
| Steady/Reserved   | 2.4          | 2.1      | 2.7                   | 3.6      | 1.6    | .8       |
| Steady/Unstruc.   | 1.7          | 1.7      | 2.0                   | 2.7      | 1.2    | 1.0      |
| Precise/Direct    | 3.3          | 2.6      | 2.7                   | 2.7      | 3.9    | 2.9      |
| Precise/Outgoing  | 2.0          | 1.8      | 1.4                   | 1.4      | 2.3    | 1.9      |
| Precise/Steady    | 2.7          | 3.3      | 2.9                   | 4.5      | 2.9    | 2.3      |
| Precise/Indirect  | 1.0          | .8       | .2                    | .7       | 1.6    | 1.0      |
| Precise/Reserved  | 2.6          | 2.7      | 2.5                   | 4.1      | 2.9    | 1.7      |
| Precise/Urgent    | 2.0          | 1.9      | 1.6                   | 1.8      | 2.3    | 2.1      |
| Indirect/Outgoing | .7           | 1.6      | .5                    | .7       | 1.0    | 2.7      |
| Indirect/Steady   | 2.3          | 2.1      | 2.0                   | .9       | 2.7    | 3.1      |
| Indirect/Precise  | .7           | .6       | .7                    | .2       | .8     | 1.0      |
| Indirect/Reserved | 2.4          | 2.4      | 3.2                   | 1.8      | 1.9    | 3.3      |
| Indirect/Urgent   | 1.4          | 1.2      | .9                    | .9       | 1.9    | 1.4      |
| Indirect/Unstruc. | 3.7          | 3.4      | 2.0                   | 2.0      | 5.1    | 4.1      |
| Reserved/Direct   | 1.1          | 1.1      | 2.0                   | .9       | .4     | 1.0      |
| Reserved/Steady   | 2.6          | 1.8      | 3.8                   | 2.9      | 1.8    | 1.0      |
| Reserved/Precise  | 1.6          | 1.9      | 2.5                   | 1.4      | 1.0    | 1.9      |
| Reserved/Indirect | 4.1          | 4.8      | 4.1                   | 7.2      | 4.3    | 2.9      |
| Reserved/Urgent   | 1.4          | 2.3      | 1.1                   | 2.9      | 1.8    | 1.9      |
| Reserved/Unstruc. | 1.7          | 2.4      | 2.0                   | 2.7      | 1.6    | 2.1      |
| Urgent/Direct     | 3.3          | 2.4      | 4.1                   | 2.3      | 2.7    | 2.7      |
| Urgent/Outgoing   | 2.6          | 2.1      | 2.0                   | 1.4      | 3.1    | 2.7      |
| Urgent/Precise    | 2.2          | 1.3      | 1.6                   | .2       | 2.7    | 2.3      |
| Urgent/Indirect   | 1.0          | 1.1      | 0                     | 0        | 1.8    | 2.1      |
| Urgent/Reserved   | 1.0          | 3.1      | 1.4                   | 2.0      | .6     | 4.1      |
| Urgent/Unstruc.   | 2.3          | 1.4      | 2.3                   | 1.1      | 2.3    | 1.7      |
| Unstruc./Direct   | .4           | .6       | .9                    | .5       | 0      | .8       |
| Unstruc./Outgoing | 2.5          | 2.2      | 1.8                   | 1.6      | 3.3    | 2.3      |
| Unstruc./Steady   | 2.0          | 1.6      | 2.7                   | 1.4      | 1.4    | 1.4      |
| Unstruc./Indirect | 3.4          | 3.1      | 3.8                   | 2.9      | 2.9    | 2.9      |
| Unstruc./Reserved | 2.8          | 1.6      | 3.6                   | 1.6      | 2.1    | 1.5      |
| Unstruc./Urgent   | 2.1          | 3.4      | 2.5                   | 2.9      | 2.1    | 4.1      |
| N = 1032          |              |          |                       |          |        |          |
| 1% = 10           |              |          | 1% = approximately .5 |          |        |          |

## VIII. FUTURE RESEARCH

The *INSIGHT Inventory* has grown from its infancy in the early 1980's into its adolescence. Data is steadily being accumulated in both theoretical and applied research. As research continues, this Technical Manual will be revised and updated. The goal is that, as the *INSIGHT Inventory* matures and its use widens, it will become one of the more thoroughly researched self-scoring style inventories.

Following are some suggestions for further research.

1. Duplicate and expand the test retest reliability data. It would be helpful to determine if Work Style (or School Style) scale scores are as consistent over time as are the Personal Style scores. This could shed some light regarding whether people see themselves making adjustments more often to one environment.
2. Conduct some predictive validity studies using such criteria as selection into leadership positions, success on the job, satisfaction with work (or academic major), etc.
3. Explore any relationships between the *INSIGHT* scales and different cultural, sex, age, or racial heritage.
4. Identify which profile configurations are the most frequently occurring in different samples.
5. Conduct additional construct validity studies between the *INSIGHT Inventory* and such personality and interest tests as the:
  - Big Five Assessments
  - Minnesota Multiphasic Personality Inventory (MMPI)
  - California Personality Inventory (CPI)
  - Strong-Campbell Interest Inventory (SCII)
  - Kuder DD
6. Measure the difference between people's Work (or School) scores and Personal Style scores and determine:
  - the explanations for such variations
  - how much variation is typical versus how much is unusual
  - the relationship of any given variation is to stress and pressure
7. Test the degree to which individuals can "fake good" or bias the results. It would be beneficial to know if specific populations (students, job applicants, etc.) perceive certain style preferences to be inherently more desirable.
8. Examine the relationships between self-ratings on the *INSIGHT Inventory* and feedback ratings obtained from the e-*INSIGHT* Observer feedback. For example, research might show that people's self-rating scores on one scale (i.e., Responding) more closely match feedback averages than do matched ratings on a different scale (i.e., Influencing). Also, one might find adults self-ratings scores more closely match their feedback ratings than do students; thus indicating an age factor in self awareness

9. Explore the congruence of self-ratings and observer feedback ratings in relationship to such independent variables as:
  - self-esteem
  - leadership and management skill
  - job success
  - interpersonal conflict, etc.

This is just a beginning list of potential research projects. It is included to stimulate even more ideas on possible research. The usefulness of the *IN-SIGHT Inventory* will grow with each added piece of information acquired and this data will be added to the next revision of the Technical Manual. Individuals interested in conducting a research study are encouraged to contact the authors for assistance.



## IX. REFERENCE LIST

- Allport, G.W. (1955). *Theories of Perception and the Concept of Structure*. New York: Wiley.
- Allport, G.W. & Odbert, H.S. (1936). *Trait-Names: A Psycho-lexical Study*. Princeton: Psychological Review Company.
- Allport, G.W. (1947). *The Genius of Kurt Lewin*. J. Pers., 16, 1-10.
- Allport, G.W. (1937). *Personality: A Psychological Interpretation*. New York: Holt.
- Allport, G.W. (1950a). *The Nature of Personality: Selected papers*. Cambridge, Mass.: Addison-Wesley.
- Allport, G.W. (1955). *Becoming Basic Considerations for a Psychology of Personality*. New Haven: Yale University Press.
- Allport, G.W. (1961). *Pattern and Growth in Personality*. New York: Holt, Rinehart and Winston.
- Allport, G.W. (1966). *Traits Revisited*. American Psychologist, 21, 1-10.
- American Psychological Association (1983). *Publication Manual of the American Psychological Association*. Washington, D.C.: Author.
- American Psychological Association (1985). *Standards for Educational and Psychological Testing*. Washington, D.C.: Author.
- Anastasi, A. (1976). *Psychological Testing*. New York: MacMillian Publishing Co., Inc.
- Cattell, R.B. (1943). *The Description of Personality: Basic Traits resolved into clusters*. The Journal of Abnormal and Social Psychology, 36.
- Cattell, R.B. (1946). *Description and Measurement of Personality*. Yonkers-on-Hudson: World Book Co.
- Cattell, R.B. (1947). *Confirmation and clarification of primary personality factors*. Psychometrika, 12, 197-220.
- Cattell, R.B., Eber, H.W. & Tatsuoka, M. (1980). *Handbook for the Sixteen Personality Factor Questionnaire (16PF)*. Champaign: Institute for Personality and Ability Testing.
- Cattell, R.B. (Ed.). (1966b). *Handbook of Multivariate Experimental Psychology*. Chicago: Rand McNally.
- Cattell, R.B. (1957). *Personality and Motivation Structure and Measurement*. New York: Harcourt, Brace & World.

- Gough, H.G. (1965). *The Adjective Check List Manual*. Palo Alto, California: Consulting Psychologists Press.
- Handley, P.G. (1982). *The Relationship Between Supervisors' and Trainees' MBTI Styles and the Supervision Process*. Journal of Counseling Psychology, 29, 508-515.
- Hartshorne, H., & May, M.A. (1930). *Studies in the nature of character: III. Studies in the organization of character*. New York: MacMillan.
- Holland, J.L. (1973). *Making Vocational Choices: A Theory of Careers*. New Jersey: Prentice Hall.
- Kaiser, K.M. (1981) *Use of the First 50 Items as a surrogate measure of the Myers-Briggs Type Indicator Form G*. Research on Psychological Type.
- Krug, S.E. (1983). *Interpreting 16PF Profile Patterns*. Champaign: Institute for Personality and Ability Testing.
- Lewin, K. (1935). *A Dynamic Theory of Personality*. New York: McGraw-Hill, 1935.
- Lewin, K. (1936b). *Some Social-Psychological Differences Between the United States and Germany*. *Character and Personality*, 4, 265-293.
- Lewin, K. (1936a). *Principles of Topological Psychology*. New York: McGraw-Hill.
- Lewin, K. (1948). *Resolving social conflicts*; Selected papers on group dynamics. Gertrude W. Lewin (Ed.). New York: Harper & Row.
- Lewin, K. (1951). *Field theory in social science*; Selected theoretical papers. D. Cartwright (Ed.). New York: Harper & Row.
- Lewin, K. (1954). *Behavior and development as function of the total situation*. In L. Carmichael (Ed.). *Manual of child psychology*. New York, Wiley, 918-970.
- MacDaid, G.P. (1983) *A Comparison of Myer-Briggs Form G and Form H*. Paper presented at APT-V, College Park, MD.
- Myers, I.B. (1962) *Myers-Briggs Type Indicator Manual*. Palo Alto, California: Consulting Psychologists Press.
- Myers, I.B. & McCaulley, M.M. (1985). *Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator*. Palo Alto: Consulting Psychologists Press.
- Nunnally, J.C., (1978). *Psychometric Theory*. New York: McGraw-Hill

- Sealy, A.P., and Cattell, R.B. Adolescent personality trends in primary factors measured in the 16PF and the HSPQ questionnaires through ages 11-23. *Brit. J. Soc. Clin. Psychol.*, 1959, 15, 3-21.
- Thurstone, L.L. Multiple factor analysis. *Psychology Review*. 1931, 38, 406-427.
- Thurstone, L.L. *Multiple factor analysis: a development and expansion of the vectors of the mind*. Chicago: University of Chicago Press, 1947.
- Thurstone, L.L. Psychological implications of factor analysis. *American Psychologist*, 1948, 3, 402-408.
- Tolman, E.C. Kurt Lewin, 1890-1947. *Psychol. Rev.*, 1948,55,1-4.