

Evolution of FIRO-B to Element B

Will Schutz, Ph.D

FIRO-B:

- Is one of the most widely used instruments ever constructed.
- Was judged "the most generally useful instrument in training" in an authoritative 1983 survey of over 70 instruments. (Pfeiffer, et al, 1976).
- Has been completed by millions of people over the past 30 years.

And it was all a mistake!

Well, not exactly a mistake.

I never meant the FIRO-B (Fundamental Interpersonal Relations Orientation–Behavior) to be a general usage instrument. It was constructed for one purpose only.

During the Korean War, I was recalled into the Navy and given the task of devising a method for predicting who would work well together with whom. In the course of performing experiments to predict team compatibility, I devised the FIRO theory and the FIRO-B instrument. FIRO-B was designed to help predict interaction between two people. For that purpose it was very successful. I had no idea of its value for any other purpose.

Somewhat later, a highly respected publisher asked if I would like to have FIRO-B published. "Sure, why not?," said I, and disappeared into the Human Potential movement.

Fifteen years later I reappeared and to my amazement—and delight—I found FIRO-B wherever I went.

I also found several publications describing how to interpret the instrument.

"But," I objected ambivalently, "I never meant it to be used in all these ways."

Carefully, I reexamined FIRO-B and found it a very good instrument that could be made far better. I struggled with myself for a while, not wanting to tamper with success, yet not wanting to continue being identified with an instrument I knew could be vastly improved.

Yielding to the latter feeling, I proceeded to make substantial changes in the instrument while retaining its simplicity and shortness. The result is Element B (for Behavior) which I regard as a major advance over FIRO-B.

Reading the published interpretations of FIRO-B in light of my present views of psychological instruments, I found the manuals did not reflect the way I would interpret either FIRO-B or Element B.

However, since I had published no guidelines of my own, I had left interpretation to others by default.



Will Schutz (1925-2002), creator of The Human Element, FIRO® theory and the Elements of Awareness.



I now want to correct that omission.

Here I will summarize the evolution of Element B from FIRO-B and provide a simple conversion method. This way, those of you who have accumulated FIRO-B data may use them fully. You will also find it simple to expand your understanding of FIRO-B into an equally clear grasp of Element B.

Changes

Element B is derived from the revised FIRO theory, while FIRO-B is based on the original form of the theory. Following is a summary of developments in FIRO theory since 1982 and their effect on these instruments.

Affection to Openness

As described above, the FIRO theory postulates three areas for understanding human interaction. In the original theory, at the behavioral level these areas were called Inclusion, Control, and Affection.

Years of experience revealed that the term "affection" was misused. The concept of affection refers primarily to feeling rather than to behavior. Accordingly, "affection" was changed to the essential behavioral ingredient of affection, "openness." The three behavioral dimensions thus become:

Inclusion—the area concerned with achieving an optimal amount of contact with people. It has to do with IN and OUT

Control—the area concerned with achieving an optimal amount of control over people. It has to do with TOP and BOTTOM.

Openness—the area concerned with achieving an optimal amount of personal openness with people. It has to do with OPEN and CLOSED. Some people enjoy relationships with others in which they confide their feelings and innermost

thoughts. Other people prefer to not be open with people, to keep relationships impersonal, and to have acquaintances rather than close friends. Everyone has some desire to be open and some desire to keep relations private.

All items of the FIRO-B Affection scales have been replaced in Element B with items that measure Openness.

Expressed and Wanted

Another change from the original FIRO theory affects the aspects of behavior or feelings measured. In the original FIRO instruments, the Expressed and Wanted aspects of each dimension are measured.

Closer examination revealed that Expressed and Wanted were not the ends of the same continuum.

The opposite of Expressed is Received. The opposite of Wanted is Seen, or What I Now Perceive.

Accordingly, Element B measures ask me, the respondent, to describe:

Expressed (What I Do Toward You), and Received (What I Get From You) behavior (now called Do and Get, respectively).

Perceived (What I See), and Wanted (What I Want) behavior (now called See and Want, respectively).

As a result, Element B yields twice as many measures as FIRO-B.

In addition, for each behavior area, I may explore the discrepancy between my perceived status (What I See) and my desired situation (What I Want). In a counseling setting, this comparison is useful for focusing attention on sources of dissatisfaction and areas of desired change.



Response Categories

In FIRO-B, two sets of response categories are used:

1. usually	2. often	3. sometimes	
4. occasionally	5. rarely	6. never	
1. most people	2. many people	3. some people	
4. a few people	5.1 or 2 people	6. nobody	

This leads to three difficulties:

- Sometimes the same item content is repeated for each set of responses (for example, FIRO-B items 14 and 26, "I am easily led by people.") This repetition often gives the impression the entire item is repeated.
- The different sets of responses require the respondent to shift mental set.
- Some respondents distract themselves with semantic arguments, such as whether "rarely" is more frequent than "occasionally."

These difficulties are eliminated in Element B. There is only one set of answer categories for Element B. These responses do not have names. They are shades of agreement with each item. This method encourages respondents to use their overall feeling to respond to the item rather than to concern themselves overmuch with debating the meanings of each response word.

In addition to adding clarity, this feature explains, in part, why administration time is no longer for Element B than for FIRO-B, despite an increase in number of responses required.

There are three sets of numbers in FIRO-B: each item is numbered, each possible response is numbered, and the responses selected are numbered. Some respondents find this confusing. On Element B all these numbers are gone. The only numbers

remaining are the scale scores arrived at after scoring the instrument.

Title

To describe the total instrument, the word Element was chosen to replace the word Scale. This was done for two reasons.

"Scale" is not a technically correct term. A scale, as usually defined, is a set of items with certain psychometric properties. This definition applies to each of the nine-item sets that make up the instrument, but not to the instrument as a whole.

"Element" conveys the idea that each instrument measures a part of a whole: the human organism.

By definition, an "element" is a component or constituent of a whole into which the whole may be resolved by analysis. "Element" implies that a better understanding of a total person results from understanding the elements of a person and the relationship among these elements.

Item Wording

The wording of the items has been simplified, and difficult words, ambiguous qualifiers, and negatively phrased items have been virtually eliminated. These changes improved the scalability of the items for many scales.

Simplified Scoring

Element B is self-scoring; it does not require separate scoring templates. While this change is purely utilitarian, it will doubtless be welcomed by all users. Scoring is now a simple, clerical task, accomplished by the respondent quickly and easily.



Self-scoring also provides a more personal connection between respondent and instrument that makes scores more personally meaningful.

Scale Names

The scales that constitute Element B are named by declarative sentences, such as "People control me" or "I like myself" rather than by single words such as "authoritarian" or "paranoid." Each scale is scored from 0 to 9. The score indicates the degree to which I agree with the scale name. The higher the score, the greater the agreement. A score of 8, for example, on "I am open with people" indicates I agree strongly with the statement, that is, I feel I am very open with people.

"High" Score

Interpretation of the size of the FIRO-B scales presented a dilemma. What is a "high" score? What does "high" mean? Unfortunately, there is no simple answer. Here are the alternatives that were typically used:

- The range is divided arbitrarily so that 0, 1, and 2 are called low; 3, 4, 5, and 6 are called medium; and 7, 8, and 9 are called high. But mean scores differ radically between subgroups. For example, a medium score of 5 for an engineer (average 2.1) on "I act close and personal with people" is extremely high—for an engineer.
- The score is compared to a reference group. Sales reps, for example, average 7.0 (FIRO-B) on wanting to be included. Therefore, compared to sales reps, a score of 5 is low. However, compared to creative architects (average 1.7), a score of 5 is very high.
- One score may be compared to my other scores. If I score 0 on all scales but one, and 2 on that scale, 2 may be considered high.

However, all these methods are unsatisfactory. Using the What I See and What I Want scoring responses provides a more satisfactory answer to how to interpret scale scores by introducing the concept of "Difference."

Difference

By comparing What I See with What I Want, I obtain a measure of the difference between the two. Rather than deciding arbitrarily whether a scale score is high or low, as described above, I see whether my scale score, regardless of its size, is the way I want it to be. For example, when I subtract my score for What I Want from my score on What I See, I obtain a difference score that tells me how close my What I See score is to my ideal, regardless of how high or how low my actual scores are.

If I score 4 on "I feel competent," and 4 on "I want to feel competent," I need not be concerned whether 4 is too high or too low since I am where I want to be. If I score 6 on "You include me," and 9 on "I want you to include me," I am not getting what I want even though, in absolute terms, 6 is a relatively high score. Since what I see is quite different from what I want, obviously I want to change.

"Difference" is defined as "I don't have what I want" the difference between What I See and What I Want. It may be interpreted in two ways:

- 1. Unhappiness. I may say "People include me" 2, for example, and "I want people to include me" 8. This difference may be a source of great dissatisfaction in my life and lead to much sadness and depression.
- 2. Recognition. Or this difference may simply be a recognition of the state I am in at the present time. I am not depressed by it, I simply recognize that things are not the way



I want them to be and I am satisfied with my progress toward changing them. How much of each of these two possibilities is true is up to me to determine. Scores from Element B alone are silent on that point.

Summary: Advantages of Element B over FIRO-B

- All Element B items have been edited for consistency of form and for elimination of ambiguity and of difficult words. This improves clarity and scalability.
- Two sets of answer categories on FIRO-B have been reduced to a single set on Element B.
- To reduce confusion, all numbers except the final scores have been eliminated from Element B.
- The dimension of Affection has been replaced by the dimension of Openness, a behavior parallel to the other two dimensions, Inclusion and Control. Since Affection is a mixture of feeling and behavior, it is not parallel to Inclusion and Control.
- New items have been created for Openness to reflect behavior, in contrast to the items for Affection, which have a feeling content.
- The aspects, Expressed and Wanted, used in FIRO-B, are the ends of two continua. Expressed is the other end of Received, and Wanted is the other end of Actual or Seen. Element B incorporates both continua. For simplicity, these aspects are now called Do-Get (Expressed-Received) and See-Want (Actual-Wanted).
- Element B provides more than twice as much information as FIRO-B, since it also provides an internal measure of satisfaction for each pair of scales by comparing What I See with What I Want.
- Because of streamlining, Element B takes no longer to complete than FIRO-B. On the average,

both take 8–12 minutes to complete. Element B takes another 6–8 minutes for self-scoring.

Technical Information

Scaling of Element B

Element B was generated by using: (1) facet design, (2) dichotomous decisions, and (3) Guttman Scaling.

Facet Design

The facet design is a technique used to describe the total universe of content for a given area of investigation (Skye, 1978). The cells generated by the design are used to construct a series of items aimed at measuring a chosen area. This procedure assures us that the scale items are measuring what we say they are measuring, as designated by the scale name.

A facet design of the universe of content was developed and items for a questionnaire generated from that design. The facets of interest for Element B are:

- 1. Content: The specific interpersonal areas in which interactions occur: inclusion, control, and openness.
- 2. Direction: Interaction can originate either from me to you (Do), or from you to me (Get).
- 3. State: What I see (See), or what I want (Want).

The total number of possibilities for measurement is given by the product of the possibilities of each facet: 3 (content) \times 2 (direction) \times 2 (state) = 12. Table 1 shows all possible combinations of these variables. This constitutes the facet design for Element B.



Table 1. Facet Design for Element B

		See	Want
Inclusion	Do	11	12
	Get	13	14
Control	Do	21	22
	Get	23	24
Openness	Do	31	32
	Get	33	34

Each cell becomes a scale and a set of scales constitutes Element B. Code numbers are assigned to each cell for ease of identification of the scales.

Dichotomous Decisions

Items are generated from the facet design and refined by the method of dichotomous decisions.

After the universe of content is specified by the facet design, each facet is defined and several items are created to fit each cell. Examples of facets:

Inclusion = The area concerned with achieving just the right amount of contact with other people.

Do = What I initiate or do toward you.

Each item is printed on a separate card, and knowledgeable and independent judges (usually five) are presented with the task of classifying these cards.

Definitions of the facets are presented to the judges as a series of dichotomous decisions. The judges make these decisions successively for each item, until the item comes to rest in a final category. Through the use of a statistic devised for this purpose (Schutz, 1952), the percent agreement among judges for each dichotomy is computed. An item is said to fit the definition if some predetermined percentage (usually 90) of judgments agree on the

final placement of the items. Table 2 shows the dichotomous decision design for Element B.

Each category shown is defined in a sentence or two. Percent agreement among judges for each item is computed for each of the 15 dichotomies. If judges do not agree on which items belong in which categories, it is a simple matter to discover which dichotomy is unreliable, clarify the definition of that dichotomy, and repeat the classification procedure with new judges. Items with low agreement are examined and either reworded or eliminated. In this way, the sharpness of the definitions of the categories and the clarity of the items are improved until twelve items fit the final categories with 90 percent agreement.

This procedure ensures that the items are, in fact, measures of the facets. They are, therefore, logically connected to the facets. The next step is to see if they are empirically connected.

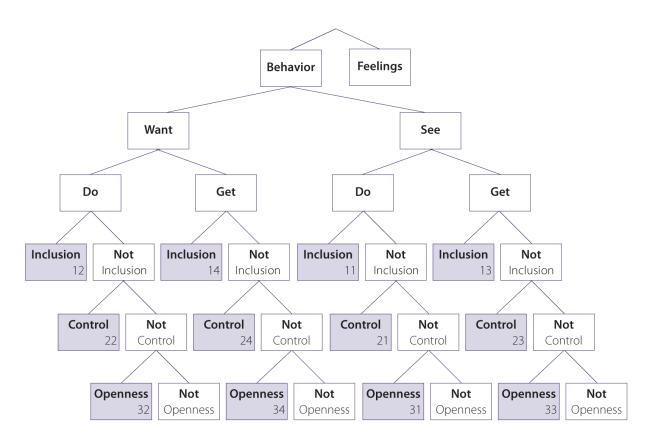
To test this, these 12 items were administered to a large population (from 100 to 300), and the Guttman scaling method was used to reduce these twelve to a nine-item scale.

Guttman Scaling

Of the several techniques available for psychological scale construction, the most appropriate one is the Guttman technique of cumulative scale analysis. For delimited content areas, the Guttman method is more relevant than methods such as factor analysis, which are more useful for isolating variables (see Schutz, 1962).

In the Guttman method (Guttman, 1950), scales composed of items regularly decreasing in popularity are constructed such that any individual will accept items sequentially to a given point and reject the remainder. If a series of items approximates this





cumulative model to the degree that 90 percent of all responses to all items can be predicted correctly from only a knowledge of how many items each person accepted, the items are said to be reproducible and to form a unidimensional scale.

For all cumulative scales, a length of nine items (ten points) was chosen. This number of items has the virtues of: (1) providing sufficient length for acceptable reliability (stability) of the scale, (2) providing a sufficient number of categories for dividing respondents into as many categories (ten) as are usually needed to understand people, (3) keeping testing time short, and (4) keeping scoring uniform among scales, and in single digits for computational ease.

Dichotomous Decisions

Table 2. Dichotomous Decisions for Element B

See table above.

Scale Names

The scale name is the name of the facet combination, for example, "I want people to include me" (Want-Get-Inclusion). The scale score indicates the degree to which I agree with the scale name. $\mathring{\mathbb{R}}$

References

Berg, K., The Human Element Feedback Survey. (Private distribution). Computer Company.

Pfeiffer, J. Heslin, R., and Jones, J. 75 Instruments



with wide application to the behavioral sciences. Behavioral Sciences, 2nd edition. San Diego: University Associates, 1976.

Doherty, W. and Colangelo, N. "The Family FIRO Model: A modest proposal for organizing family treatment." Journal of Marital and Family Therapy, 11, 299–303, 1984.

Guttman, L. "The Basis for Scalogram Analysis," in Stouffer, S. et al., Measurement and Prediction. Princeton: Princeton U. Press, 1950.

Reschak, F. Human Element Evaluation. (Hospital). (Private distribution).

Schutz, W. "Theory and Methodology of Content Analysis," Ph.D. dissertation. Los Angeles: UCLA, 1950.

Schutz, W. "Reliability, Ambiguity and Content Analysis" Psychological Review, Vol. 59, No. 2, March, 1952.

Schutz, W. "What Makes Groups Productive?" Human Relations, Volume VIII, Number 4, 1955 (429–465).

Schutz, W. FIRO: A three dimensional theory of interpersonal behavior. New York: Rinehart, 1958. Reprinted as The Interpersonal Underworld. Palo Alto: Science and Behavior Books, 1966 (i).

Schutz, W. "Outline of Research Design." Unpublished, 1962.

Schutz, W. Individual Self-Interpretation of Element B. Mill Valley, WSA, 1995.

Schutz, W. Joy. New York: Grove (and Ballantine), 1967.

Schutz, W. Leaders of Schools. Muir Beach, CA: WSA, 1988 (original publication, 1976).

Schutz, W.The FIRO Awareness Scales, Palo Alto: Consulting Psychologists Press, 1977.

Schutz, W. Profound Simplicity. Muir Beach, CA: WSA, 1988 (original publication, 1979).

Schutz, W. The Human Element: Productivity, Self-Esteem and the Bottom Line. San Francisco: Jossey-Bass, 1994.

Schutz, W. The Truth Option, Berkeley: TenSpeed, 1984.

Schutz, W. Concordance: Decision Making. Muir Beach: WSA, 1987.

Schutz, W. and Krasnow, E. "An IBM 704–709 Program for Guttman Scaling." Behavioral Science, Vol. 9, No. 1, January, 1964.

Shye, S. (ed.) Theory Construction and Data Analysis in the Behavioral Sciences: A Volume in Honor of Louis Guttman (Part 1: From Factors to Facets). San Francisco: Jossey-Bass, 1978.