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"MBTI^{3D}"
(A Three-Dimensional Interpretation)

Captain
William H. Burdon
SC, U.S. Navy

Faculty Research Advisor
Colonel Gail I. Arnott, USAF

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The Industrial College of the Armed Forces
National Defense University
Fort McNair, Washington, D.C. 20319-6000

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ABSTRACT

This paper was developed to provide management with an additional tool to use, in conjunction with the Myers-Briggs Type Indicator (**MBTI**), in team building, strengthening communication, and preventing or diagnosing organizational dysfunction. The **MBTI** has long been the instrument of choice of most organizations concerned about group dynamics. However, there is potential for incorrect interpretation, misunderstanding, and misuse. The **MBTI^{3D}** was developed to provide management the ability to visualize an individual in a multi-dimensional environment, as well as the capacity to compare multiple individuals. It gives management a new understanding of group dynamics and provides the capability to facilitate organizational change as well as explaining, resolving, and avoiding employee conflict.

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MBTI^{3D}
A Three-Dimensional Interpretation

THE MYERS-BRIGGS TYPE INDICATOR

Organizations consist of people who differ from each other in numerous ways. Understanding how these people differ is a major step toward creating a smooth operating organization. The "***Myers-Briggs Type Indicator*** " (**MBTI**) is an excellent tool for examining individual personality types within an organization. Many organizations today use the **MBTI** as their primary instrument for team building, strengthening communication, decision making, and for diagnosing organizational dysfunctions. However, there is potential for incorrect interpretation, misunderstanding, and misuse.

Most organizations using the **MBTI** do not sufficiently understand the limitations and possible pitfalls associated with blind "**Type**" casting. Current dimensional preference interpretation provides limited personality type association. The existing **Type Table** and associated thinking does not accurately show true preferential relationship--individuals are pigeonholed into personality types based solely on preference inclination and with disregard for actual preference values. Consequently, individual and group relationships, as represented by the **MBTI**, are not integrated the way most organizations perceive.

The **MBTI**'s somewhat cerebral definition and its two-dimensional visual display present a limited portrayal of real life multi-dimensional relationships. This linear and somewhat cumbersome depiction of individual preferences inhibits the true potential of the **MBTI**. A three-dimensional (3-D) visual display, on the other hand, would provide enhanced individual and organizational visibility by permitting multiple preference comparisons of numerous individual type indicators--the **MBTI^{3D}**.

Accordingly, my effort here will be to provide users of the **MBTI** with an alternate means (a different picture) to interpret dimensional preference and view group dynamics.

ONE MODEL/MULTIPLE INTERPRETATIONS

Theory of Type

In the early 1900's Swiss psychiatrist Carl Jung developed a series of personal observations into a theory on basic personality types. He called his theory "***Psychological Types***." Jung theorized that people, from birth, make clear choices on how to use their minds and, although they may not always use them in exactly the same manner, with time they acquire a mental preference or psychological type that characterizes their personality. He went on to speculate that there were three basic psychological types (ranges of orientation) common to all people--**Perceiving** (Sensing versus iNtuitive), **Interpreting** (Thinking verses Feeling) and **Responding** (Extraversion versus Introversion). By being cognizant of individual psychological types, Jung surmised people would be able to understand differences in personalities and be better suited to working together.[1]

Today, almost all of the personality typology effort in Human Resource Development (HRD) has its origins in the works of Carl Jung.

Type Indicator

In the early 1940's, Isabel Briggs Myers and her mother, Katherine Briggs, developed the **MBTI** model to make the theory of "***Psychological Types***" described by C. G. Jung understandable and useful in people's lives.[2]

The **MBTI** was based on a series of questions that, when completed by an individual,

seem to indicate personal viewpoint and behavior style. Myers and Briggs based their model on four "personality dimensions"--the three psychological types developed by Carl Jung and a fourth psychological type based on personal **Lifestyle** (Judging versus Perceiving).[3] Myers and Briggs defined their four personality dimensions as follows:

- **Extroverts/Introverts (E/I)**
- **Sensors/iNtuitors (S/N)**
- **Thinkers/Feelers (T/F)**
- **Judgers/Perceivers (J/P)**

By utilizing these personality dimensions they were able to classify an individual (based on that individual's preference for one aspect from each of the four personality dimensions) in one of sixteen personality types (the four-letter indicators that classify personality type consist of one letter representing a trait from each pair of personality dimensions--e.g., **ISTP**, **ISTJ**, **ESTJ**, **INFP**, etc.).

Over the years the **MBTI** has become a cornerstone of the HRD industry--over two-million people completed it in the United States alone last year. Today many major corporations use the **MBTI** as an element for self-awareness and as a tool for team building.

Temperament Sorter

Expanding on the works of Carl Jung and Myers-Briggs, David Keirsey and Marilyn Bates developed the theory of "temperaments." They defined temperament to be "...a moderation or unification of otherwise disparate forces, a tempering or concession of opposing influences...," and concluded that "One's temperament is that which places a signature or thumbprint on each of one's actions, making it recognizably one's own."[4]

Employing three of the four personality dimensions found in the **MBTI**, Keirsey and Bates created "The Four Temperaments." Using Sensors/iNtuitors (S/N) as the primary personality dimension and Judgers/Perceivers (J/P) and Thinkers/Feelers (T/F) as secondary personality dimensions, they developed a personality sorter based on preference:

> People with an S (sensing) preference gather information in concrete ways, based on facts in the here-and-now; temperament theory then subdivides them based on how they act on this information (judging or perceiving). People with N (intuitive) preference gather information in abstract ways, based on intuition and possibilities; the temperament sorter then subdivides them based on how they make decisions about this information (thinking or feeling). Thus, according to Keirsey and Bates Sorter, a person is characterized as SJ, SP, NT, or NF.[5]

Ocular Interpretation

MBTI is a useful instrument for team building, strengthening communications, decision making, and for diagnosing organizational dysfunctions."[6] There are, however, many interpretations applied to the results. Most psychologists recognize the **MBTI** as an important tool in understanding individual and group behavior, but there is very little consensus over dimensional interpretation. I feel that the best vehicle for dimensional consensus rests in the visual interpretation of the **MBTI**^{3D}.

ORIGINS OF THE MBTI^{3D}

Dimensional Preference

After taking the **MBTI**, I was not surprised to find that my **Type** (**ISTP**) scores indicated relatively weak dimensional preferences for **P**erceiving and **L**ifestyle (**I**-31, **S**-7, **T**-13, and **P**-1):

> There is a score associated with each letter of your type. These scores show how consistently you chose one preference over its opposite--how much you voted for one side versus the other. High scores generally mean a clear preference. There is nothing wrong with having a low score, however. In fact low scores are quite

> common, especially in younger people. It probably just means that for some reason your preference is not clear. It is important to understand that the scores do not show how developed that preference is, or how well you use that preference.[7]

What surprised me, though, was that by personality type (**ISTP**) I was classified the same as an individual whose scores indicated much stronger dimensional preferences (e.g., **I**-51, **S**-41, **T**-49, and **P**-23). It became apparent to me that as good a tool as the **MBTI** is, the interpretation of the results generally do not properly demonstrate variations in dimensional preference. In addition, I discovered that the preference scores of my personality type (**I**-31, **S**-7, **T**-13, and **P**-1) were actually closer to the preference scores of an individual with an entirely different personality type (**E**-4, **N**-8, **T**-10, and **J**-15). The more I examined this, the more it became obvious that common use of the **MBTI** needs more emphasis on the relative values of each dimensional preference. Once the score had been determined, an individual was assigned a personality-dimension, and his or her relative values were of secondary consideration at best. I felt there had to be a better way.

Therefore, to enhance a somewhat misleading representation of **MBTI** personality types, I proposed as a research project the development of a three-dimensional, Computer-Assisted Design (CAD) model for **MBTI** personality types display.

Relative Position

The idea of displaying the **MBTI** as a three-dimensional illustration had its origin in the two-dimensional **Type Table** used by Myers-Briggs:

> The Type Table is a device for seeing all the types *in relation to each other.* It arranges the types so that those in specific areas of the Table have certain preferences in common and hence share whatever qualities arise from those preferences. It is therefore valuable both for analysis of research data and for systematic personal observation.[8]

The problem with the **Type Table** is that it shows little or no real individual type relationship. The first **Type Table** position is established by dividing the "most observable choice"--**Perceiving**--and placing all the Sensing types on the left and all the iNtuitive types on the right. The second **Type Table** position is established by dividing the "next most discernible choice"--**Interpreting**--into two sets of two; placing the first set of Thinking and Feeling types on the left with the Sensing types, and placing the second set of Thinking and Feeling types on the right with the iNtuitive types. This process goes on through the two remaining personality dimensions (**Lifestyle** and **Responding**), taking care "...that in going from one combination to the next, only one preference changes at a tim ."[9]

Although the rationale given for the relative position of each personality type in the **Type Table** is plausible ("This arrangement reflects the closer relationships feeling types have with other people, whereas thinking types are more detached."[10]), the actual visual display is not. At best, the **Type Table** can only portray general personality relationships--an **ISTJ** is an **ISTJ**. It cannot accurately depict stand alone individual personality dimensions, let alone the potential to drift into a different personality dimension (a phenomena labeled by Charles K. Coe, Associate Professor, Department of Political Science and Public Administration, North Carolina State University, as the "Shadow Function"[11]). An **ISTJ** with a **J** value of 30 is totally removed from an **ENTJ** with a similar **J** value of 30. For that matter an **INTJ** with a **T** value of 25 and a **J** value of 35 is at the opposite

TYPE TABLE

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

end of the **Type Table** from an **ESTJ** with the same **T** and **J** values. At the same time an **INTJ** with a **T** value of 3 and a **J** value of 4 will be classified exactly the same as the **INTJ** with the **T** value of 25 and the **J** value of 35.

DEVELOPING THE MBTI^{3D}

Model Evolved

Typologists have for years attempted to demonstrate the functional and attitudinal relationships identified by Carl Jung. Unable to accurately visualize psychological type affiliation, they have developed a myriad of theories (personality dimensions, temperaments, etc.), and diagrams (type table, communication two-way dyad, etc.), to attempt to illustrate individual and group affinity. Accordingly, the impetus for developing the **MBTI^{3D}** was based on what I perceived to be a limited and somewhat confusing representation of the **MBTI** dimensional preferences. There must be a better way to demonstrate type relationship.

With the rapidly developing technoiogy of Computer-Assisted Design (CAD) and, in particular, its Three-Dimensional (**3D**) aspect, it occurred to me that by combining CAD technology with Myers-Briggs dimensional preferences a more accurate representation of type relationship might be possible.

I must admit that from the start I was intrigued with the **MBTI** and its potential for understanding individual and group behavior. However, I was troubled over the mechanics of the representations. Utilizing scores provided by the **MBTI**, I developed the **MBTI^{3D}** model based on the traditional representations of C. G. Jung's three elements of "***Psychological Types***:" **Perception** (**S/N**), **Interpreting** (referred to as **Judgment** (**T/F**) by Myers-Briggs), and

Responding (referred to as **Attitudes (E/I)** by Myers-Briggs):

- **Perception** includes the many ways of becoming aware of things, people, events, or ideas. It includes information gathering, the seeking of sensation or of inspiration, and the selection of the stimulus to be attended to.[12]

- **Judgment** includes all the ways of coming to conclusions about what has been perceived. It includes decision making, evaluation, choice, and the selection of the response after perceiving the stimulus.[13]

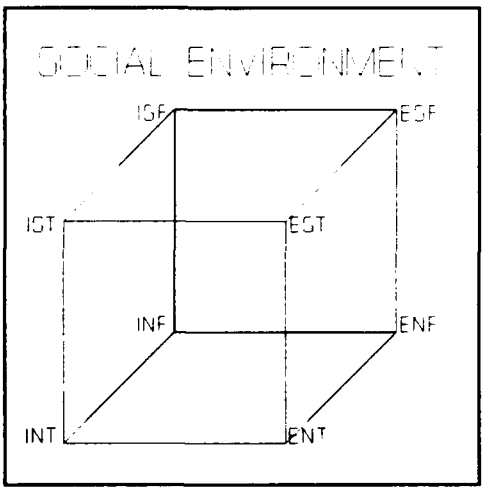
- **Attitudes** are seen as complementary orientations toward life assumed to be variants of normal human personality, recognized through history and literature, and each with major contributions to society. [14]

As I stated earlier, Isabel Myers and Katherine Briggs, in developing their **MBTI,** added a fourth element (dimensional preference) popularly referred to as **Life Style (J/P)**. This dimensional preference has two uses: First, it describes identifiable attitudes and behaviors to the outside world. Secondly, it is used in conjunction with **Attitudes** to identify which of the two preferred dimensional preferences **(E/I)** is the leading or dominant function and which is the auxiliary.[15]

Three Basic Elements

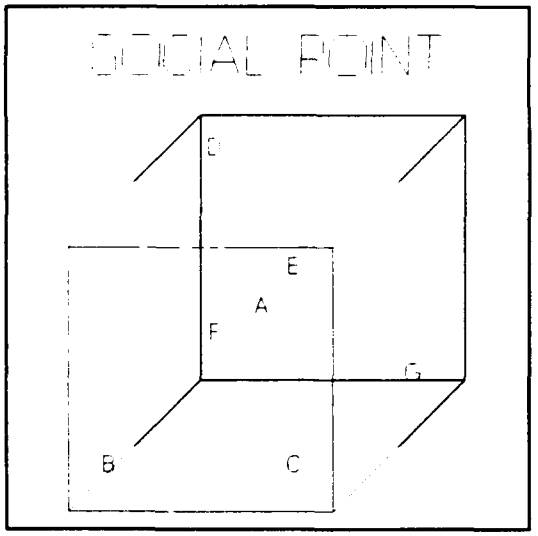
As I developed the **MBTI^{3D}**, I began to acquire a preference for the original psychological types postulated by Carl Jung. Initially, my preference was based on the rather rudimentary consideration that three axes were easier to represent in a three-dimensional environment than four. However, after talking with Bill Jeffries, a noted organizational development consultant and the author of ***True To Type***,[16] I ultimately sided with Carl Jung. As I researched type development, it became apparent that most of the follow-on extrapolations of his psychological types were only attempts to clarify type relationship--a relationship that is very clear on a three-dimensional scale.

I elected to use the **MBTI** preference scores as the basis for the **MBTI**^{3D} because their numeric values were easy to plot in a multi-dimensional environment. To date, utilizing **HARVARD GRAPHICS** and **TURBOCAD-3D** (a CAD program), I have developed the three basic elements of the **MBTI**^{3D} model:



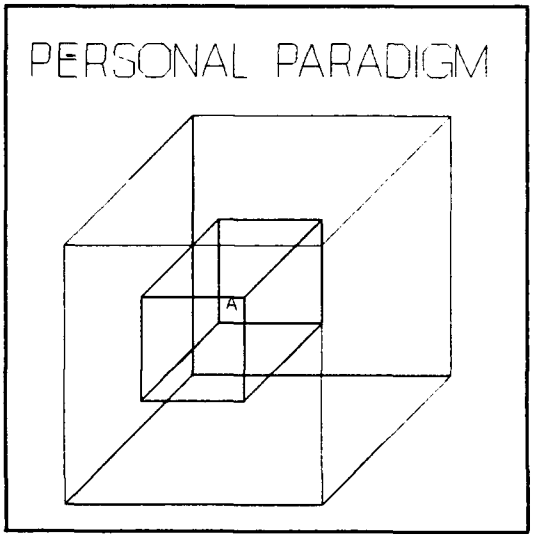
Social Environment: This refers to the environment in which all personality types exist. By this I mean the envelope of social involvement as determined by the relative values of an individual's dimensional preference as compared to another individuals' dimensional preference--an environment for group interface. In the **MBTI**^{3D} model this is represented by a cube whose measurements have been determined by the absolute range values of Jung's three psychological types: **Perceiving** (Sensing versus iNtuitive), **Interpreting** (Thinking versus Feeling) and **Responding** (Extraversion versus Introversion)--with a center value of 0 and an individual axis value of 120 units to a side (-60 to +60--the preference strength points of the MBTI as described in Appendix A).

Social Point: The actual point within the **Social Environment** in which an individual's psychological type is located relative to the confines of the **Social Environment**. This is an individual's dimensional preference center point. An individual's **Social Point** of reference--where an individual is located relative to other individuals. In the **MBTI**^{3D} model this is represented by the three individual **MBTI** preference scores that correspond to Jung's three Psychological Types; **Perceiving** (Sensing versus iNtuitive), **Interpreting** (Thinking versus



Feeling) and **Responding** (Extraversion versus Introversion)--for example S-9, T-39, and I-11, etc. This point may move within the Personal Paradigm.

Personal Paradigm: This is the area within the **Social Environment** in which an individual's **Social Point** exists (given the social point may move relative to other Social Environment influences). This is an individual psychological comfort zone and may be influenced by others within the **Social Environment**. In the **MBTI**^{3D} model this is represented by twice the value of the preference strengths--displayed as a rectangle (for example S-18 by N-26, T-26 by F-6, and J-22 by P-32). Preference strengths have been doubled to offset adjustments in **MBTI** scoring criteria (the formula for preference score is as follows: for **E, S, T,** and **J** it is 2 times the larger number minus the smaller number, minus one; for **I, N, F,** and **P**, it is 2 times the larger number minus the smaller number, plus one; for ties, **I** = 1, **N** = 1, **F** = 1, and **P** = 1) to more accurately represent actual size within the **Social Environment**. The creation of the **Personal Paradigm** is a major step toward solving the "Shadow Function" problem (the tendency to utilize a weaker preference in conjunction with a stronger preference during certain social situations) identified by Charles K. Coe:

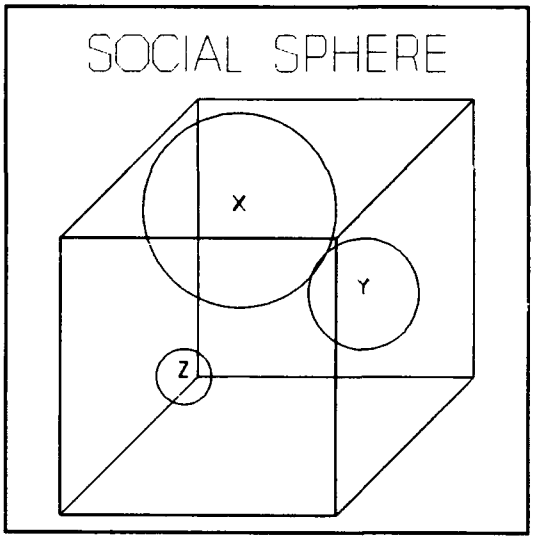


> Because the MBTI is a forced choice instrument it cannot measure how well one performs the shadow function.
>
> This shadow function failure is the most serious limitation of the MBTI (Ramaprasad and Mitroff, 1984: 604) and the source of greatest misunderstanding about the instrument. Many assume that the MBTI is an either/or proposition. For example, one is either an extravert or an introvert. In fact, each person performs all eight functions all at the same time; moreover, some people are more integrated on one or more of their shadow functions than others.[17]

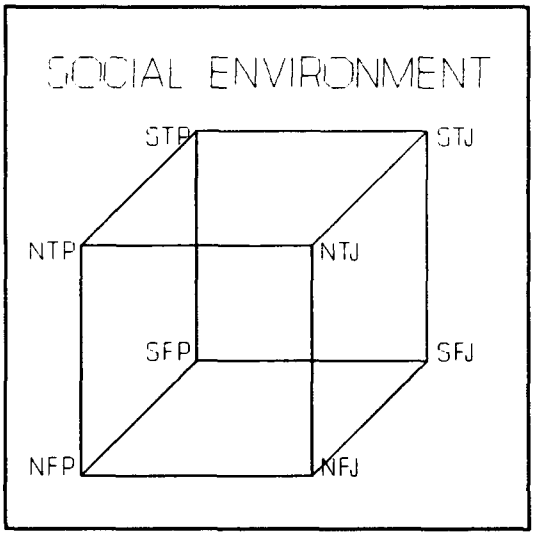
An Alternate Approach

In developing the **MBTI^{3D}** model I initially compared the relative values of the four-dimensional preferences of Myers-Briggs against the three psychological types of C. G. Jung. This model utilized the three Myers-Briggs "How" dimensional preferences ("How do you acquire information? The **S/N** scale..." "How do you make decisions? The **T/F** scale..." and the "How do you orient toward the outer world? The **J/P** scale...")[18] to develop the three axis points of the **MBTI^{3D} Social Point** as well as the axis legs of the **MBTI^{3D} Personal Paradigm**. In addition, I developed a fourth display utilizing the Myers-Briggs "Where" dimensional preference-- "Where do you prefer to focus your attention? The **E/I** scale..."[19] called the **Social Sphere**:

Social Sphere: the sphere of social interface (the degree of preference that an individual has to relate to the world around him/her). Under the Myers-Briggs alternate approach to the **MBTI^{3D}** the value of the **E/I** dimensional preference is represented as a sphere in the **Social Environment**. The **Social Sphere** is superimposed over the **Social**



Point to show the relative degree of introversion to extraversion (introversion being a smaller sphere and extraversion a larger sphere). In the case of the alternate approach (utilizing all four dimensional preferences of Myers-Briggs), the **Social Environment** is determined by the absolute values of the three "How" dimensions: Sensing versus iNtuitive, Thinking versus Feeling, and Judging versus Perceiving.



In the end I chose a Jungian approach for the **MBTI**^{3D} for two reasons. First, although true to the precepts of the **MBTI**, use of Myers-Briggs dimensional preferences vice Carl Jung's psychological was beyond my graphic capability (particularly when superimposing the **Social Point**). Secondly, like most Jungian traditionalists, I decided that **Life Style** was a redundant representation of the existing relationships between Carl Jung's three psychological types--a relationship that is very difficult to perceive in a linear (two-dimensional) representation.

THE MBTI^{3D} APPLIED

Group Dynamics

As revealing as the **MBTI**^{3D} is on an individual basis, it does not reach its true potential until it is applied to group dynamics (or field theory as it is often called). For the most part group dynamics is concerned with analyzing individuals and their relationship to groups. For many the essence of a group is its **interdependency**. Kurt Lewin, a respected psychologist and

authority on group behavior, makes the point that the integral aspect of a collection of individuals that make it a group is the interdependency of the individuals on one another.[20] Paul Hare, a well-known expert in small group research, adds: "There are several characteristics which differentiate the group from a collection of individuals: There must be some interaction; they share a common goal and a set of norms; roles become stabilized; and a network of interpersonal attraction develops.[21]

Many typologists believe that the study of group homogeneity/heterogeneity is the key to productive team building. The general conclusion is that the more heterogeneous a group is, the more effective the group is likely to be for most complex tasks and problem solving. The more homogeneous a group is, the less effective the group is likely to be.

From the standpoint of the **MBTI** (dimensional preferences) a heterogeneous team is composed of members with different perception and judgment preferences. These differences enhance the problem solving capability of the group because the strengths of one member complement the weaknesses of another. A homogeneous group, on the other hand, is composed of members with the same perception and judgment preferences. From this common base, I suggest that there is high potential for effective communication and decreased potential for conflict.

Here is where the **MBTI**^{3D} comes into its own. Studies have been conducted to evaluate the effectiveness of groups composed of members with compatible (homogeneous) and complementary (heterogeneous) **MBTI** types (the Blaylock Experiment[22] and McAleer's Research[23]). In general, the complementary groups outperformed the compatible groups. However, there were various anomalies--complementary groups that communicated effectively

and compatible groups that displayed effective problem solving skills--suggesting that the margin of effectiveness between groups was not always well defined and the **MBTI** measures preference and not ability. Isabel Myers and Mary McCaully allude to these inconsistencies: "A number of observers have begun to focus on specific type groupings, naming them and describing their characteristics. The research to bring together these observations and test them empirically is still in the early stages."[24]

These group aberrations also seem to exist to some degree in Flavil Yeakley's Communication Theory. Yeakley developed his communication two-way dyad based on the assumption that the greater the psychological type similarity between people, the easier it should be for them to communicate and develop stable relationships.[25] However, Yeakley's commitment to the theory of compatible communication seems to waver slightly when he submits that it is not the degree of similarity in **MBTI** scale preferences that is most important but rather the degree of similarity in function (e.g. communication style preferences). [26]

Both Isabel Myers and Flavil Yeakley insinuate that there may be unaddressed deviations associated with the **MBTI** model. I would suggest that the these anomalies exist in the inability of the current **MBTI** to properly represent the true values of the dimensional preferences (types). As illustrated earlier, type values are not absolute. An individual with **ISTP** values of: **I**-10, **S**-7, **T**-13, and **P**-1 is dimensionally closer to an individual with **ENTJ** values of: **E**-4, **N**-8, **T**-10, and **J**-15 than to an individual with **ISTP** values of **I**-51, **S**-41, **T**-49, and **P**-23. This inability to represent relative preference relationship distorts the view of what constitutes homogeneous and heterogeneous groups--theoretically the **ISTP** above could share a more homogeneous bond with the **ENTJ** above than with a **ISTP** with much stronger preference values. The significance

of this comparison is graphically illustrated by comparing the standard **Type Table** to the **MBTI[3D] Social Environment**. By plotting the **MBTI** scores of the primary secondary control groups on both the standard **Type Table** and in the **Social Environment**, a more meaningful comparison can be obtained (values as found in Appendix B. Items 1 through 12):

Primary Group:

A. **ISTJ** I-11, S-11, T-59, and J-31.

B. **ESTP** E 19, S- 1, T-11, and P 31.

C. **ISTJ** I-39, S-57, T-57, and J-35.

D. **ESTP** E 17, S-55, T-17, and P 25.

E. **ENTP** E 23, N 29, T-13, and P 3.

F. **ISTP** I-31, S- 7, T-13, and P 1.

Secondary Group:

G. **INTP** I-17, N 9, T-39, and P 11.

H. **ESFJ** E 47, S-15, F 1, and J-15.

I. **ISTJ** I-17, S-23, T-31, and J- 1.

J. **ESTJ** E 31, S-45, T-35, and J-29.

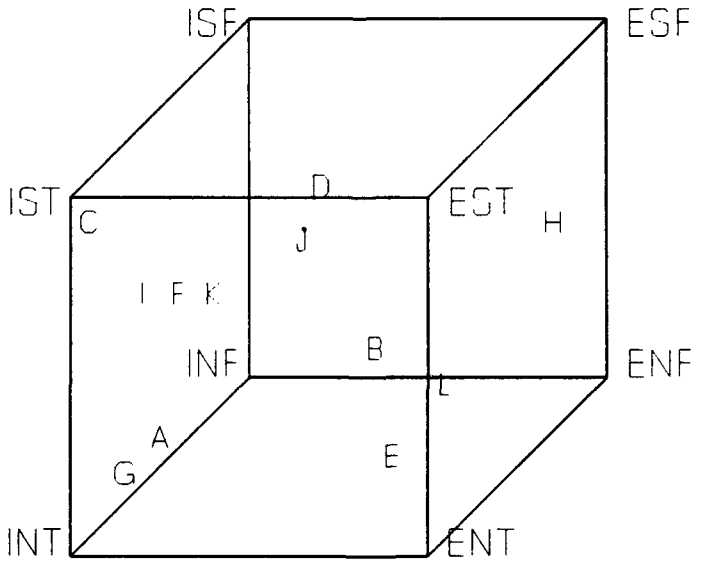
K. **ISTJ** I-21, S-23, T-49, and J- 1.

L. **ENTJ** E 43, N 23, T- 9, and J- 5.

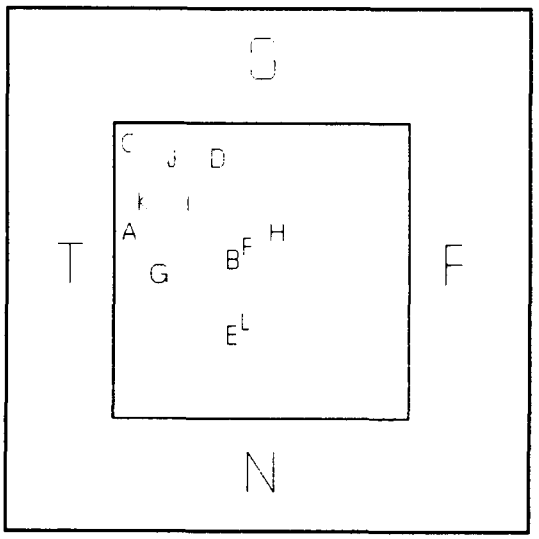
TYPE TABLE

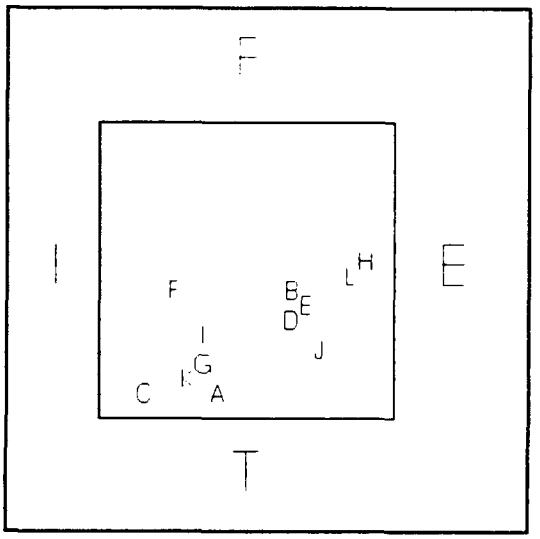
ISTJ A E I I	ISFJ	INFJ	INTJ
ISTP F	ISFP	INFP	INTP G
ESTP B D	ESFP	ENFP	ENTP E
ESTJ J	ESFJ H	ENFJ	ENTJ L

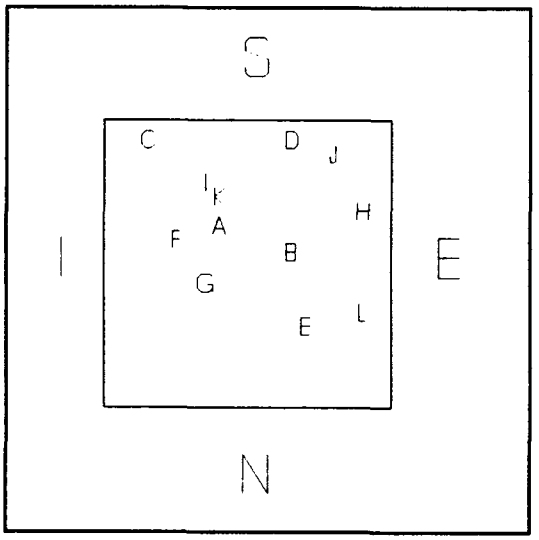
SOCIAL ENVIRONMENT

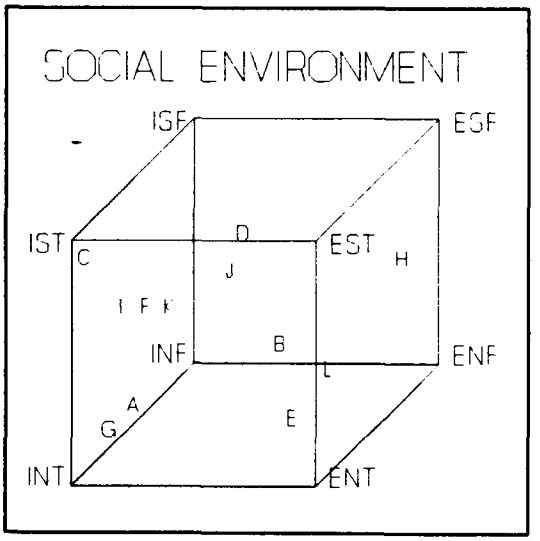


One of the potential strengths of the **MBTI[3D]** is the ability to rotate the **Social Environment** (while in the **TURBOCAD 3-D** module). This provides a dynamic comparison of individual positions (dimensional preferences) and organizational relationships. For those not spatially adept, a draftsman's representation of the control group's **Social Environment** provides a slightly different visual approach. Although not as dramatic as the **MBTI[3D]**, the relative relationship between individuals is easier to visualize:









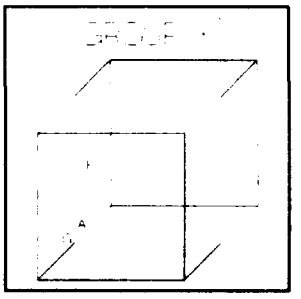
The Group of Twelve

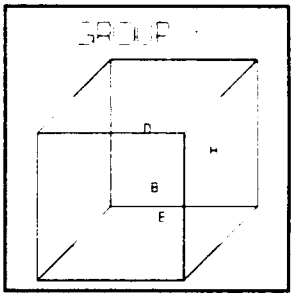
Upon arriving at the Industrial College of the Armed Forces (ICAF), all students were assigned to seminar groups. Within a few weeks the seminar group that I was assigned to (consisting of my primary control group (seminar members **A**, **B**, **C**, **D**, **E** and **F**) and my secondary control group (seminar members **G**, **H**, **I**, **J**, **K**, and **L**)) developed into a relatively harmonious assemblage--a healthy, well-established interdependency with active and accurate lines of communication. Even the instructors commented on the unity of the seminar group, indicating that it was one of the best they had seen.

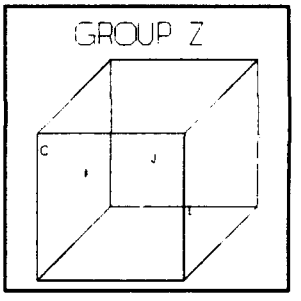
As the semester went by the relative homogeneity of the group became more and more obvious. Group assignments were accomplished quickly, accurately, and with a high degree of innovation. Even the mid-semester project, where the group was split in two, was successfully accomplished with little or no problem. However, the end of semester project, although marginally successful, was marred by unanticipated internal dissension, independence, and overall poor communication. For a group as successful as this group had been, this came as a surprise. It left the seminar group confused and uncertain of its future capacity and overall capabilities.

In retrospect, a review of the standard **Type Table** would seem to indicate a potential for dysfunction and to an **MBTI** expert the collapse of the seminar group might not come as a surprise. However, when viewed through the **MBTI**^{3D} the cause for collapse is identifiable. As a group the seminar was very heterogeneous (psychological types scattered throughout the **Social Environment**) and all the elements of good team building were present. Even when the seminar group split into two groups, group one (the primary group) and group two (the

secondary group), for the mid-semester project the individual group assignments retained much of their heterogeneous character. However, when the seminar was forced to break down into three groups, group **X** (with members **A**, **G**, **I**, and **F**), group **Y** (with members **B**, **D**, **E**, and **H**) and group **Z** (with members **C**, **J**, **K**, and **L**), for the end of semester project, the individual group assignments created three markedly different groups (one decidedly homogeneous group and two fairly different heterogeneous groups). Not only did this limit the ability of the seminar to communicate, it developed individual pockets of creativity that had little or no relationship to each other and, despite the project facilitator's attempt to provide a uniform structure for group output, each group produced totally dissimilar products. In the end the seminar could not come to closure and project success was achieved only after the group reunited and individual group products were modified by consensus.







Group assignment by **Type Table** (dimensional preference) might have minimized the potential for group dysfunction by providing a somewhat vague indication of personality separation. Nevertheless, because of the numerous value permutations within a dimensional preference this might not always be apparent. The **MBTI**^{3D}, on the other hand, vividly displays individual personality relationships within a group. Working group assignments made with reference to **MBTI**^{3D} location should go a long way toward enhancing subgroup productivity and harmony.

A Different View

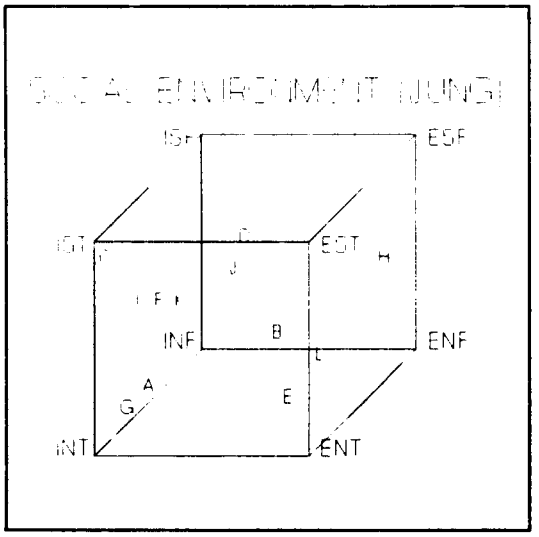
The **MBTI**^{3D} provides a new tool for behavioral scientists to use in investigating personality types and their relationship to group dynamics. The mechanics of the model may be applied to any one of several interpretations of Jung's psychological types. I initially developed the **MBTI**^{3D} to replace the standard **MBTI Type Table**. However, I later became intrigued with the debate over the validity of the **Judging-Perceiving** attitude advance by Katherine Briggs and Isabel Briggs Myers and modified my model to represent a more traditional Jungian approach to the **MBTI**^{3D}:

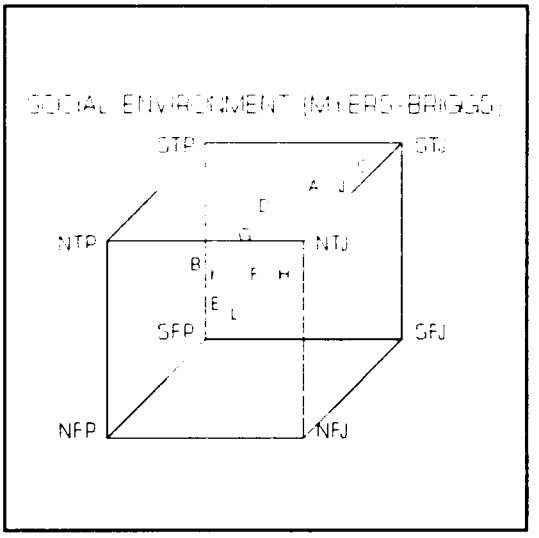
> To many Jungians, having the **Judging-Perceiving** attitude included on the **MBTI** represents a violation of Jungian theory. While the **J-P** difference was never explicitly stated in Jung's writings, Katherine and Isabel felt it was there implicitly. I, and others knowledgeable in the field, agree with their judgment, but many "pure" Jungians take umbrage at such liberties being taken.[27]

As previously stated, I was uncomfortable with the rather ambiguous way the **Type Table** represented the sixteen personality types. The **Type Table** was extremely enigmatic for examining assorted personality relationships. By using specific **MBTI** dimensional preference values, I felt the **MBTI**^{3D} could be much more definitive. Hence, the following analogy. Where as the standard **Type Table** can tell you in what city and in what ball park specific spectators are located, the **MBTI**^{3D} can tell you in what city, in what ball park, in what section, and in what seat the spectators are sitting.

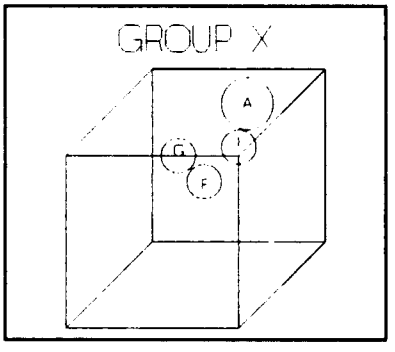
I initially developed the **MBTI**^{3D} to represent the thinking of Myers-Briggs (utilizing a **Social Environment** comprised of the extended values of the dimensional preferences; Sensors/iNtuitors, Thinkers/Feelers, and Judgers/Perceivers as well as a **Social Sphere** represented by the comparative value of the dimensional preference Extroverts/Introverts).

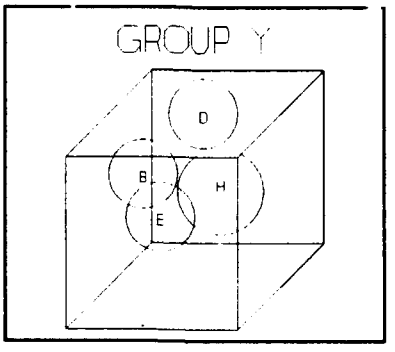
However, I ultimately elected the traditionalist approach and chose to use Jung's three psychological types (Extroverts/Introverts, Sensors/iNtuitors, and Thinkers/Feelers) as being the least controversial and easiest to represent graphically. However, both provide interesting, albeit somewhat different, insight into individual personality type and group dynamics:

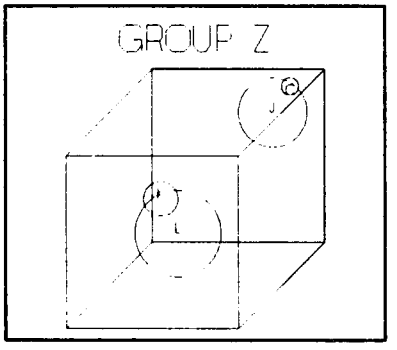




Although I believe the **MBTI**^{3D} obviates the need for Myers-Briggs' fourth dimensional preference (**Judgers/Perceivers**) I recommend that additional research be conducted using the Myers-Briggs application of the **MBTI**^{3D} model. A prime area for additional research would be the comparative relationships found in the **Social Sphere**. In the case of the dysfunctional seminar groups mentioned earlier an examination of the **Extrovert/Introvert** aspects of the individuals involved provides a slightly different view of dynamics of the three groups:







Management Tool Development

Originally, I started graphic development of the **MBTI^{3D}** model utilizing the **3D** module of the computer program **TURBOCAD** (values as plotted from appendix B, items 1 through 12). This program readily transfers the **MBTI** preference scores to a **3D** graphic representation that provides a multi-dimensional visual image. In addition, **TURBOCAD** provides the capability for object rotation (which comes in quite handy when trying to visually grasp three-dimensional relationships). Unfortunately, I found **TURBOCAD** difficult to transfer to **Wordperfect**, and ultimately elected to use **Harvard Graphics** to develop the various graphic representation found in this paper.

Accordingly, I recommend additional research to develop software to convert **MBTI** preference scores to a multi-dimensional computer terminal display of the various elements of the **MBTI^{3D}** (**Social Environment**, **Social Point**, and **Personal Paradigm**, etc.). This software would have object rotation capability and would be available to management for investigating personality type and group dynamic research, as well as enhancing self-awareness, self-development, and team building.

MBTI^{3D} IN CLOSING

This **3D** concept has application as well in almost any multi-value comparison (as long as the compared values are of similar disposition). As the comparison of the Jungian approach versus the Myers-Briggs approach demonstrated above, each **3D** representation gives a slightly different view of an individual and of that individual's relationship to the group. Any model where multiple value data has been established is a potential candidate for multi-dimensional

representation, and typologists should consider additional applications for this model.

The **MBTI** is a powerful tool for understanding individual preferences. It can provide useful insight into individual inclination and personal propensity. Nevertheless, when applied to multiple individual relationships it is easily misinterpreted and misused. Because of the complexity of multi-dimensional preferences the relative relationship between more than two individuals is very difficult to perceive. Reference to the **Type Table** further exasperates this problem because it does not accurately show true preferential relationship (relative dimensional location).

Individuals relate to each other on multiple planes. So why not view them that way? The capacity to visualize multi-dimensional data representations opens up a whole new area for individual and group comparison. This abstract provides management with a data based, visual representation for evaluating group relationships through the examination of related multiple values. In the case of the **MBTI**^{3D} these values are extracted directly from the **MBTI**'s dimensional preferences and serve to display multiple relationships on an individual preference level.

In closing, the **MBTI**^{3D} was developed to provide management with an additional tool to use in team building, strengthening communication, and preventing or diagnosing organizational dysfunction. The ability to visualize an individual in a multi-dimensional environment, as well as the capacity to compare multiple individuals, gives management a new understanding of group dynamics and provides the capability to facilitate organizational change as well as explaining, resolving, and avoiding employee conflict.

ENDNOTES

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24. Isabel Briggs Myers and Mary H. McCaully, A Guide to Development and Use of the Myers-Briggs Type Indicator, p. 31.

25. Flavil R. Yeakley Jr., "Implications of Communication Style Research for Psychological Type Theory," Research in Psychological Type, 1983

26. Ibid., p. 31.

27. William C. Jeffries, True to Type, p. 28.

Social Environment Work Sheet

1. **Values:**

	a.	X	60	Y	60	Z	60
	b.	X	60	Y-	60	Z	60
	c.	X-	60	Y-	60	Z	60
	d.	X-	60	Y	60	Z	60
	e.	X	60	Y	60	Z	60
	f.	X	60	Y	60	Z-	60
	g.	X	60	Y-	60	Z-	60
	h.	X-	60	Y-	60	Z-	60
	i.	X-	60	Y	60	Z-	60
	j.	X	60	Y	60	Z-	60
New Start	k.	X	60	Y-	60	Z	60
	l.	X	60	Y-	60	Z-	60
New Start	m.	X-	60	Y-	60	Z	60
	n.	X-	60	Y-	60	Z-	60
New Start	o.	X-	60	Y	60	Z	60
	p.	X-	60	Y	60	Z-	60

(Appendix A.)

MBTI[3D] WORKSHEET

1. Letter Code: A No. 1

2. Control Group: PRIMARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

I	11
S	11
T	59
J	31

   b. Preference Strengths:

Extraversion	11	- :	16	Introversion
Sensing	17	:	11	iNtuition
Thinking	30	:	0	Feeling
Judging	22	:	6	Perception

4. MBTI[3D] Matrix:

   a. Social Point:

X = (+E/-I) -11

Y = (+S/-N) 11

Z = (+T/-F) 59

(Appendix B. Item 1.)

b. Personal Paradigm:

(1) X_E 11 Y_S 17 ZT 30

(2) X_E 11 Y_N- 11 Z_T 30

(3) X_I- 16 Y_N- 11 Z_T 30

(4) X_I- 16 Y_S 17 Z_T 30

(5) X_E 11 Y_S 17 Z_T 30

(6) X_E 11 Y_S 17 Z_F- 0

(7) X_E 11 Y_N- 11 Z_F- 0

(8) X_I- 16 Y_N- 11 Z_F- 0

(9) X_E 11 Y_S 17 Z_F- 0

(10) X_E 11 Y_S 17 Z_T 30

(11) X_E 11 Y_N- 11 Z_T 30

(12) X_E 11 Y_N- 11 Z_F- 0

(13) X_I- 16 Y_N- 11 Z_T 30

(14) X_I- 16 Y_N- 11 Z_F- 0

(15) X_I- 16 Y_S 17 Z_T 30

(16) X_I- 16 Y_S 17 Z_F- 0

(Appendix B. Item 1.)

MBTI[3D] WORKSHEET

1. Letter Code: B No. 2

2. Control Group: PRIMARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

E	19
S	1
T	11
P	31

   b. Preference Strengths:

Extraversion	17	:	7 Introversion
Sensing	13	:	12 iNtuition
Thinking	15	:	9 Feeling
Judging	7	:	22 Perception

4. MBTI[3D] Matrix:

   a. Social Point:

X = (+E/-I)	-11
Y = (+S/-N)	11
Z = (+T/-F)	59

(Appendix B. Item 2.)

b. Personal Paradigm:

(1) X_E 17 YS 0 ZT 22

(2) X_E 11 Y_N- 0 Z_T 22

(3) X_I- 16 Y_N- 0 Z_T 22

(4) X_I- 16 Y_S 30 Z_T 22

(5) X_E 11 Y_S 30 Z_T 22

(6) X_E 11 Y_S 30 Z_F- 6

(7) X_E 11 Y_N- 0 Z_F- 6

(8) X_I- 16 Y_N- 0 Z_F- 6

(9) X_E 11 Y_S 30 Z_F- 6

(10) X_E 11 Y_S 30 Z_T 22

(11) X_E 11 Y_N- 0 Z_T 22

(12) X_E 11 Y_N- 0 Z_F- 6

(13) X_I- 16 Y_N- 0 Z_T 22

(14) X_I- 16 Y_N- 0 Z_F- 6

(15) X_I- 16 Y_S 30 Z_T 22

(16) X_I- 16 Y_S 30 Z_F- 6

(Appendix B. Item 2.)

MBTI[3D] WORKSHEET

1. Letter Code: C No. 3

2. Control Group: PRIMARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

I	39
S	57
T	57
J	35

   b. Preference Strengths:

Extraversion	4	:	23 Introversion
Sensing	32	:	3 iNtuition
Thinking	29	:	0 Feeling
Judging	23	:	5 Perception

4. MBTI[3D] Matrix:

   a. Social Point:

X = (+E/-I)	-39
Y = (+S/-N)	57
Z = (+T/-F)	57

(Appendix B. Item 3.)

b. Personal Paradigm:

(1) X_E 4 Y_S 32 ZT 29

(2) X_E 4 Y_{N^-} 3 Z_T 29

(3) X_{I^-} 23 Y_{N^-} 3 Z_T 29

(4) X_{I^-} 23 Y_S 32 Z_T 29

(5) X_E 4 Y_S 32 Z_T 29

(6) X_E 4 Y_S 32 Z_{F^-} 0

(7) X_E 4 Y_{N^-} 3 Z_{F^-} 0

(8) X_{I^-} 23 Y_{N^-} 3 Z_{F^-} 0

(9) X_E 4 Y_S 32 Z_{F^-} 0

(10) X_E 4 Y_S 32 Z_T 29

(11) X_E 4 Y_{N^-} 3 Z_T 29

(12) X_E 4 Y_{N^-} 3 Z_{F^-} 0

(13) X_{I^-} 23 Y_{N^-} 3 Z_T 29

(14) X_{I^-} 23 Y_{N^-} 3 Z_{F^-} 0

(15) X_{I^-} 23 Y_S 32 Z_T 29

(16) X_{I^-} 23 Y_S 32 Z_{F^-} 0

(Appendix B. Item 3.)

MBTI[3D] WORKSHEET

1. Letter Code: D No. 4

2. Control Group: PRIMARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

E	17
S	55
T	17
P	25

   b. Preference Strengths:

Extraversion	17	:	8 Introversion
Sensing	28	:	0 iNtuition
Thinking	15	:	6 Feeling
Judging	7	:	19 Perception

4. MBTI[3D] Matrix:

   a. Social Point:

X = (+E/-I) 17

Y = (+S/-N) 55

Z = (+T/-F) 17

(Appendix B. Item 4.)

b. Personal Paradigm:

(1) X_E 17 Y_S 28 ZT 15

(2) X_E 17 Y_N- 0 Z_T 15

(3) X_I- 8 Y_N- 0 Z_T 15

(4) X_I- 8 Y_S 28 Z_T 15

(5) X_E 17 Y_S 28 Z_T 15

(6) X_E 17 Y_S 28 Z_F- 6

(7) X_E 17 Y_N- 0 Z_F- 6

(8) X_I- 8 Y_N- 0 Z_F- 6

(9) X_E 17 Y_S 28 Z_F- 6

(10) X_E 17 Y_S 28 Z_T 15

(11) X_E 17 Y_N- 0 Z_T 15

(12) X_E 17 Y_N- 0 Z_F- 6

(13) X_I- 8 Y_N- 0 Z_T 15

(14) X_I- 8 Y_N- 0 Z_F- 6

(15) X_I- 8 Y_S 28 Z_T 15

(16) X_I- 8 Y_S 28 Z_F- 6

(Appendix B. Item 4.)

MBTI^{3D} WORKSHEET

1. Letter Code: E No. 5

2. Control Group: PRIMARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

E	23
N	29
T	13
P	3

   b. Preference Strengths:

Extraversion	19	:	7	Introversion
Sensing	4	:	18	iNtuition
Thinking	12	:	5	Feeling
Judging	13	:	14	Perception

4. MBTI^{3D} Matrix:

   a. Social Point:

X = (+E/-I)	23
Y = (+S/-N)	-29
Z = (+T/-F)	13

(Appendix B. Item 5.)

b. Personal Paradigm:

(1) X_E 19 Y_S 4 ZT 12

(2) X_E 19 Y_N- 18 Z_T 12

(3) X_I- 7 Y_N- 18 Z_T 12

(4) X_I- 7 Y_S 4 Z_T 12

(5) X_E 19 Y_S 4 Z_T 12

(6) X_E 19 Y_S 4 Z_F- 5

(7) X_E 19 Y_N- 18 Z_F- 5

(8) X_I- 7 Y_N- 18 Z_F- 5

(9) X_E 19 Y_S 18 Z_F- 5

(10) X_E 19 Y_S 18 Z_T 12

(11) X_E 19 Y_N- 4 Z_T 12

(12) X_E 19 Y_N- 4 Z_F- 5

(13) X_I- 7 Y_N- 4 Z_T 12

(14) X_I- 7 Y_N- 4 Z_F- 5

(15) X_I- 7 Y_S 18 Z_T 12

(16) X_I- 7 Y_S 18 Z_F- 5

(Appendix B. Item 5.)

MBTI[3D] WORKSHEET

1. Letter Code: F No. 6

2. Control Group: PRIMARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

I	31
S	7
T	13
P	1

   b. Preference Strengths:

Extraversion	6	:	21 Introversion
Sensing	14	:	10 iNtuition
Thinking	12	:	5 Feeling
Judging	12	:	12 Perception

4. MBTI[3D] Matrix:

   a. Social Point:

X = (+E/-I)	-31
Y = (+S/-N)	7
Z = (+T/-F)	13

(Appendix B. Item 6.)

b. Personal Paradigm:

(1) X_E 6 Y_S 14 ZT 12

(2) X_E 6 Y_N- 10 Z_T 12

(3) X_I- 21 Y_N- 10 Z_T 12

(4) X_I- 21 Y_S 14 Z_T 12

(5) X_E 6 Y_S 14 Z_T 12

(6) X_E 6 Y_S 14 Z_F- 5

(7) X_E 6 Y_N- 10 Z_F- 5

(8) X_I- 21 Y_N- 10 Z_F- 5

(9) X_E 6 Y_S 10 Z_F- 5

(10) X_E 6 Y_S 10 Z_T 12

(11) X_E 6 Y_N- 14 Z_T 12

(12) X_E 6 Y_N- 14 Z_F- 5

(13) X_I- 21 Y_N- 14 Z_T 12

(14) X_I- 21 Y_N- 14 Z_F- 5

(15) X_I- 21 Y_S 10 Z_T 12

(16) X_I- 21 Y_S 10 Z_F- 5

(Appendix B. Item 6.)

MBTI^{3D} WORKSHEET

1. Letter Code: G No. 7

2. Control Group: SECONDARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

I	17
N	9
T	39
P	11

   b. Preference Strengths:

Extraversion	9	:	17	Introversion
Sensing	9	:	13	iNtuition
Thinking	23	:	3	Feeling
Judging	11	:	16	Perception

4. MBTI^{3D} Matrix:

   a. Social Point:

X = (+E/-I) -17

Y = (+S/-N) - 9

Z = (+T/-F) 39

(Appendix B. Item 7.)

b. Personal Paradigm:

(1) X_E 9 Y_S 9 ZT 23

(2) X_E 9 Y_N- 13 Z_T 23

(3) X_I- 17 Y_N- 13 Z_T 23

(4) X_I- 17 Y_S 9 Z_T 23

(5) X_E 9 Y_S 9 Z_T 23

(6) X_E 9 Y_S 9 Z_F- 3

(7) X_E 9 Y_N- 13 Z_F- 3

(8) X_I- 17 Y_N- 13 Z_F- 3

(9) X_E 9 Y_S 9 Z_F- 3

(10) X_E 9 Y_S 9 Z_T 23

(11) X_E 9 Y_N- 13 Z_T 23

(12) X_E 9 Y_N- 13 Z_F- 3

(13) X_I- 17 Y_N- 13 Z_T 23

(14) X_I- 21 Y_N- 13 Z_F- 3

(15) X_I- 21 Y_S 9 Z_T 23

(16) X_I- 21 Y_S 9 Z_F- 3

(Appendix B. Item 7.)

MBTI[3D] WORKSHEET

1. Letter Code: H No. 8

2. Control Group: SECONDARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

E	47
S	15
F	1
J	15

   b. Preference Strengths:

Extraversion	26	:	2 Introversion
Sensing	15	:	7 iNtuition
Thinking	9	:	9 Feeling
Judging	18	:	10 Perception

4. MBTI[3D] Matrix:

   a. Social Point:

X = (+E/-I)	47
Y = (+S/-N)	15
Z = (+T/-F)	- 1

(Appendix B. Item 8.)

b. Personal Paradigm:

(1) X_E 26 Y_S 15 ZT 9

(2) X_E 26 Y_N- 7 Z_T 9

(3) X_I- 2 Y_N- 7 Z_T 9

(4) X_I- 2 Y_S 15 Z_T 9

(5) X_E 26 Y_S 15 Z_T 9

(6) X_E 26 Y_S 15 Z_F- 9

(7) X_E 26 Y_N- 7 Z_F- 9

(8) X_I- 2 Y_N- 7 Z_F- 9

(9) X_E 26 Y_S 15 Z_F- 9

(10) X_E 26 Y_S 15 Z_T 9

(11) X_E 26 Y_N- 7 Z_T 9

(12) X_E 26 Y_N- 7 Z_F- 9

(13) X_I- 2 Y_N- 7 Z_T 9

(14) X_I- 2 Y_N- 7 Z_F- 9

(15) X_I- 2 Y_S 15 Z_T 9

(16) X_I- 2 Y_S 15 Z_F- 9

(Appendix B. Item 8.)

MBTI[3D] WORKSHEET

1. Letter Code: I No. 9

2. Control Group: SECONDARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

I	17
S	23
T	31
J	1

   b. Preference Strengths:

Extraversion	8	:	16 Introversion
Sensing	19	:	7 iNtuition
Thinking	18	:	2 Feeling
Judging	14	:	13 Perception

4. MBTI[3D] Matrix:

   a. Social Point:

X = (+E/-I) -17

Y = (+S/-N) 23

Z = (+T/-F) 31

(Appendix B. Item 9.)

b. Personal Paradigm:

(1) X_E 8 Y_S 19 ZT 18

(2) X_E 8 Y_N- 7 Z_T 18

(3) X_I- 16 Y_N- 7 Z_T 18

(4) X_I- 16 Y_S 19 Z_T 18

(5) X_E 8 Y_S 19 Z_T 18

(6) X_E 8 Y_S 19 Z_F- 2

(7) X_E 8 Y_N- 7 Z_F- 2

(8) X_I- 16 Y_N- 7 Z_F- 2

(9) X_E 8 Y_S 19 Z_F- 2

(10) X_E 8 Y_S 19 Z_T 18

(11) X_E 8 Y_N- 7 Z_T 18

(12) X_E 8 Y_N- 7 Z_F- 2

(13) X_I- 16 Y_N- 7 Z_T 18

(14) X_I- 16 Y_N- 7 Z_F- 2

(15) X_I- 16 Y_S 19 Z_T 18

(16) X_I- 16 Y_S 19 Z_F- 2

(Appendix B. Item 9.)

MBTI[3D] WORKSHEET

1. Letter Code: JI No. 10

2. Control Group: SECONDARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

E	31
S	45
T	35
J	29

   b. Preference Strengths:

Extraversion	21	:	5 Introversion
Sensing	25	:	2 iNtuition
Thinking	21	:	3 Feeling
Judging	21	:	6 Perception

4. MBTI[3D] Matrix:

   a. Social Point:

X = (+E/-I)	31
Y = (+S/-N)	45
Z = (+T/-F)	35

(Appendix B. Item 10.)

b. Personal Paradigm:

(1) X_E 21 Y_S 25 ZT 21

(2) X_E 21 Y_N- 2 Z_T 21

(3) X_I- 5 Y_N- 2 Z_T 21

(4) X_I- 5 Y_S 25 Z_T 21

(5) X_E 21 Y_S 25 Z_T 21

(6) X_E 21 Y_S 25 Z_F- 3

(7) X_E 21 Y_N- 2 Z_F- 3

(8) X_I- 5 Y_N- 2 Z_F- 3

(9) X_E 21 Y_S 25 Z_F- 3

(10) X_E 21 Y_S 25 Z_T 21

(11) X_E 21 Y_N- 2 Z_T 21

(12) X_E 21 Y_N- 2 Z_F- 3

(13) X_I- 5 Y_N- 2 Z_T 21

(14) X_I- 5 Y_N- 2 Z_F- 3

(15) X_I- 5 Y_S 25 Z_T 21

(16) X_I- 5 Y_S 25 Z_F- 3

(Appendix B. Item 10.)

MBTI[3D] WORKSHEET

1. Letter Code: K No. 11

2. Control Group: SECONDARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

I	21
S	23
T	49
J	1

   b. Preference Strengths:

Extraversion	9	:	19 Introversion
Sensing	23	:	6 iNtuition
Thinking	25	:	0 Feeling
Judging	15	:	14 Perception

4. MBTI[3D] Matrix:

   a. Social Point:

X = (+E/-I)	-21
Y = (+S/-N)	33
Z = (+T/-F)	49

(Appendix B. Item 11.)

b. Personal Paradigm:

(1) X_E 9 Y_S 23 ZT 25

(2) X_E 9 Y_N- 6 Z_T 25

(3) X_I- 19 Y_N- 6 Z_T 25

(4) X_I- 19 Y_S 23 Z_T 25

(5) X_E 9 Y_S 23 Z_T 25

(6) X_E 9 Y_S 23 Z_F- 0

(7) X_E 9 Y_N- 6 Z_F- 0

(8) X_I- 19 Y_N- 6 Z_F- 0

(9) X_E 9 Y_S 23 Z_F- 0

(10) X_E 9 - Y_S 23 Z_T 25

(11) X_E 9 Y_N- 6 Z_T 25

(12) X_E 9 Y_N- 6 Z_F- 0

(13) X_I- 19 Y_N- 6 Z_T 25

(14) X_I- 19 Y_N- 6 Z_F- 0

(15) X_I- 19 Y_S 23 Z_T 25

(16) X_I- 19 Y_S 23 Z_F- 0

(Appendix B. Item 11.)

MBTI[3D] WORKSHEET

1. Letter Code: L No. 12

2. Control Group: SECONDARY

3. Myers-Briggs Type Indicator (MBTI) Scores:

   a. Preference Score:

E	43
N	23
T	9
J	5

   b. Preference Strengths:

Extraversion	24	:	2 Introversion
Sensing	5	:	16 iNtuition
Thinking	11	:	6 Feeling
Judging	14	:	11 Perception

4. MBTI[3D] Matrix:

   a. Social Point:

X = (+E/-I) 43

Y = (+S/-N) -23

Z = (+T/-F) 9

(Appendix B. Item 12.)

b. Personal Paradigm:

(1) X_E 24 Y_S 5 ZT 11

(2) X_E 24 Y_N- 16 Z_T 11

(3) X_I- 2 Y_N- 16 Z_T 11

(4) X_I- 2 Y_S 5 Z_T 11

(5) X_E 24 Y_S 5 Z_T 11

(6) X_E 24 Y_S 5 Z_F- 6

(7) X_E 24 Y_N- 16 Z_F- 6

(8) X_I- 2 Y_N- 16 Z_F- 6

(9) X_E 24 Y_S 5 Z_F- 6

(10) X_E 24 Y_S 5 Z_T 11

(11) X_E 24 Y_N- 16 Z_T 11

(12) X_E 24 Y_N- 16 Z_F- 6

(13) X_I- 2 Y_N- 16 Z_T 11

(14) X_I- 2 Y_N- 16 Z_F- 6

(15) X_I- 2 Y_S 5 Z_T 11

(16) X_I- 2 Y_S 5 Z_F- 6

(Appendix B. Item 12.)