The History and Evolution of
Interpersonal Dynamics Inventory (IDI)

Developed by R E Zackrison, PhD and associates

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Introduction

Interpersonal Dynamics Inventory (IDI) is an instrument that measures and evaluates the impression you make on other people. This document is intended to describe the history and evolution of the IDI Instrument leading up to the current version. Furthermore, we want to present an image of continuous research and further development.

History

The description of the evolvement of IDI to today's version was compiled from interviews with Richard Zackrison and others involved in development in the U.S. and Sweden.

Interest in inherent character traits has given rise to many different types of instruments intended to measure and describe these traits. These instruments are collectively known as Psychometrical instruments, and many originate from the list comprised of nearly 18,000 adjectives that was created in the 1930's to describe personality traits. (Allport & Odbert, 1936).

The question of whether these traits are something a person is born with or if they are affected by one's social environment after birth is still debated today. The majority of experts agree that an adult's personal characteristics are a combination of genetic and social factors. Kurt Lewin was one of the first to introduce a definition of behavior that summarized this: behavior (B) is a function (f) of personal characteristics (P) and the environment (E) the person is currently in.

In spite of Lewin's contributions most of today's psychometric instruments are designed to measure personal traits and collect information only from the test subjects' themselves. The IDI instrument also gathers information about the test subject from at least six other respondents of the subject's own choosing.

Because of this, IDI join the ranks of instruments designed to give an idea about a person's personality and social adaptability (f. Example, Wiggins 1995 Personality Adjective Scales). Several of these instruments use a similar description of the two basic factors (Directiveness and Affiliation) that IDI measures, but use other names; Agency (Power, Mastery, Assertion) for Directiveness and Communion (Intimacy, Union, Solidarity) for Affiliation. These types of psychological instruments are often used - unlike IDI - in the treatment of people with social problems (i.e. The Inventory of Interpersonal Problems - IIP: Horowitz, Alden, Wiggins, & Pincus, 2000).

IDI is an instrument intended to be used in working life and in competence development. It is aimed in particular at those whose success depends on interaction
and collaboration with others. Psychometric instruments for this application were created to a large extent during the 1950-60’s. Many were based on the Ohio study (Halpin & Winer 1957) whose two dimensions ”Initiating of structure” and ”Consideration” can be found in a variety of leadership development tools, for example Managerial Grid by Blake and Mouton (1985) and the so-called 3-D Theory of Managerial Effectiveness by Reddin (1970) and other instruments, (for further examples see Bass, 1990).

In 1964 James W Taylor developed an instrument intended to measure a person's social style by letting other people describe his/her what they defined consistent, patterns of behavior perceived that can be observed and described by others”. (Social Styles, Taylor 1964, Merrill & Reid 1981, Byrum, 1986). These patterns are derived - according to Byrum - from behavioral preferences, i.e., the way a person talks and acts, that an individual has become comfortable with and tends to appreciate in him/herself and in others. Social style can also be described as the method of coping an individual has learned early in life and then evolves into a historically favorable habit.

Taylor’s instrument was refined by David W. Merrill and came to be called ”Social Style Profile”. Their pioneering work served as the foundation of several subsequent instruments intended to measure a person’s social style. Dr. R.E Zackrison saw the utility the social styles concept. However, the simple fact that he questioned the reliability of existing instruments intended to assess an individual’s social style led him to develop his own instrument eventually named the ”Interpersonal Dynamics Inventory” (IDI) (Zackrison, R. E., 1977).

The development of the IDI in the U.S.

The basic research conducted by Taylor, Merrill and Reid (Personal Style and Effective Performance, Merrill & Reid, 1981, pp. 210 -231) served as the base for Zackrison’s research. To help with his own work he engaged Charles Gustafsson, a behavioral scientist and Professor of Statistics at the U.S. Naval Postgraduate School and Michael Marovich, head of the Interpersonal Communications Unit at the U.S. Army’s Organization Effectiveness Training Center (OETC).

Basic principles

Taylor's instrument, i.e. his "Social Style Profile" (Taylor, 1964) consisted of a form with 150 words frequently used to describe people. Next to each word were three alternatives:

- Y = the word is a good description of the person being profiled,
- N = the word is an incorrect description of the person being profiled and
- ? = the word cannot be used to describe the person being profiled.

Zackrison and his team used many of the same words as Taylor had used in his instrument, as well as a number of additional words that were both synonyms and
antonyms to words used by Taylor. Their original research used a test group of 50 individuals, each of whom completed a self-assessment form and were then evaluated by five other people who filled in a similar form. These five “raters” then used a five-point Likert scale to indicate how well they judged the each of the adjectives on the list to match their perceptions of the subject’s observable behavior. The subsequent factor analysis yielded three primary clusters of adjectives. A separate analysis of these clusters revealed that two of them were very close to of the behavioral dimensions that identified by earlier researchers such individuals as Taylor, Merrill, Reid, etc.:

- The dimension we later defined as “Directiveness” others called Assertiveness, Dominance, Initiating of structure, Need for Control, Agency, etc.

- The dimension we later defined as “Affiliation” was called by others as Responsiveness, People-orientation, Sociability, Consideration, etc.

- The third dimension which we defined as “Adaptability” was found to be closely related to the dimension that other researchers called Flexibility, Versatility, Social adjustment, etc.

**Correlation Analysis**

Zackrison and his team then sought to determine which of the words most clearly and consistently reflected a person's degree of directiveness, affiliation and/or adaptability, with the objective being to answer two questions:

1. First, if an individual's behavior is evaluated by five other people, which of the adjectives will most consistently be given a similar rating by the five assessors?

2. Second, if two individuals are evaluated by five other people, which of the adjectives in each dimension will most consistently differ, i.e. vary greatly in grading between raters?

As a result of responses to the above two questions, a list of the words was developed for each dimension that were perceived as most accurately measuring an individual's behavior in each of the three dimensions.

**The development of a method for collecting data**

The words identified in the above process were placed in six groups:

- words that indicate a high degree of directiveness, i.e., that he/she often perceived as highly directive in his/her interactions with other.

- words that indicate a low degree of directiveness, i.e., that he/she seldom perceived as directive in his/her interactions with other.
• words that indicate a high degree of affiliations, i.e., that he/she often perceived as highly affiliative in his/her interactions with other.

• words that indicate a low degree of affiliation, i.e., that he/she seldom perceived as affiliative in his/her interactions with other.

• words that indicate a high degree of adaptability, i.e., that he/she often perceived as highly adaptable in his/her interactions with other.

• words that indicate a low degree of adaptability, i.e., that he/is seldom perceived as adaptable in his/her interactions with other.

Because he hoped to create a more reliable instrument than similar instruments available at the time, Dr. Zackrison and his team chose to further develop their instrument using the “Semantic Differential” method developed by psychologist and communication scholar Charles E. Osgood (Osgood et al, 1957). Semantic differentials were selected based on the fact that it is a well-known method of revealing different people’s preferences and attitudes towards other people, but also to products of various kinds.

The dimensions that semantic differentials measure (evaluation, potency and activity) are different from the dimensions IDI measures, but the method used to collect data about the dimensions is similar. The semantic differential method pairs words perceived as opposites, i.e., words were based on the degree to which they indicate a low or high value for each scale - not the words that are opposites as in Osgood method. Further, the two words chosen for each word pair should have a similar value (positive, neutral or negative). For example, a word that often indicates directiveness, such as "brave", is paired with a word that rarely indicates directiveness, such as "cautious".

The words were presented as pairs and the respondents were asked to use a 5-point Likert scale to indicate their perception of which of the two words in each word pair best described the “typical” behavior of the person being profiled.

Example:

**Cautious ○ ○ ○ ○ ○ Brave**

In the original version of IDI, Zackrison and Gustafsson chose to use 76 word-pairs with the words that they - in their selection process - found to have the highest correlation values within the scales they intended to measure.

**Verifying the Instrument**

Two separate methods were then used to examine whether the new instrument really did measure what it was designed for.
• 1st. About sixty people who had been tested using other instruments (e.g., The Social Styles Inventory), were also tested with the IDI. The results were compared and found to be consistent.

• 2nd. A group of a hundred people from a military training program were tested with IDI and the results were evaluated by the team of Zackrison, Gustafson and Marovich. All three had observed the test subjects’ behavior in different situations and all had a deep understanding and vast experience of assessing a person’s social style through observation. Their conclusion, individually and as a team, was that the results yielded by the IDI were consistent with the individuals’ observable behaviours.

From the beginning, Zackrison was keen to ensure that an individual’s IDI-Style should be based on a large congruence between the assessments - not a simple average of the ratings for each item. Therefore, he was not pleased to discover that there were several cases in which the results from the IDI instrument differed somewhat from the results yielded by comparison instruments. Therefore, he asked Dr. Mary Rivers, Professor of Statistics at Seattle University, to recommend a course of action to enhance the reliability of an IDI report. Dr. Rivers recommended four improvements, all of which were all accepted:

1st. that placement of an individual on each of the three scales should be calculated with tighter statistical limits than those used by the existing instrument.

2nd. that an "observation text" should be included in to participants where the congruence of the underlying data for their IDI-Profile is found to lie outside of the limit established above.

3rd. that the observation text should indicate to the person, the size of the deviation and on which dimension it was located.

4th. that the instrument should use a seven-point scale in place of the five-point scale.

**Substyles**

People are evaluated by the instrument and their IDI style is determined by calculating the data from the respondents for each dimension as above. These values are then used to form a 4x4 grid using the dimensions of directiveness and affiliation as the axis. The subsequent matrix is then divided into four basic styles, each in turn divided into four substyles, making a total of sixteen possible substyles. A description of the person’s substyle is then included with the result provided to the individual being profiled. In addition, each participant is provided with written description of the primary characteristics of individuals in their given substyle.
The IDI was originally developed and owned by Zackrison’s American corporation, Growth Dynamics Associates. This company was later closed down when Zackrison moved to Sweden in the early 80s and started the company ECS, Effectiveness Consultants Scandinavia AB, which later became the Effectiveness Consultants Sverige AB. In January of 2015 all the rights to the IDI were transferred to a newly formed corporation, IDI Profiling AB, which is the current owner of the IDI instrument and all accompanying materials.

The Swedish IDI version

As we previously reported above, in 1980 Zackrison brought his ID-Profiling instrument to Sweden where he was commissioned by the Swedish Armed Forces to conduct a sixteen-week training program for their internal consultants.

Based on requests from several Scandinavian public service organizations, Dr. Zackrison chose to relocate the base for his consulting and training services from his base in the US to a new base in Stockholm, Sweden. As a result of this decision, a team of Swedish psychologists and instructors were engaged in the process of translating the IDI from English to Swedish. The original Swedish version was developed with the support of the people mentioned above, all of whom all had an excellent grasp of the English language.

The first step in the process was to translate the English words into Swedish synonyms with the same or very similar context-related weighting.

To ascertain that the instrument would be reliable in the Swedish translation, it was subjected to two tests:

1. Around twenty Swedes, all of the first graduates from a 16 week intensive consultant training program, were profiled by a total of one hundred respondents, all of whom were familiar with both English and Swedish. Respondents were instructed to complete their assessments using both the original American and the newly translated Swedish version, after which the results were compared. The two versions of the IDI form produced consistent results in regard to their placements on the directiveness, affiliation and adaptability scales.

2. The American substyle descriptions were also translated and adjusted by participants and tutors in the training program.

3. Sixteen Swedes from the second round of the consultant training program were tested with the Swedish version only and the results were evaluated by the leaders and participants of the first training round, who all had been trained in assessing a
person’s social style through observation. The script of the Swedish sub styles was also refined using students and tutors from the second training session.

The first tests between the English and the Swedish version showed that the results were consistent. They also found a good correlation between the IDI results and the perceived behavior through observation. As a result, Zackrison and his colleagues began using the Swedish version of IDI in all subsequent internal consultant training for the armed forces, The Police and other agencies within the civic administration and also in Effectiveness Consultants training and consulting services.

The refinement of the current IDI

In the early 1990s the number of respondents required to calculate a valid IDI-Profile was extended from five to six in order to increase the reliability of the results and to ensure that data from at least five respondents would be handed in, the minimum number from which a profile can be calculated.

In 1993 the instrument underwent a comprehensive statistical and grammatical audit in order to assess the instrument’s validity. New norms were calculated on the basis of all data collected since the instrument was first used.

A correlation analysis was carried out on the word-pairs that the IDI was using and it was found that the instrument could be significantly improved by replacing some word-pairs that had been found to have the lowest correlation values with word-pairs that appeared to be better sensors for the dimension to be measured. A similar review was then conducted annually up to 2006, with continuous minor adjustments.

Because the placement of a test person must always give an indication of where that person is in relation to all other people measured, we have also adjusted, where appropriate, the standard for the three dimensions that IDI measures.

Demographics

Ever since 2004 we have been collecting demographic information associated with IDI profiles for statistical purposes. This gives us the opportunity to compare demographic groups and thus provide the basis for advanced studies, such as "benchmarking" for large customer organizations, where they can compare their employees to our norm group.

In Sweden the IDI norm group is based on data collected over the past five years. The group consists of almost 30 000 people, most of whom are between 20 and 65 years old. The majority are employed in the private, public and voluntary sectors and over 50% of
the group says they are working in positions where they have subordinate staff. The group is split 58% male to 42% female.

**Quality assurance**

In the fall of 2011, an ISO standard (EN - ISO 10667-1 and 10667-2 2011 2011) for "Assessment Services at Work - Processes and methodologies for the assessment of people in work-related purposes." was established. The standard covers the entire process from identification of customer requirements to delivery of activities to satisfy those needs. We follow these recommendations and our work is guided by these recommendations.

Over the past eleven years we have focused on ensuring the quality of the IDI-instrument based on the criteria developed by the Foundation for Applied Psychology (STP). In order to identify areas that need to be developed and to respond to the criteria that STP uses to assess psychological instruments we have engaged psychologist Sara Henrysson Eidvall on two separate occasions to examine the instrument on our behalf. Her advice has guided our development.

A few examples:

- The form that has to be completed in order to create an IDI profile used to be comprised of 76 word-pairs. To respond to the STP's stringent requirements we changed the previously set limit values regarding the use of a pair of words as an "indicator" for the dimension we intend to measure. Since 2006 we therefore use only word-pairs with a correlation value against other word-pairs that measures the same dimension, of 0.60 and also shows a correlation value against the other dimensions of less than 0.20. The word-pairs that fall outside these thresholds are not used in the calculations. Since the form is still comprised of 76 word-pairs we are therefore able to use the redundant positions as "test-words" to get a basis for future changes to the form.

- In 2008, we introduced an additional requirement for including a pair of words as an indicator on the scales directiveness and affiliation. The word-pairs used should be balanced so that a word that would be used to indicate "rarely" on the scale Directiveness would be valued as equally as possible to the word that would be used to indicate "frequently". As we strive for balance we choose to pair the words so that each word is a clear indicator of one or the other polarity, and they should have a similar positive or negative flavor, for example, Slow - Stressed and Calm - Fast. This balance is measured in our annual statistical analysis by checking the mean value and by calculating the quantity of skewness and kurtosis, for the frequency distributions of all the words used.
In the fall of 2012, Bo Ekehammar, Professor of Psychology at the Stockholm University, was commissioned to write a Technical Report as part of our effort to develop a manual for the IDI-instrument. It was finalized on 26 March 2013 (Ekehammar, 2013). Ekehammar found that, while maintaining measurement quality, we could reduce the number of word-pairs that we use to calculate the result.

In spring 2013, we introduced a new platform for the instrument, which now is entirely web-based. The new program allows a person to choose any number of respondents, at any time, to provide a basis for their profile. Profiles that have less than six completed forms will not be calculated.

Revision of the description of substyles

The substyles where revised during the years 1992-94. IDI tutors and participants in the courses ran by Effectiveness Consultants where engaged in this work. The people who had been evaluated with the instrument and placed in the same 16th part of the IDI-matrix revised their descriptive text according to how well they felt that it described their own behavior and how it differed from the other style descriptions. These revised descriptions were presented at a facilitator meeting in August 1994 and have been used ever since. In January 2007, a linguistic revision of the descriptions were made and in 2010 we made an educational rearranging of the text.

Option to fill out the IDI-form in your native language

Many Swedish companies have operations abroad and many of the companies using IDI in its leadership and employee development want to use the tool in international environments. For their sake, we have created forms to provide data for profiles in languages other than Swedish. From 2014 you can choose to fill in the data in English, Swedish, Norwegian, Danish, Finnish, German, Dutch, Polish, Estonian, Russian, Ukrainian, Czech, French, Spanish, Portuguese, Mandarin, Hindi and Italian.

As our collected data from these countries accumulate, we will be able to develop unique standards for each of these countries in the future. Today we have different standards for Sweden, Norway and England. The others are derived from an "international standard" that we created based on input from all the other languages.

Ongoing development work

Dr. Anders Hytter, of the Linnaeus University in Växjö, is working on a comparative study of the IDI and the instruments, The Myers-Briggs Type Indicator (MBTI) and Cattell's 16 Personality Factors (16 PF). Ekehammar commented on some of Hytters findings in his Technical report. Hytter presented parts of his research in August 2015.
IDI is currently available in 20 languages. All material produced by the web-based programme is in the required language.

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Citation and Sources


