Measuring the development of group's thinking ability: An experimental application of Bion's grid

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ABSTRACT

In the present study, I have tried first to introduce Bion's Grid. Bion devised the Grid so that the analyst can use it as an instrument for thinking about the dynamics of the session in between the sessions. It was thus meant to be used 1) as a method to abstract the clinical material of a session, 2) as an instrument for mediative review and thinking about the clinical material, 3) as a method to examine and also control this material, 4) as a "psychoanalytic game", and 5) an exercise for the development and improvement of one's intuitive ability. In the present study I have also attempted, using clinical materials from a diagnostic group I conducted, to demonstrate how the Grid can be also used as a scale to empirically evaluate or measure group development. To be able to use the Grid as an objective tool, I have more clearly redefined the two axes of the Grid so that it can be used even by those who do not have clinical experience and knowledge of Bion's theories underlying it. By using the Grid as demonstrated in the present study, one 1) can transform the qualitative clinical material of the session into quantitative data, 2) develop hypotheses and performing statistical analyses to test them. To my knowledge, since the publication of the Grid by Bion, there have been no attempts to refine the Grid, and use it for purposes different than mediative thinking about the session. By using it as an instrument to objectively measure the group development, the present study can be, therefore, considered as a pioneer one.

Key words: *Bion, Grid, Group Development, Thinking, Alpha-function, Alpha-elements, Beta-elements*

Since its foundation by Sigmund Freud, psychoanalysis, and all the psychological methods and theories derived from it, has been confronted with the problem and difficulty of recording "objectively" the clinically observed changes or development occuring during the analytical session. Owing to this difficulty and the inability of psychoanalysts to overcome it, psychoanalysis is still criticized as being unscientific, and consequently has been refused the status of a science. The main reasons behind the psychoanalysts inability to develop new and use the already existing objective measures and instruments is the fact that psychoanalysis, as well as other psychoanalytically-oriented psychotherapies and theories, is the result of the

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fact that the (analyst-analysand) dyad which can function only in total secrecy and without the need for the real presence of a third person. Psychoanalysts, since Freud, have always emphasized the need to focus on the relationship between the analyst (or the psychotherapist) and his patient (or client) in the "here-and-now". There is a tendency to think that what takes place in the session concerns principally the analytical dyad only, and divulgating the "secret" of the session may be harmful for the dyad and especially for the patient or the client. For, the two partners of the dyad are bound by the "rule of secrecy". For instance, Bion (1992), speaking of transference, points out that its importance

> *lies in its use in the practice of psycho-analysis. It is available for observation by analysands and analysts. In this respect it is unique - that is its strength and its weakness; its strength, because the two people have a fact available to both and therefore open for discussion by both; its weakness because it is ineffable and cannot be discussed by anyone else. The failure to recognize this simple fact has led to confusion (p. 353).*

When the therapist is, for academic or professional reasons, to reveal the content of the session, he must take a lot of precautions, such as alterating the content so that it is no more recognizable. Besides, even if the therapist is not willing to respect the rule of secrecy, he does not have at his disposition methods that can describe acurately the richness of even a single interaction in a single session. The only instrument available to the analyst is his verbal and non-verbal package, and we know how subjective and inacurate this is. This is the dilemma the psychoanalyst and clinical psychologist in general is confronted with daily; and it is the inability to go out of, and beyond this dilemma that has been hindering the development of psychoanalysis and its related therapies.

Introduction to Bion's Grid

Wilfred Bion is one of the rare psychoanalysts who have seriously taken in consideration the problem of the scientificity of psychoanalysis in a number of his works. He (1992) wrote that "a means must be found whereby the peculiar kind of facts in which we deal can be properly investigated and recorded" (p. 351). As a result, Bion (1963) developed an instrument that allowed him , like a mathematician thinks about his mathematical objects, to think about the psychoanalytical object, that is, the content of the session, in its absence. He called his instrument the "Grid", and defined it as a tool for the use of practising psycho-analysts, which is intended to be used after and not during the clinical session. He (1963) wrote that the Grid is a method he has

> *found useful in thinking about problems that arise in the course of psycho-analytical*

practice...My subject does not belong directly to the sphere of work done in analytic situations or throw much light on how to record sessions. Yet, it has a bearing on the work done in analytic situations or throw much light on how to record session...Later, perhaps, it might help in developing a method of written recording analogous to that enjoyed by the mathematician...(p. 1)...I have proposed uses for the Grid closely associated with actual analytic experiences. (It is) an imaginative exercise...closer to the activity of the musician who practises scales and exercises, not directly related to any piece of music but to elements of which any piece of music is composed (p. 101).

According to Bion, the Grid was developed so that the analyst can use it to exercise in order to develop his intuitive power, just like an eye surgeon who, to be effective, "must keep the small muscles of his hands in perfect order" (Bion, 1977; p. 12) by exercising. For intuition is to the analyst what well maintained hands and fingers are to the surgeon. Therefore, the Grid was developed "to be used in the process of...preparation, not as a substitut for observation or psycho-analysis but as a prelude to it" (p. 33).

To summarize, Bion (1963) used the Grid as a 1) a method of abstracting the content of the session, 2) as an instrument for mediative review of the clinical material of a session, 3) as a method to examine and also control this material , 4) as a "psychoanalytic game", and 5)as an exercise for the development of one's intuitive ability outside the session time. Hence, all these different usages of the Grid have for common object the clinical material of the session. Having discussed, the principal usages and applications of the Grid, I will now try to describe briefly its theoretical foundation, content and structure.

The theoretical foundation on which the Grid is based postulates the existence of a mental function Bion (1962, 1963, 1965, 1970) called "alpha (α) function". According to Bion, the task of α function consists in transforming our sense impressions resulting from emotional experiences, which he called "beta(β)-elements" into "thoughts". The term "thought" denotes all what we say verbally, and express non-behaviorally about these emotional experiences. For, if a person says "I am angry", this is a thought which results from this person's verbal transformation of the initial experience that had led to this statement. The same person may also transform the initial experience into a non-verbal reaction, such as silence for instance. This non-verbal reaction is also a thought.

Moreover, Bion (1956, 1967) differentiates a number of thought categories. He argued that, depending on their degree of clarification, development, precision, sophistication, and abstraction, thoughts can be classified in a number of categories. He adnumbrated eigth categories, suggesting that the reader or the analyst may also find others. It is to be able to think about, and classify these thought categories that Bion constructed the Grid.

The Grid

	1 Definitory hypotheses	2 Ψ	3 Notation	4 Attention	5 Research	6 Action	...n.
A: β-elements	A1	A2				A6	
B: α-elements	B1	B2	B3	B4	B5	B6	...Bn
C: Dream thoughts, dreams,myths	C1	C2	C3	C4	C5	C6	...Cn
D: Preconception	D1	D2	D3	D4	D5	D6	...Dn
E: Conception	E1	E2	E3	E4	E5	E6	...En
F: Concept	F1	F2	F3	F4	F5	F6	...Fn
G: Scientific deductive system		G2					
H: Algebraic calculus							

Figure 1. Bion's Grid

The Vertical (ROW) Axis: Classification of Thought

As indicated in Figure 1, the Grid comprises two, horizontal and vertical axes and an infinite number of squares or compartments represented by a combination of letters and numbers. The vertical axis depicts the eight thought categories (from A to H), from the most primitive to the most abstract and sophisticated categories, namely from the β-elements to algebraic calculus and, as suggested by the last empty compartment, yet-to-be developed categories. I will now discribe briefly the content of each of these categories .

The most primitive category (A) is the one comprising "β-elements". These elements comprise not only thoughts in form of concrete objects but also psychic objects. Clinically speaking this category comprises objects (words, statements, thoughts, etc.) characterizing psychotic thoughts.

The second category comprises α-elements or the result of the work of the α function on our sensory impressions. These elements, like those comprising the previous category, do not comprise real observable objects from the external reality. They include visual, auditory and olfactory images of objects and emotional experiences. The difference between α-elements and β-elements is the fact that the former correspond to phenomena that can be considered as thoughts in general.

The third category (C) comprises elements resembling dream thoughts, dreams, myths

in the general and Bionic meaning of the term. Bion (1989) writes that this category was "intended for categories of thoughts which are often expressible in terms of sensuous, usually visual, images such as those appearing in dreams, myths narratives hallucinations" (p. 3).

The fourth category (D) of thoughts comprises elements reflecting "pre-conceptions" or mental states of expectation of satisfaction and saturation. Therefore will be included here statements that are unsaturated, waiting to be saturated with meaning by experiencing a realization that can me mated with the pre-conception. To illustrate what he means by a pre-conception, Bion (1963, 1965) gives the example of the mental state displayed by a baby expecting to find a good feeding breast.

The fifth category (E) includes conceptions. According to Bion (1967), conceptions are the very result of the mating of a pre-conception with a realization, and the consequent saturation of the unsaturated element in the pre-conception.

Included in the the sixth category (F) are statements and formulations that correspond to what is generally meant by concepts, analytical and scientific theories in general, laws of nature and other constructs already accepted by various disciplines as genuine attempts to formulate scientific observations.

The seventh category (G) would gather statements which correspond to or constitute a "scientific deductive system". According to Bion (1963), a "scientific deductive system" is a logical combination of concepts in form of hypothesis and systems of hypotheses so that the meaning of each individual concept and hypothesis is enhanced further.

The last category (H) of the vertical axis includes attempts to represent further the scientific deductive system using algebraic calculus or mathematical terms to synthesize or combine different signs, according to determined combination methods and rules.

The Horizontal (column) Axis: The Use of Thought

The horizontal axis serves to differentiate thoughts expressed in form of statements according to their use and purpose. Each of the categories constituting this axis represents a specific use or purpose. As indicated in Figure 1, Bion has adumbrated six different categories, suggesting by his use of the symbol n that there may be an infinite number of other categories that remain to be discovered or created.

The first category, or Column 1 (C1), includes those statements used as "definitory hypotheses" by the analyst or the analysand, or both. The statement belonging to this category is used to define or simply tell about the relationship or the conjunction of certain elements. The analysand may say "I feel sleepy each time you start speaking". The analysand has thus tried to report about the conjunction of his feeling and the analyst's speech, developing the hypothesis that these two factors are related. To be categorized as a

definitory hypothesis, a statement should only not be self-contradictory.

The second column (C2), comprises statements or thoughts used to deny that a situation is unknown to the speaker, and consequently frightening, painful, dangerous, and liable to cause a "catastrophic change". Bion designates this category using, as shown in Figure 1, the Greek letter psi (Ψ).

The third column (C3) comprises statements that are used to record a present or a past fact. Like, for an example, when the analyst give a brief summary of what took place or is taking place in the here-and-now between the analyst and the analysand. These kinds of statements fulfill, according to Bion (1963), a function similar with the one described by Freud as "notation and memory".

The next column (C4) includes statements which are "expressed with as much scientific rigour as the circumstances of analytical practice permit" (Bion, 1963; p. 19), and fulfill a function Freud denotes by the term "attention". That is, the speaker produces the statement to draw his interlocutor's attention to a given fact, experienced previously.

The fifth column (C5) includes statements, formulations and interpretations (theories, hypotheses) used to explore the unknown, illuminate pre-existent material, release further material, and obtain material and data for the satisfaction of one's inquiry impulses and desires. The King Oedipus's inquiry into his past is an example of this category.

The last column (C6) adumbrated by Bion includes statements that are closely related to, or analogous to actions. In other words, this kind of statements aims at stiring action in the interlocutor to enabling him to resolve his problems. The statements comprised in this category correspond thus to thoughts translated or transformed into action.

The two axes of the Grid described above were developed to be combined when thinking about and trying to analyse a given statement. That is, a same statement can thus be categorized using the axes. The vertical axis will help us to know the nature and development level of this statement, and the horizontal axis will enable us to shade light on the function fulfilled by the statement. The statement "I am anxious", said by a patient to his analyst, may be understood, for example, as a β-element (category A of the vertical axis) used as a "definitory hypothesis" (First Column of the horizontal axis), and consequently classified in the compartment A1 indicated in Figure 1. It may also be understood as a "definitory hypothesis", and resistance to further analysis aimed at puting pressure on the therapist so he will end the session and stop from functioning therapeutically. In this case it will be categorized as an A2 statement. Like in this example, he therapist or analyst can have a better understanding of the clinical material at his disposition by combining the two axes when classifying the different verbal and non-verbal behaviors obvserved during the session.

However, the categories composing the Grid as discribed by Bion are too vague and,

Table 1. Description of the Different Categories Constituting the Vertical and Horizontal Axes

Categories	Description of Vertical Axis
A: Beta-elements	Illogical contradictory statements showing that the speaker is not thinking; automatic and uncontrolled body movements and sounds.
B: Alpha-elements	Statements expressed in, or describying visual, auditory and olfactory images of objects and emotional experiences.
C: Dreams, myths, narratives	Thoughts expressed in sensuous terms, usually visual, images such as those appearing in dreams, hallucinations, myths, narratives.
D: Pre-conceptions	Statements reflecting mental states of expectation of satisfaction .
E: Conceptions	Statements showing that the speaker has experienced what he expected, and what he hypothesized.
F: Concepts	Statements including analytical and scientific theories in general, laws of nature and other widely accepted and tested ideas.
G: Scientific deductive system	Statements reflecting hypotheses resulting from scientific deduction, or a logical combination of concepts.
H: Calculus	Statements including calculus or mathematical terms and combination of different signs, according to combinations methods and rules.
Categories	**Description of Horizontal Axis**
1 : Definitory Hypotheses	Statements used to define or tell about the relationship or the conjunction or relation of certain elements (behaviors, ideas, etc.)
2 : Psi (Ψ)	Statements used to deny that a situation is unknown, frightening, painful, dangerous, and liable to cause a catastrophic change.
3 : Notation	Statements used to record a present or a past fact (e.g., giving a brief summary of what took or is taking place in the here-and-now.
4 : Attention	Statements expressed with as a relative scientific rigour to draw attention to a given fact, experienced previously.
5 : Inquiry	Statements used to explore the unknown, illuminate pre-existent material, release further material, and obtain material and data for the satisfaction of one's inquiry impulses and desires.
6 : Action	Statements aiming at stiring action for problem resolution, thoughts translated or transformed into action.

consequently, can not be easily used as criteria. Using the Grid as recommanded by Bion requires intensive clinical training and intuition. Therefore, I have tried, as indicated in Table 1, to redefine clearly all the columns (horizontal axis) and arows (vertical axis) to make them more operational and relatively easy to use as a measure for the group's verbal and nonverbal behaviors or thinking content.

Theoretical Background and Hypothesis

As discussed previously, Bion developed the Grid to use it as an instrument to think or meditate about the clinical material of session outside the session time, and as means to develop one's "intuitive" capability. Hence it was meant mainly for use by practician analysts and psychotherapists and for the clinical experience. In the present study, I attempted to use the Grid as a quantitative measure to evaluate the development of the group thinking.

There is a relatively small number of theories dealing with group development, and no commonly accepted one in the field group dynamics (Agazarian et al., 1981). The very concept of group development itself is object of polemic. There are those who think that groups develop, and those who deny this fact. Discussing the difference between the two trends goes beyong the scope of the present study. However, I will only mention in passing that, in spite of their differences, most of the researchers commonly believe that groups do effectively change. One of the most widely theory on group development and change is the one by Shepard & Bennis (1956). These authors describes group change in terms of two developmental phases including six sub-phases, and a number of seven criteria, namely, 1) Emotional modality (Bion's dependency, fight/flight, and pairing), 2) Content themes (themes discussed in the group session), 3) Dominant roles (central persons), 4) Group structure and organization, 5) Group activity, 6) Group movement and the factor facilitating it, and 7) Main defenses.

In the present study I will deal with, or measure the group change using another criterion, namely thinking and thoughts (Hafsi, 2000) using Bion's Grid described above. The hypothesis developed here is that the group will experience a qualitative and quantitative change in terms of thoughts. That is, the group will gradually display more sophisticated thoughts towards the end than in the begining of the group. To put it more concretely, it was postulated that the group will gradually produce more "pre-conceptions" (D category)"conceptions" (E category), "concepts" (F category), and highler levels thoughts (G and H categories) towards the end of the group than at its begining. This hypothesis was tested using the following method.

Method

Group Constitution and Purpose: The group from which the data were collected was constituted by 16 participants (Male=9; Female=7), all of them psychology students. Participation in the group was a requirement for the students willing to have the "Psychologist Certificate", and is a part of the school psychology curriculum. The principal purpose of the group was essentially educational. The participants joined the group to learn about and experience group psychology. The group surveyed here was a Diagnostic group, or D-group. The following is a brief description of what is meant by a D-group as practiced by the author (Hafsi, 1990; 2000; 2002).

D-group Definition and Procedure: The D-group as conducted by the author derived from and is an altered version of Anzieu (1984) and Anzieu et al. (1972)'s "groupe de diagnostic" or "groupe de formation". There are many similarities between the two kinds de groups. However, D-group differs also from the latter in some basic aspects. For example, the D-group may be constituted by more participants than the "groupe de diagnostic" (from 14 to 17 participants). Whereas in the case of the "groupe de diagnostic", the group size varies between eight to twelve participants. Another important difference may concern the theoretical orientation on which are based the two kinds of groups. The theoretical background on which is based Anzieu at al's "group of diagnostic" is principally Freudian. Whereas the author's D-group is fundamentally based on object relations theory, especially Bion (1961)'s group theory.

The D-group can be defined as a brief (from 4 to 6 sessions) psychoanalytically-oriented training group. Each session lasts about 70 minutes, with an interval of 20 minutes for a rest between two sessions.

As mentioned above, the membership of a D-group consists of number of 14 to 17 participants, a trainer (the author), and two observers who do not participate in the group, and whose function is to gather objective data about the group, using a check list. The trainer's function consists in helping the group to recognize, "diagnosize" the different "basic assumptions" adumbrated by Bion (1961), and eventually overcome them temporarilly, by carrying on his interpretive function. Another important aspect of D-group is that it is conducted based on the three basic rules characterizing psychoanalysis and psychoanalytically-oriented (individual and group) psychotherapies in general, namely the rules of "free association", "non-omission", and "abstinence" (Anzieu, 1984).

The group task consists in discussing freely about any topic the group likes, using any method, with the sole condition that they (members) use verbal communication and refrain from acting out their emotions.

The participants, including the trainer, sit forming a circle, with the two observers sitting outside of it. The group commences with the trainer's basic instructions, and explanation of the rules and purpose of the group. It is always the trainer who announces the begining and end of the session each time. The role of the trainer does not go beyond this and his interpretative function. He refrains from giving his opinion about the theme discussed by the group, so that he does not influence the group process. He intervenes only when he has sensed and understood something concerning the group unconscious activity, by giving interpretations to the group-as-a-whole, not to individuals, even if the action (which incited the interpretation) was performed by one person only.

Evaluation of Group Thought: All the sessions were videotaped and transcripted. The videotapes and their transcriptions were subjected to analysis. First they were viewed by a group of raters constituted by the trainer and the two observers. The content of each session was then broken down into statements. The statements were read one by one and described collectively by the group of raters; and categorized based on Bion's Grid and its two axes as described above. That is, each statement was evaluated in terms of its level of development (vertical axis) and the purpose it was used for (horizontal axis). This task was performed first individually by each rater then collectively in the group. Evaluations by each rater were compared; and when all the three raters have agreed on the evaluation result, the statement was then finally rated on both axes. In case of discrepancy about a given statement, the three raters, based on their experience of the session, discussed and analyzed the statement in question until an agreement was reached.

Results and Discussion

After all the statements were rated, the total number of each category in each session was computed for the group, and, as indicated in Tables 2 through 5, represented in a Grid. I will discuss now the results of each session separately.

Session 1: As indicated in Table 2, the group produced a total number of 82 comprehensible statements. They were categorized, based on the criteria constituting the Grid indicated in Table 1. As a result, it was found that the group produced the highest percentage (32.93) of statements of A category or the category for beta-elements. As can be also seen in the same table, the group used the statements for all the purposes represented by the horizontal axis. That is, statements were used 1) to define or speak (C1) about the relationship between aspects of the group (5 statements); 2) to deny (C2) some other aspects such as the trainer's interpretations (6 statements); 3) to take note of what was said by the trainer (C3) and other

Table 2. The Results of Session 1

ROW	COLUMN						
	1	2	3	4	5	6	Total
A	5	6	4	3	4	5	27 32.93
B	5	3	4	2			14 17.07
C							00 00
D	7	9			7		23 28.05
E	3			3			6 7.32
F	8	4					12 14.63
G							00 00
H							00 00
Total %	28 34.15	22 26.83	8 9.76	8 9.76	11 13.41	5 6.09	82 100%

Table 3. The Results of Session 2

ROW	COLUMN						
	1	2	3	4	5	6	Total
A	4	3	3		7	6	23 19.33
B	6	4	7	7	4	5	33 27.73
C	2	4	5	2		1	14 11.76
D	3	6			4		13 10.92
E	3	5		3	2	3	16 8.71
F	3	4		4	2		13 10.92
G	3	2		2			7 5.88
H							00 00
Total %	24 20.17	28 23.53	15 12.60	18 15.13	19 15.97	15 12.60	119 100%

participants, or summarizing the group's discussion (4 statements); 4) to attract the participants (C4) and the trainer's attention (4 statements); 5) to try to understand and seek information (C5) from the trainer about the group and its activity (4 statements); and 6) to express their disatisfaction, disagreement and frustration (5 statements) through some automatic behaviors such as rocking the chairs, and sniff, for instance (C6).

The second highest percentage (28.05) was devoted to statements reflecting the group's expectancy or pre-conceptions (D category). These statements were expressed, respectively, to deny (9 statements), to define (7 statements), and to search (7 statements).

The following highest percentage was respectively the one of B category (alpha-elements) (17.07), F category (14.63), and E category (7.32). As can be noticed, the statements of those categories were also used for various purposes. However, as indicated in Table 3, the first session is characterized by a high percentage of Column 1 statements, expressed to define (34.15), and Column 2 statements to deny (26.83) some aspects experienced in the session.

To put it differently, the results indicated in Table 2 show that the group's thinking activity in the first session was characterized rather by a tendency to produce beta-elements and pre-conceptions as definitory and defensive or denial means.

Session 2: Table 3 summarizes the results of the second session. As revealed by the table, the two highest percentages are respectively those of the B category statements (27.73) and A category (19.33). That is, beta-elements and alpha-elements statements occupy approximately half (47.06) of the total number of statements (119) expressed by the group. Regarding the usage purpose of the statements, the two highest percentages were those of Column 2 (23.53) and Column 1 (20.17). This shows that the group spent a considerable part of the session time defining and denying some aspects of the group and its activity.

The third and fourth percentages where those of statements of Column 5 (15.97) and Column 4 (15.13), namely the statements aimed at searching for further information, and exploring unknown aspects and materials, and attracting attention to what the group was experiencing. The lowest percentage was the one of Column 6 (12.60), or the category of statements used to stir action or are actions in themselves. However, as discussed later, this percentage is higher than in the previous session.

To summarize, unlike the previous one, the second session is characterized principally by a high number of 1) alpha-elements used to record (7 statements), draw attention (7 statements), define (6 statements) facts, or stir action (5 statements); and 2) beta-elements used especially to search for further information, and explore new problems and solutions (7 statements), and stir action in the group and the trainer (6 statements).

Table 4. The Results of Session 3

ROW	COLUMN						
	1	2	3	4	5	6	Total
A	2	5		2		6	15 17.05
B	2	1		1	1	2	7 7.95
C				2	3		5 5.68
D		5			4	3	12 13.64
E	6	2		4	5		17 19.32
F	7	2	4	5	4		22 25.00
G			2	5	3		10 11.36
H							00 00
Total %	17 19.32	15 17.04	6 6.82	19 21.59	20 22.73	11 12.50	88 100%

Table 5. The Results of Session 4

ROW	COLUMN						
	1	2	3	4	5	6	Total
A	3	1	3	1			8 6.90
B	6	1	5	4	8	5	29 25.00
C		2					2 1.72
D	2			3	3	3	11 9.48
E	3		5	4	8	4	24 20.69
F	8		7	3	6	4	28 24.10
G	2		4	3	3	2	14 12.07
H							00 00
Total %	24 20.69	4 3.45	24 20.69	18 15.52	28 24.13	18 15.52	116 100%

Session 3: As indicated in Table 4, the group produced a relatively high percentage of F category statements (25.00), or alpha-elements, and a low percentage (5.68) of C category statements. that is, dream thoughts, dreams and myths in Bion's meaning. The second highest percentage was the one of E category statements (19.32), or conceptions. The following high percentage is the one of beta-elements, or A category statements (17.05).

As indicated in Table 4, the statements were also made for different purposes. The largest number and percentage of the statements (22.73) was made in order to seek further information and answers to the group's questions, and also to provide further information (Column 5) . The other two highest percentages were those of the statements used to draw attention (21.59) to various aspects of the group (Column 4), statements to define (19.32) these aspects (Column 1), and statements used to deny (17.04) some other aspects (Column 2).

Hence, as can be seen in Table 4, what characterizes this session is, in few words, 1) a relatively frequent use of statements which can be clssified as "concepts" in a Bion's meaning, and 2) a tendency to use these statements to provide new and further information, and draw the group's attention to given aspects or phenomena observed and experienced by the group.

Session 4: As indicated in Table 6, the total number of statements was 116. The group produced more alpha-elements, or B category statements (25.00), F category statements, or "concepts"(24.10), and E category statements or "conceptions" (20.69). Regarding the reason for which the statements were used, the group produced these statements as means for, principally, "inquiry" or Column 5 (24.13), "definition" , or Column 1 (20.69), and "notation" , Column 3 (20.69), of various group aspects, facts, and experiences.

Sessions Compared: The four sessions were compared in terms of the different thought categories (vertical axis or Row) and usage categories (horizontal axis or Column). As indicated in Table 6, considerable differences were found between the sessions. Beginning by the thought categories (from A to H), we can see that the percentage of A category statements, decreases gradually with the session. That is, the group made 32.93 percent of A cotegory statements in the first session, and only 6.90 in the last session. There was thus a considerable decrease in this category (beta-elements,) as the group proceeds.

An opposit tendency can be seen regarding the B category percentage. There was a considerable increase in Session 2 (27.73) compared with Session 1(17.07). A remarkable decrease in Session 3 (7.95), and, finally, an increase again in Session 4 (25.00) was also recorded. Concerning C category statements, the tendency is towards a decrease. There was no C statement in Session 1. A relatively high percentage (11.76) of C category statemens was recorded in Session 2 with a gradual decrease in Session 3 (5.68) and Session 4 (1.72).

Table 6. A Comparison of the Four Sessions in Terms of Thought Development

Thought category	Session			
	Session 1	Session 2	Session 3	Session 4
A	32.93 *	19.33	17.05	6.90
B	17.07	27.73	7.95	25.00
C		11.76	5.68	1.72
D	28.05	10.76	13.64	9.48
E	7.32	8.71	19.32	20.69
F	14.63	10.92	25.00	24.07
G		5.88	11.36	12.10
Total %	100%	100%	100%	100%
Usage category	**Session**			
	Session 1	Session 2	Session 3	Session 4
1	34.15 *	20.17	19.32	20.69
2	26.83	23.53	16.04	3.45
3	9.76	12.60	6.82	20.69
4	9.76	15.13	21.59	15.52
5	13.41	15.97	22.73	24.13
6	6.09	12.60	12.50	15.52
Total %	100%	100%	100%	100%

Note : * percentage

A similar gradual decrease was observed also concerning D category statements. The highest percentage of D statements was recorded in Session 1 (28.05), and the lowest in Session 4, with a slight increase again in Session 3 (13.64) compared with Session 2 (10.76).

Moreover a clear increase in E category statements was recorded. That is the further the group proceeds, the higher the percentage of E statements is. In other words, the percentage of E statements in the last session (20.69) was more than 2 times higher than in the first session (7.32).

The tendency observed concerning F category, is less clear than in the previous category. That is, as indicated in Table 6, the group produced 14.63 % of F statements in Session 1. This percentage decreases in Session 2 to 10.92 %, increases in Session 3 (25.00), then slighly decreases in Session 4 (24.07). However, if we consider the difference between Session 1 and Session 4, we can say that the tendency here may be toward increase rather than decrease.

Like in the case of C category, the group did not make any G category statement in Session 1, and the percentage of G statements tended to increase with the group's evolution from Session 2 (5.88) to Session 4 (12.10).

As can be seen in Table 6, the last category, or H category described in Bion's Grid is not mentioned, for the reason that no statement of this category was made by the group analyzed in the present study.

Concerning the usage made of the statements (horizontal axis), Table 6 reveals that the group's tendency to use statements for definition (Category 1) decreases with the group's evolution with a slight increase in Session 2 (23.53) as compared with Session 3 (19.32). To put it differently, the group used the highest percentage of Category 1 statements in the first session (34.15), and the lowest percentage in the fourth session (20.69).

A similar tendency can be observed regarding Category 2 statements. As indicated in Table 6, the number of Category 2 of statements decreases with the group's evolution. That is, the percentage of these statements is the highest in Session 1 (26.83) and decreases gradually and drastically until it reaches 3.45 percent in Session 4. To put it differently, the group resorts gradually less to denial in the final session than in the first sessions.

The percentage of Category 3 statements draws a different curve. It is at the lowest level in Session 1 (9.76) and highest level in Session 4 (20.69). With the exception of Session 3, there is thus a considerable and gradual increase in the use of Category 3 statements, or statements aimed at the notation or recording of what was taking place in the group.

The curve drawn by the percentage of Category 4 statements is characterized by a relatively low amount in Session 1 (9.76), an increase in Session 2 (15.13) and Session 3 (21.59), and a decrease in Session 4 (15.13). However, in spite of this decrease, the percentage in

Session 4 is still, as indicated in Table 6, higher than in Session 1 and Session 2. Therefore, this may be interpreted as a fact that the group tends to increasingly use statements to draw attention, with a relative scientific rigour, to facts observed or experienced previously within and by the group.

There is also a tendency to increasingly use statements to explore what is unknown, further illuminate pre-existent facts or material, and seek information for problem solving and satisfaction of one's curiosity (Caregory 5). That is, the further the group processes the more it tends to resort to this kind of statements. The percentage of statements recorded in Session 4 (24.13) is nearly two times higher than the one in Session 1 (13.41).

Regarding Category 6, considerable differences between the sessions, and an increasing tendency was observed. That is, as indicated in Table 6, the difference between the percentage of Category 6 statements used in the last session (15.52) is more than two times higher than the one in the first session (6.09). Hence, with the exception of an unsignificant decrease observed in Session 3 (12.50), the percentage of statements used as means to stir action for problem resolution or tension reduction increases gradually as the group proceeds further.

Up to now I have described the results, emphasizing the differences found between the four sessions in terms of thoughts category and their use. However, this does not mean that these differences are statistically significant. The small number of sessions and the fact that this study is based on the data from one group only does not allow for further sophisticated statistical analysis to determine the significance of these differences. Besides, the principal purpose of the present study is more to demonstrate the possibility to use Bion's Grid as a scale measuring the group's development in terms of thoughts and their use than to study these differences.

The interest in and the debate about the Grid has been limited to its value, and the opinions remain divided (Young, 1996). To my knowledge, with the exception of the clinical study by Kurth (1981), there are no attempts to apply the Grid for empirical research about groups. The present study is thus a pioneer one. I have here attempted to show how Bion's Grid can be used as a scale to empirically study the group development. As indicated in Table 2, I first tried to redefined the two axes (horizontal and vertical) to render them more operational and easy to handle as measurement tools. Then, using the data from a 4-sesion D-group, I tried to demonstrate how we can categorize the group's verbal and non-verbal (acting-out) statements or thoughts by combining the two axes of the Grid, namely, the "vertical axis" which describes thought categories, and the "horizontal axis" which depicts the possible use for which thoughts or statements are subjected. Thus refined the Gird allows to classify almost all the statements made by the group in each session, compute the total number of

each category of the two axes and represented them in a grid (see Tables 2 to 5). By using the Gird in this way one can have a whole, concrete, and objective picture of how the group has been functioning during the session, and consequently, the predominant group mentality (Bion, 1961).

Compared with a verbal description of a session, like in a clinical report for instance, the use of the Grid as described above has various advantages. Unlike the verbal description, description of the session in form of a Grid is less ambiguous, and therefore facilitates interpersonal communication between professionals, during a scientific meeting for example. Unlike in a verbal description, the content of session can also be communicate to another person without running the risk of alterating it.

Finally, as a means allowing the transformation of the content of the session into quantitative data or numbers, the Grid, as used here, constitutes an ideal research tool; it allows the researcher to develop hypotheses, test them by conducting quantitative studies and statistical analyses, while still preserving and further enhancing one's clinical intuition. For, unlike proper staistically-oriented measurement scales, using the Grid requires sufficient training, and clinical intuition and sense.

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