Molar Behavior: Verbal and Nonverbal Behavior Related to Mind Processes without Vision

Raimo J Laasonen
Project researcher
Vihti/Nummela
Finland

Abstract

The objective of the research was to answer the question: What kinds of processes prevail between molar behavior (verbal and nonverbal) and mind processes? Data were obtained from a videotaped program where the participants had no possibilities to see the stimuli. The number of the subjects was 40. Reliability of observation was assessed in two ways; from the z-score based correlation matrix and from the normalized vectors. The statistical analysis comprised of state vectors of the mind processes and the conditional matrix powered from 1 to 11. So the analysis was a stochastic process with a regular matrix. The results indicated the existence the process system with controls. The mindamic evolves until the half of the process and then reaches dynamic equilibrium. A surprise was a fact; the shape mindition has a greater chance to transmute into the experientally organized mindition. So the question is not to fill-in the plain organized mindition with experiental content. The fact a part of the former researches showed. At the same time it was necessary to develop novel concepts for molar behavior that included both verbal and nonverbal behaviors. Again the importance of the transmuter emphasized as an executer.

Molar Behavior: Verbal and Nonverbal Behavior Related to Mind Processes without Vision

The research is sequel to the former series of papers and manuscripts dealing with the processes of the mind. The purpose is to find connections between molar behavior and mind processes.

As to the present research, I prefer to present the earlier theoretical results to make the research more understandable. The series of the researches began with the construction of a theoretical model for a mental shape formation. The result was a proposition: the croupier process determines the arrangement of discrete mental activities, their teleology, their social worth, and the use of partial information in the process of constructing a mental shape. The croupier means an executive system separating, sorting, and collecting environmental information to form the mental shape.

The mental shape as a concept was not satisfactory because of its vague nature. That is why it was necessary to develop a concept with organization. The concept was a mindy, an organized mental shape without the vagueness of the mental shape. The mindy is open, discrete, and kinetic in nature. The mindy is a unit process the mind applies

to its dynamic. The open mindy purposes: The mindy can process with other mindies to construct new mindies or maintain the old ones. If the mindy is closed then it has not a possibility to relate with other mindies. The discrete nature of the mindy purposes: the mindies are distinguishable from each other. Thus a new mindy is discrete, again. Kinematics of the mindy purposes continual motion.

A thing became clear with time, the mindy was an intermediary concept and the mental shape was useful. The finding of the preparatory process and the making one in the construction of the mindies was one of the successful applications of the mindy concept. The processes organize hierarchically according to the velocities. The preparatory process is serial whereas the making process includes a parallel part working up the mindies and their applications.

In an application of the mindy to social behavior, the results indicated the existence of a trim-effect and of dicausalities between the variables. In addition, the social mindies are necessary for social skills otherwise they remain incomplete.

In a research concerning creative mindies, the results indicate: The variables that had the

greatest impacts with the creativity, was the reasoning, the well-being affects, and the cognitive organization in the mentioned order.

Mediating processes were assumed to exist between the mindies. Diffusion, absorption, and assimilation of information are the processes in between the mindies. Plasticity was the state of the mindies when the mediating processes are to work. Thereafter they return to elasticity again as the discrete elements. In a research concerning elastic-plastic processing, the results warranted the conclusions: Social environment constructs positive self-esteem that promotes the development of complete elastic-plastic processing of mindies. Motion is accelerating during the process and transfer from unstable equilibrium to stable equilibrium occurs.

Cumulation of results forced to organize them through modeling and comparing the researches. The test of the model indicated: The model shows a process of growth. In the evolvement the negative effects, the social environment, and the peer aggregate have a central function in the development of processing environmental information and through which the mindy construction becomes more organized. Two hypotheses derived from the model and the one concerning adults was tested. The results

indicated: Nature of occupation disturbs the acquisition of other kinds of experiences than those absorbed in work life. The salient feature of the process is the precedence of the experiental content or the filling-in of the mental shape before its organizing or the contour formation. The croupier process is needful when there emerge difficulties between the content and the organization. Inclusion of background variables leads to the conclusion; The mental shape and the mindy were not enough in the examination of the mind processes. Thus it was necessary to derive a configuration that means an organized process with experiental content.

The question remained about the postulate of the mediating processes. To avoid the logical patch up the postulate was tested empirically. Patterns occurred which enabled to indicate; diffusion, absorption, and assimilation are real processes between other mind processes. Thus the postulate has a high probability of verification.

As with the mind processes, it was consistent to assume existence of a process before the mental shape called an initial form. The process is hazy ‘misty’ before it obtains some shape. In each case the croupier was sufficient to obtain organization to the

results. The only difficulty was to explain abrupt transfers from process to process. Thus the concept of the transmuter was utilized because it had the full number of the degrees of freedom for modifications. However, the conceptual apparatus even although the elements are the processes, was static in nature. Calling something a process does not warrant existence of dynamic at the conceptual level. It is reasonable to presume the concepts to include motion in themselves. In this way it is possible to tackle real processes because the concepts and their corresponding operations are in line. That is why an attempt was done to define and to construct concepts including dynamic and motion.

Mindition is movement as bursts of the mind processes; not necessarily at physical time but at its complement of mind time. Bursting is a natural way of motion in the organic mind. It also is quick. It is difficult to think of a continuous functioning of the mind because no inner discriminations would be possible and active rest states would remain out. The fact refers to the discrete nature of the processes. So the mindition appears in bursting because it is specific to the mind differentiated from motion in space. Mindic(es) is relational movement between the minditions at time. Mindic as a

verb shows processual effects between the minditions in a time interval. Thus the mindic indicates, for example, selective diffusion, absorption, or assimilation between the minditions. Mindamic is the most extensive of the concepts and it purposes the set of the minditions and of the mindices under scrutiny. So the mindamic is a subsystem of the mind under scrutiny. At the very bottom, the question is about processes process processes.

Systems analytically, the previous examination means revision of a system definition. The common denominator in different system definitions is the elements and their interaction. Replacement of the elements with the processes and interaction with the processes produces a definition more according to reality. For example, the mindition called the mental shape transmutes into the mindy. Half-formally, the same thing is the mindition 1 mindics into the mindition 2. So the system definition has established. Thus defining the processes as the minditions and as the mindices gives an advantage; there is no need to use descriptions of motion.

A word from background variables has its place here. Gender and former experience have proved to be fertile in the explanation of the results in

the former researches. However, their influences differ with the transmuter that is the necessary antecedent regulator for the mind processes. In the previous research the hypothesis corroborated, mainly. The principal result was: the mindamic of the process system is such as it is because gender or the occupational valuation generates the ceiling-effect, continually. Thus the processes process the processes within the boundaries of gender or the occupational valuation (Laasonen, 1999). Hypotheses have many forms. In this context, the direct question has its place because of induction. What kinds of processes prevail between molar behavior (verbal and nonverbal) and mind processes?

Molar behavior (verbal and nonverbal), as contrasted with molecular behavior, means transfer from movement to movement. For example, moving of fist does not include whereas arm moving is in. The question is about kinesic in gross whether stimuli come inside out or outside in. The variables included in the present research are: gender and the occupational valuation are the extraneous variables. The stimuli are three kinds: The stimuli of functional purpose, structural purpose, and multipurpose=(both functional and structural

purposes). The transmuter is the managing process system differentiating into a separator that classifies environmental information; a sorter that arranges form bound meanings; a collector that associates information; and a transformer that modifies the form bound meanings. The mind processes are: an empty process or no information process, an initial form means a hazy process where shape is given. The mental shape purposes a vague process with some organization. The mindy is a formally organized process. The configuration is an experientally organized process. The configuration gets content from experiences of the subjects.

A category system for observation of nonverbal behavior was worked up. The system included the classes of integration, tension-management, decision, control, evaluation, and orientation. The verbal leader transmuter included verbal behavior, only.

. Method

Obtaining Data

The subjects were 19 men and 21 women from a program where the goal was to infer a stimulus word whose intensions the subject described. The subjects were in groups of five. Each subject participated twice in the contest. The subjects described their stimulus words in turn and there were 11 rounds in

average at a time. The leader gave a turn and told the results after every round. Direct observation from a videotape presumes structural arrangements. That is why a category system was constructed to observe verbal behavior.

The functional purpose occurred when the subject told the use of the stimulus word. The structural purpose indicated when the subject told relations in the stimulus word. The multipurpose showed when the stimulus word included both functional and structural elements. The transmuter included the subprocesses. The separator was in function when the subject produced classified responses. The sorter worked when the responses arranged in order. The collector worked when the subject used connectives or showed associated responses. The transformer worked when the subject changed responses or corrected them.

The empty process existed in the 'don't know' responses or answering something. The initial form registered when the subject responded tangentially. The mental shape was coded from some idea of the stimulus word. The mindy derived from a clear organized response. The right answers were the configurations. To make it easier to code the responses the categories were numbered and the

numbers corresponded with the responses. So minutes of observation resulted in where the acts were in sequence.

Thereafter a data matrix was constructed; the variables and the processes were in the columns and the contests were in the rows. The occasions with the same persons were joined. The occupational valuation classified into three categories: high, medium, and low according to education and job. To ensure the correctness of the conclusion's reliability of observation was assessed before the proper mindamic analysis. A category system was constructed to observe nonverbal behavior, too. The categories come from the problem areas of the Bales system (Newcomb, Turner, and Converse, 1969 p.555). The problem areas converted into active voice. So six categories formed; three for the social-emotional area and three for the task area.

Social-emotional area

1. Integrate: For example, the subject turns around looking others as an approver.
2. Manage tension: for example, close arms.
3. Decide: for example, stop before an answer

Task area

4. Control: for example, draw back rapidly
5. Evaluate: for example, sway back and forth

Table 1

Frequencies of.Verbal Processes and Variables

Times	Stimuli			Transmuter				Mind processes					Leader	
	fu	str	mu	se	so	cr	tr	ep	if	ms	m	co	lse	lso
1	1	11	7	24	21	12	2	1	3	2	38	35	4	14
2	1	12	7	44	30	7	1	11	14	5	33	17	7	12
3	7	9	5	28	21	2	0	9	17	2	23	33	8	14
4	6	9	7	22	20	7	3	7	20	14	17	30	12	11
5	3	15	6	20	21	0	1	9	21	12	12	40	9	18
6	5	9	7	21	19	0	0	9	21	10	7	38	12	11
7	1	13	12	7	9	0	0	18	22	8	13	19	13	11
8	1	9	15	5	13	0	0	10	31	4	12	43	14	9

Note. Abbreviations mean, fu=functional purpose, str=structural purpose, mu=multipurpose; se=separator, so=sorter, cr=collector, tr=transformer; ep=empty process, if=initial form, ms=mental shape, m=mindy, co=configuration; lse=leader separator, lso=leader sorter.

	frequency
Gender:	19 men, 21 women

	frequency
Occupational valuation:	12 high, 11 medium, 17 low

Table 2

Original Category Frequencies of Nonverbal Stimulus production and Responses

	Stimulus production			Responses			
Time	Categories			Categories			
	tm	ev	or	tm	de	ev	or
1	4	5	12	32	19	34	12
2	10	11	9	10	1	13	8
3	2	7	6	33	12	33	13
4	6	11	8	32	18	40	18
5	5	8	10	30	24	23	22
6	9	13	11	26	30	24	16
7	1	10	13	19	37	34	10
8	2	13	11	19	32	31	13
9	2	14	4	32	38	22	7
10	5	17	7	22	43	19	12
11	1	7	6	22	37	23	13
12	3	14	12	21	38	22	22
13	3	8	5	31	33	22	21
14	2	13	6	31	31	25	20
15	2	10	10	22	43	23	16
16	5	17	4	18	47	28	17

Note. Abbreviations are: tm=manages tension, de=decides, ev=evaluates, or=orients

stopping every now and then.

6. Orient: for example, lean in some direction inquiring

The numbers of the categories functioned as the corresponding indicators of behavior in observation. Sound was off during observation. Thus it was impossible to hear what the subject spoke. The procedure gave a full possibility to focus on nonverbal behavior, plainly. According to the classification it was possible to construct observation minutes in the same way as with the verbal behavior. The arrangement enabled the construction of the data matrix where the categories were in the columns and the joined contests in the rows. Observation took place during the stimulus production and during responding the stimuli. Wriggling of the leader was not observed.

Results

Table 1 gives the verbal frequencies for further analysis; Table 2 includes the nonverbal frequencies. I mentioned earlier that the same subjects participated with the competitions twice. So in the further analysis the frequencies of the categories

were joined in pairs at time. The categories 1 and 4 had no frequencies, except in the stimulus production the total frequency is 10. Thus the categories were deleted from the further analysis. One of the basic questions in observation is exclusiveness of the categories. Coefficient of alienation proved to be useful in this context because it indicates overlapping of the categories. Table 3 in the next page includes the coefficients of alienation for the nonverbal stimulus production and the responses. The coefficients are high enough to warrant the conclusion of almost no intersection between the categories. So the categories are separate and discrimination of observation is rather tolerable.

The values in Table 2 derive from the calculations between the columns of the data matrix. The ability to discriminate is not the only quality observation is to have. The amount of error or randomness in observation is important, equally.

Table 3

Coefficients of Alienation for Nonverbal Stimulus production and Responses

Stimulus production				Responses			
	tm	ev	or		tm	de	ev	or
tm		.97	.98	tm		.99	.92	.96
ev			.97	de			.99	.98
or				ev				.99
				or				

Note. Coefficient of alienation is obtained from a formula; $k=Sqrt(1-r^2)$ where r is correlation between variables. Abbreviations are: tm=manages tension, de=decides, ev=evaluates, or=orients.

Reliability of Observation

The frequency matrices of the stimulus production and of the responses were put together. The reliability coefficient originated from Nunnally (1967, p. 195 (6-23)) with verbal behavior. Second, the row frequencies were normalized and the same formula was used. If all the correlations in the matrix are ones, then no randomness or error exists. Reliability is a necessary condition for validity or what a device is to measure. In this context, to have a glance about validity the distances from the correlation matrix with ones were calculated. In the z-score case the reliability coefficient was 0.90 and in the normalized case it was 0.97. In the latter case, normalization somewhat forces the frequencies into the same model. The same thing is visible with the distances. The z-score distance was 4.67 and the normalized one 1.66. So observation has some processual validity

The measures with nonverbal behavior resulted in 16 by 7 matrix. The rows of the matrix converted into z-scores and all the correlations were calculated between the rows. Nunnally, (1967, p. 195 (6-23)) offers a convenient formula for assessing the coefficient of reliability. The coefficient is applicable to observation, too. In the usual case

the reliability coefficient was 0.95. The coefficient of the squared correlation matrix gave the value 0.89. So the overall observation has certain freedom from randomness The thing makes it easier to draw conclusions.

Analysis of Molar Mindamic

The verbal and nonverbal data were dealt with the way of independent trials. It meant addition of the frequencies over the rows or $\sum f_{\cdot j}$. Thereafter, the column sums were divided by the total sum or $\sum f_{\cdot j} / \sum\sum f_{\cdot j}$. The calculation produced total statistical probabilities for the minditions. The frequencies of gender and the occupational valuation converted into the statistical probabilities in a common way dividing the class frequencies by the total frequencies. The probabilities of the mind processes remained as such. However, for the further analysis it was necessary to construct a conditional matrix for the molar process.

Two matrices formed; one for the verbal processes and the other one for the nonverbal processes. The extraneous variables were the same. The leader transmuter remained verbally because it did not include in the target processes. Next, the probabilities of the verbal stimulus production and of the verbal transmuters were multiplied one-to-one

with the nonverbal ones. The operation resulted in the matrix whose rows included in the probabilities of gender, the occupational valuation, the molar stimulus production, the molar transmuters, and the verbal leader transmuter. The missing cell values replaced with zeroes. Thus the start matrix for the conditional matrix was 5 by 4. The obtained matrix was multiplied, in the way of AA′.

The resulted matrix was deconstructed into vectors and the probabilities that were interpretatively spurious were deleted. Thereafter, the vectors were divided by their row sums. A new matrix was constructed called the conditional matrix. The conditional matrix is in Table 4 with the vector of the mind processes.

Insert Table 4 about here

The zeroes in the matrix indicate the spurious connections with the antecedents of gender and of the occupational valuation. The processes are not able to influence backwards; that is why the zeroes. Thus the matrix includes the probable causes in the right time order.

Table 4

Conditional Matrix with State Vector

	g	ov	sp	tm	ltm
Gender	.31	.18	.08	.07	.33
Occupational valuation	.00	.40	.14	.09	.35
Stimulus production	.00	.00	.28	.14	.57
Transmuters	.00	.00	.17	.16	.66
Leader transmuter	.00	.00	.17	.15	.66

State vector

Process	Probability
Empty mindition	.10
Initial mindition	.21
Shape mindition	.08
Plain organized mindition	.22
Experientally organized mindition	.36

There were 11 rounds in average. So powering of the conditional matrix took place from 1 to 11. The conditional matrix was left multiplied by the state vector or more shortly, $mp^0.cm^1$. The powered multiplication was chained. Thus one conditional matrix corresponded with one round. The state vector included the possible changes in the minditions.

There is certain difference between stochastic and random processes. The latter was a standard with empirical processes. The formation of the random matrix followed up with the same procedure as with the conditional matrix. The one-to-one multiplication left out. The random matrix with the random state vector is in Table 5.

Insert Table 5 about here

The random frequencies were obtained from random numbers in Fisher and Yates (1963, pp. 134-139). Every random row derives from a different page. The matrix powering and chaining were analogous with the empirical data. Comparison of Tables 4 and 5 results considerable differences.

Table 5

Random Matrix with Random State Vector

	g	ov	sp	tm	ltm
Gender	.34	.19	.08	.14	.22
Occupational valuation	.00	.28	.21	.26	.23
Stimulus production	.00	.00	.41	.24	.33
Transmuters	.00	.00	.34	.34	.30
Leader transmuter	.00	.00.34		.22	.43

Random state vector

Process	Probability
Empty mindition	.29
Initial mindition	.08
Shape mindition	.00
Plain organized mindition	.31
Experientally organized mindition	.32

From Table 4 a keener reader perceives that there are autoloops of the processes in the diagonal of the conditional matrix. In the autoloops things take place in the stimulus production, in the transmuters, and in the leader transmuter during the rounds. In every round there is a certain order of presentation. The leader gives a turn to the stimulus production; the participants try to conclude the stimulus; the leader summarizes back the answers after the round. So that, a regulative process system functions. Therefore, it is reasonable to present the results orderly. The changes take place in the first half of the mindamic. Probably the optimal way of presenting the derived data is to represent the changes as in Table 6.

Insert Table 6 about here

The molar terms occurring in the autoloop Tables have a more thorough development in the discussion part.

Table 6

Conditional Matrices of Round 2 and 3, and Changes until Dynamic Equilibrium

	Round 2				Round 3			
g	ov	sp	tm	ltm	g	ov	sp	tm	ltm
g				.49					.57
ov				.52					.59
sp		.20	.15	.63		.19	.15		.64
tm		.19	.15	.65		.19	.15		.64
ltm		.19	.15	.65		.19	.15		.64

Round 4	Round 5	Round 6
ltm	ltm	ltm
g .61	.63	.64
ov .62	.64	.64
sp .64	.64	.64
tm .64	.64	.64
ltm .64	.64	.64

Note. Abbreviations are: g=gender,ov=occupational valuation; sp=stimulus production, tm=transmuters, ltm=leader verbal transmuter.

The construction of the autoloop matrices was not so straightforward as with the conditional matrix. In the stimulus production the verbal multipurpose included both functional or structural purposes. Thus all three purposes were usable. The use of the verbal functional purpose caused that the structural purpose was not possible, simultaneously or vice versa. The same thing concerned the nonverbal behavior. The direct multiplication was usable in the autoloop cases, too. Otherwise, the calculations were the same as with the powering of the conditional matrix.

As to the transmuters, the way of thinking resulted in a lower triangular matrix. Concerning processing environmental information in the transmuter; sorting presupposes separation, collection presupposes separating and sorting, and transformation of information presupposes the three processes. The inner mindices of the stimulus production and of the transmuters are in Tables 7 and 8 up to the dynamic equilibrium.

_____

Insert Table 7 about here

_____

_____

Insert Table 8 about here

Table 7

Molar Stimulus Production

	Round1			Round2			Round3		
	rr	sr	er	rr	sr	er	rr	sr	er
rr	.50	0	.50	.25	.21	.53	.12	.33	.53
sr	0	.50	.50	0	.46	.53	0	.46	.53
er	0	.43	.56	0	.45	.53	0	.46	.53
	Round4			Roun5			Round6		
	rr	sr	er	rr	sr	er	rr	sr	er
rr	.06	.39	.53	.03	.43	.53	.01	.44	.53
sr	0	.46	.53	0	.46	.53	0	.46	.53
er	0	.46	.53	0	.46	.53	0	.46	.53

Note. Abbreviations mean: rr=regulative referentment, sr=selective referentment, er=explorative referentment.

Table 8

Molar Transmuters and Verbal Leader Transmuter

	Round1				Round2			
	rd	ad	pc	cp	rd	ad	pc	cp
rd	.25	.25	.25	.25	.15	.28	.28	.28
ad	.12	.29	.29	.29	.13	.28	.28	.28
pc	.12	.29	.29	.29	.13	.28	.28	.28
cp	.12	.29	.29	.29	.13	.28	.28	.28

	Round3				Round4			
	rd	ad	pc	cp	rd	ad	pc	cp
rd	.14	.28	.28	.28	.14	.28	.28	.28
ad	.13	.28	.28	.28	.13	.28	.28	.28
pc	.13	.28	.28	.28	.13	.28	.28	.28
cp	.13	.28	.28	.28	.13	.28	.28	.28

	Round5			
	rd	ad	pc	cp
rd	.13	.28	.28	.28
ad	.13	.28	.28	.28
pc	.13	.28	.28	.28
cp	.13	.28	.28	.28

Leader transmuter

	Round1	
	se	so
se	.61	.38
so	.50	.50

Leader transmuter

	Round2	
	se	so
se	.57	.42
so	.55	.44

Leader transmuter

	Round3	
	se	so
se	.56	.43
so	.56	.43

Table 9

Different Minditions and Random Minditions

Empirical minditions

	t^0	t^1	t^2	t^3	t^4	t^5	t^6	t^7	t^8	t^9	t^{10}	t^{11}
ep	.10	.03	.01	0	0	0	0	0	0	0	0	0
if	.21	.10	.04	.02	0	0	0	0	0	0	0	0
ms	.08	.16	.18	.19	.19	.19	.19	.19	.19	.19	.19	.19
m	.22	.13	.14	.15	.15	.15	.15	.15	.15	.15	.15	.15
co	.36	.55	.60	.63	.64	.64	.64	.64	.64	.64	.64	.64

Random minditions

	t^0	t^1	t^2	t^3	t^4	t^5	t^6	t^7	t^8	t^9	t^{10}	t^{11}
ep	.29	.10	.03	.01	0	0	0	0	0	0	0	0
if	.08	.07	.04	.01	0	0	0	0	0	0	0	0
ms	0	.26	.32	.35	.36	.36	.36	.36	.36	.36	.36	.36
m	.31	.24	.25	.26	.26	.26	.26	.26	.26	.26	.26	.26
co	.32	.31	.34	.35	.35	.36	.36	.36	.36	.36	.36	.36

Note. Abbreviations are: ep=empty mindition, if=initial mindition, ms shape mindition, m=plain organized mindition, co=experientally organized mindition.The meanings of the molar abbreviations in Table 8 are: rd=regulative differentiation, ad=arranged determination, pc=preferential composition, and cp=converted predisposition; se=separator, so=sorter.

Answering the question, it is rational to present the changes of the different minditions or the bursting mind processes together with the corresponding random ones. Time involves in the mindamic. So I follow up with the usual t^i marking.

Discussion

Theoretical ground work is necessary before the results become understandable. Molar behavior means the same thing as assimilating verbal behavior and about simultaneous kinesic behavior into a whole. The operation needs conceptual modification and clarification.

In the stimulus production the functional purpose joins with tension-management. Tension-management includes regulative behavior to maintain

Table 9

Different Minditions and Random Minditions

Empirical minditions

	t^0	t^1	t^2	t^3	t^4	t^5	t^6	t^7	t^8	t^9	t^{10}	t^{11}
ep	.10	.03	.01	0	0	0	0	0	0	0	0	0
if	.21	.10	.04	.02	0	0	0	0	0	0	0	0
ms	.08	.16	.18	.19	.19	.19	.19	.19	.19	.19	.19	.19
m	.22	.13	.14	.15	.15	.15	.15	.15	.15	.15	.15	.15
co	.36	.55	.60	.63	.64	.64	.64	.64	.64	.64	.64	.64

Random minditions

	t^0	t^1	t^2	t^3	t^4	t^5	t^6	t^7	t^8	t^9	t^{10}	t^{11}
ep	.29	.10	.03	.01	0	0	0	0	0	0	0	0
if	.08	.07	.04	.01	0	0	0	0	0	0	0	0
ms	0	.26	.32	.35	.36	.36	.36	.36	.36	.36	.36	.36
m	.31	.24	.25	.26	.26	.26	.26	.26	.26	.26	.26	.26
co	.32	.31	.34	.35	.35	.36	.36	.36	.36	.36	.36	.36

Note. Abbreviations are: ep=empty mindition, if=initial mindition, ms shape mindition, m=plain organized mindition, co=experientally organized mindition.

tension within certain tolerances. That is why regulative but what. Referentment is definable as a process pertaining to present referents of a stimulus. It is what the persons do when they produce stimuli. They give the referents for inference. Thus in a molar way behavior is regulative referentment. In the same way, the combination of the structural purpose and evaluation is selective referentment. The reasons for the new term are. Evaluation includes pondering valuableness of different alternatives. In this particular case, the pondering takes place between relations and their importance in the stimulus production. As with the multipurpose and orientation, the former includes both the functional and the structural purposes. The molar behavior is called explorative referentment. Orientation means selection of direction and there are two alternatives to choose. Thus there are the selection between two alternatives and taking the proper direction after choosing from the available alternatives. The operation needs exploration.

In the transmuters, separation connects with tension management. Regulation again associates

with tension-mangement to control tension. Separation by definition is differentiation of environmental information. So the former imply regulative differentiation in molar behavior.

Sort and decisions link. Sort is behavior where something is arranged in order. Deciding is the same as determine an option for behavior. In the molar behavior arranged determination is behavior that includes both verbal and nonverbal behaviors. The pair of collection and evaluation produces preferential composition. Collection includes gathering essential information and evaluation purposes pondering its valuableness. Collection is to make something into an entity from the essential information. The molar behavior can be called preferential composition because essentials are arranged into a whole. Transformation and orientation form the last pair. Transforming is to change behavior into another behavior, sometimes into a new one. Orientation again is selection of the proper direction from different available alternatives. Together they form the molar converted predisposition because predispositions are states of mind that induce certain kind of behavior. Thus there are several options to behave but they are

transformable into each other, for example there may be alternation between converted predispositions ‘I’ll answer a house, oh no, I’ll say a horse’.

In the place of the leader transmuter the former definitions of the separator and sorter remain valid.

Return to the conditional matrices in Tables 4 and 6 indicates that the greatest changes take place during the first two rounds. Proceeding of the mindamic tells that the extraneous variables; gender and the occupational valuation of the persons increase their causalities with the leader transmuter until the 6th round. Thereafter occur leveling into dynamic equilibrium. The stimulus production somewhat slows down between the 1st and 2nd round. Otherwise, the mindices are about the same. During the mindamic the extraneous variables and the processes reach an equal position with the leader transmuter. A scrutiny according to the order of the occasions shows rather stable behavior, keeping in mind, the causalities from gender and the occupational valuation to the leader transmuter. So before long the variables and the processes induce the leader verbal transmuter with the same power. No changes take place after the 6th round in the mindamic. The process system is in dynamic equilibrium. The more detailed answers

demand to follow up with the behavioral order in the situations. The general conclusion is that the minditions are slow bursting; like action potentials (Fishbach, 1993, p.5). The mindamic begins when the leader starts the first stimulus production. What happens first is the next answer in the autoloop of the stimulus production.

At the beginning, the referentments become active in the stimulus production. The regulative and selective referentments fuse into the exploratory referentment that describes the stimulus. The exploratory referentment generates activation of the transmuters, rather slowly. Especially, the regulative differentiation receives the stimulus information. Thereafter, the regulative differentiation conveys information to the preferential composition and to the converted predisposition. In this context, it is profitable to notice a fact that the interpretation deals with processes, except with the extraneous variables. The triplet of the preferential composition, the converted predisposition, and the arranged determination has mutual biconditions. Thus they are necessary to each other. However, the arranged determination is expressive behavior. It is very

likely, the preferential composition chooses important information for the converted predisposition to select. Then the arranged determination elicits an answer. The arranged determinations induce the start of the autoloop of the leader transmuter; the separator and the sorter. The most probable verbal alternative is the function of the separator through which the leader informs back the stimulus producer, other persons about the right and wrong results. In addition, other persons contact back with the stimulus producer. In the conditional processes or in the mindices events are slow-moving, except the ones that direct to the leader. In the stimulus production the fusion is moderately quick and the inner processes of the transmuters are rather slow-moving in the first phase. The previous information is available in Tables 7 and 8.

In next phase the inner processes of the stimulus production and of the transmuters do not change and the mindices of the subprocesses remain stable during the entire mindamic. On the contrary, the leader transmuter experiences changes in the 2nd phase. There begins to form a channel between the separator and the sorter which in the 3rd phase

settles down and does not change any more (Table 8). The separator conveys information into the sorter that returns it as the expressive feedback quicker than in sending.

No decisive changes take place in the conditional matrix of number 2. However, it is perceivable that gender and the occupational valuation become more salient in determining the leader transmuter. Simultaneously, the processes have minor ups and downs but in no crucial way. The mindamic goes as about the same until the 6th phase where all the variables and the processes occasion the leader transmuter, equally. Until now I have stuck with the process part but the processual input and outputs have not been dealt with.

From Table 9 it is possible to scrutinize the processual inputs and the outputs of the mindamic. I only have to state that in the random process the processes processing the processes are quite different compared with the empirical mindamic. Let me remind, the minditions defined as the bursting mind processes (in Table 9) are the ones whose transmutations are the target of the research. What has been accomplished until now is knowledge about the variables and the mindamics that produce the transmutations between

the different minditions. So what is left, is to answer the question about the transmutations.

The greatest changes take place between the initial situation and the 1st round. The changes are considerable. In the initial situation, the initial mindition and the plain organized mindition have the greatest opportunities to transmute into the experientally organized mindition. The difference between the coordinates is the same as the distance. After the processing, the situation is quite different. The shape mindition is the most transmutable then the plain organized one with a great decrease but the empty mindition and the initial minditions begin to fade away. It also is important that a great increase occurs in the experientally organized mindition. The increase continues to the 4th phase where it stabilizes. In a similar manner, there are minor increases at the beginning phases of the mindamic. The proper dynamic equilibrium begins from the 5th phase. One of the salient observations is: the shape mindition has a little advantage to transmute into the experientally organized mindition. On the contrary, it would be more rational to assume the plain organized mindition to absorb former experience and to transmute and to configure into the experientally

organized mindition. According to some former results experiental content fills-in the plain organized mindition and in the older terms it becomes the configuration or the organization with experiental content. It may be so because of the lack of vision in the research that formation of an organization is not so fine-graded than with vision and reconstruction of the experiental information becomes more difficult. Some crucial pieces of contour formation are missing and effort is greater to reconstruct the experiental content. Thus filling-in remains incomplete. Should I say, the making process of the experientally organized minditions does not attain its optimal state. The results have theoretical implications.

One of them is the focal position of the transmuter (the former croupier process) as a kind of junction process that modifies the minditions. However, according to former results the transmuter has its boundary conditions such as gender, former experience, work experience, education, age, and occupation. The extraneous variables have different causalities with the transmuter as a converter of the minditions. In this phase of the project, there remains a mind process that the mindamics of the process systems the mind uses, have the number of the

degrees of freedom depending on which extraneous processes or variables are important at times. Another observation is the need of new conceptualizations which promote the angle of view of the mind as a processual whole with discrete processes.

As to the mind itself, I very much agree with Fischbach (1993, p. 14) that the mind is an emergent process. Let me use a very bad metaphor. A plant needs for growth crucial substances in the soil. Maybe, the brain is a growth base for the mind. On the other hand, assuming the mind as a complex system may be erroneous because the approach of complexity shows that from simple starting points can evolve complicated systems. According to Gazzaniga (1998, p. 37), the purpose of the brain is to assist information processing in the mind. Maybe so? The results, on the contrary, indicate that kinesic causes certain deceleration in verbal behavior and stabilization in the minditions and especially, their mutual transmutations. Thus the molar aspect provides somewhat different angle into the mind and its process systems. So the inductive approach from parts to a whole may not be fertile until relevant molar concepts have been constructed with dynamic qualities. So the question is about synchronizing

conceptual development and empirical observations. Otherwise, research drifts into the same situation as with computers. Evolvement of hardware is much more rapid than software. However, the situation with systems that process information is not so simple as Dillon, Jr (1983 p. 124) presents because a mere classification of the organic devices does not indicate the complex internal or external processual interactions. The very ones the present research has tried to bring in sight.

Next the question is about the transmutations between the processes. It probably is the most important of the problems, at hand.

References

Dillon, Jr. (1983). Foundations of general systems theory. Seaside, CA: Intersystems Publications.

Fischbach, G. D. (1993).Mind and brain. Readings from scientific american magazine.(pp. 1-14). New York, NY: W.H. Freeman and Company.

Fisher, R. A., & Yates, F.(1963). Statistical tables. London: Longman Group Limited.

Gazzaniga, M. S. (1998). The split brain revisited. Scientific American. 279 (1), 34-39.

Newcomb, T. M., Turner, R. H., & Converse, P. E. (1965). Social psychology. London: Routledge & Kegan Paul LTD.

Nunnally, J. C. (1967). Psychometric theory. New York, NY: McGraw-Hill Book Company.