THE EXPERIENTIAL TYPEWRITER

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In EARLIER PAPERS, (1, 2, 3), we have stressed the importance of the astonishing statistics about the nervous system and the potentialities of consciousness. For us these neurological numbers take on the meaning of mantras.

THE HUMAN BRAIN
RECEIVES
ONE THOUSAND MILLION SIGNALS
A
SECOND

OR

WE POSSESS
BETWEEN
TEN AND THIRTEEN
BILLION
BRAIN CELLS

OR

EACH BRAIN CELL
IS CONNECTED
(ON THE AVERAGE)
WITH TWENTY-FIVE THOUSAND
OTHER CELLS

During an ecstatic experience triggered by psychedelic foods and drugs we are tuned in to some of this astonishing neural activity. Billions of signals are being registered, decoded a minute. Thousands of energy languages are operating each minute. Each level of energy defines a level of consciousness. Almost all of this awareness is blocked from the level of symbolic consciousness which comprises routine awareness.

We can't describe it for many reasons.

First of all we don't have the words or symbols for it.

Secondly, it all happens too fast to describe verbally, even if we did have the words.

We can think or speak at the rate of three words a second. That means that one-thousand-million-minus-three registrations cannot be communicated.

When you ask a psychedelic subject what is happening, he can't tell you. He looks at you blankly or he gasps: "Wow!"

The communication problem is like this. Suppose we put a subject in the front seat of a roller coaster and we sit next to him during the dizzy ride. As the car plummets down the first gasping descent we ask him, "What do you see and feel?" By the time we have said the second word the car has flashed down into the black descent and is screeching around a turn. As the car starts to pull up the next incline he says, "What did you say?" When we repeat the question he looks at us blankly. "Well, it happened too fast. I just can't put it into words." So the next time we prepare the subject. We tell him that in the middle of the hurtling ride downward we are going to ask him about what he sees and feels. It still won't work with words. As he rackets down the descent the most he can stutter is, "Ooooh. Lights . . . and . . ." By this time he is around the dark bend and heading up. "It's just too fast for words," is about the best you are going to get.

Now the action of the cortex is perhaps a million times faster and more complex than reactions to a roller coaster ride. And that's why you should never ask a subject during an LSD session what he is experiencing.

Now suppose we install a recording gadget on the roller coaster. Lets imagine twenty buttons which the subject will push to record his reactions. One button is for "fear" and another for "thrill" and another for "lights" and another is for "sick" and another is for "dizzy." Then we train the subject for hours in the code system until he gets to that point of automatic proficiency of the touch typist who can rattle off copy without thinking of what she is doing, banging out seventy words a minute while thinking about the dress she is going to wear tonight. Then we strap the subject's hands to the dials of the twenty-button recorder and send him down the roller-coaster ride. He can now give us perhaps twenty to a hundred codes a second which we pick up on a polygraph (i.e., a multipen recorder attached to the sending keys).

That's the experiential typewriter and that's how it's used and why such a device is necessary to record psychedelic experiences during the session.

THE EXPERIENTIAL TYPEWRITER

The communicating device known as the Experiential Typewriter was designed by Dr. Ogden Lindsley of the Harvard Medical School and William Getzinger, electronic engineer with MIT's Lincoln Laboratory.

Certain requirements had to be met: the device should allow for touch typing of messages by subjects lying or sitting in darkened rooms. The keyboards had to be separate and the keys had to be engineered to fit the structure of the hand and fingers.

The recording had to be set up so that a separate finger-movement had to be made to register an experience. It was anticipated that during high points of sessions subjects would lose contact with the instrument and might hold down a key for long periods. To avoid this eventuality, each time the key is depressed a mark is made on the polygraph, but if the key is held down no further impression is recorded until the key is released.

Mr. Getzinger's description of the four major parts of the

typewriter is as follows:

1. Twenty-pen Recorder

- a. The registration of reactions is accomplished by an Esterline-Angus Operation Recorder with the internal wiring modified so that operation with pulsed D.C. is possible. This recorder can only be used with the Experiential Typewriter, unless it has been rewired internally. (Instructions for restoring the internal wiring to its previous state are inside the recorder).
- An accessory kit contains a bottle of red ink, a pen-filler, an inkwell filler, and spare tips for the glass-tipped pens.
- c. Esterline-Angus Event Recorder Chart 1720-X is suitable for most situations, because it has no special time markings, but does have a grid for the 20-pen recorder.
- d. A multi-wire cable attached to the recorder is terminated in a plug which fits the smaller of the two recepts at the rear of the console. The black and white pair of wires in this cable carry 115 V.A.C. when the recorder line-cord is plugged into a wall socket supplying 115 V.A.C. Do not attempt to operate this device on anything but 115 V.A.C.

2. The Console

- a. The console has a sloping front panel. The purpose of the console is to provide a convenient location for a transformer to supply low voltage for the keyboard and signaling lamps, to provide a control center for handling any additional devices or circuits that may be added later, and to provide a location for a signaling lamp and pushbutton, a lamp intensity adjustment, and a phone recept.
- b. The toggle switch powers the transformer that provides 28 V.A.C. for the lamps. When operating properly, the jeweled red lamp indicates power is available for the keyboard lamps. The 115 V.A.C. input to the transformer is fused at the rear of the console.
- c. The pointer knob at the center of the console provides 5 stepped voltages to adjust the lamp brilliance. The brighter the lamps, the shorter their life. At brightest, lamp-life expectancy is about 500 hours. At next brightest, about 3000 hours, and longer for dimmer positions.
- d. The phone recept connects with a similar recept on the left-hand keyboard to allow spoken communication between keyboard location and console location. Soundpowered phones could be used, but they are not supplied. Another possible use would have a microphone at the keyboard end and a tape-recorder at the console end.
- e. The round button on the sloping panel energizes a lamp in a similar button on the left-hand keyboard, and vice versa, thus allowing simple visual signaling between keyboard and console locations.

3. Connecting Cables

- a. The 20-pen recorder has an attached cable that plugs in the smaller recept at the rear of the console. DO NOT plug directly into keyboard!
- b. The dual cable with branches about six feet long connects the two keyboards to a single plug. The connectors for the two keyboards are different and so they cannot be incorrectly connected. The single large plug can be connected to the large recept at the rear of the console if it is desired to use the keyboards in close proximity to the console and recorder. Otherwise, the large plug of the dual cable connects to the recept of either of the two extension cables.
- c. The two long extension cables provide a means of separating the keyboards from the console and recorder. One of these cables is about 30 feet long and the other about

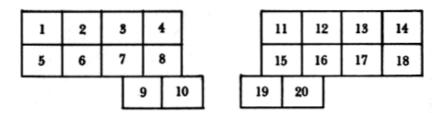
45 feet long. Either or both of these cables may be used between the console and the dual cable to the keyboards.

4. The Keyboards

The sketch below relates the keys on the keyboards to the numbered pens of the recorder.

FIGURE 1

Keyboard of the Experiential Typewriter



Left Hand

Right Hand

- There is a small opening at one narrow end of each key to allow insertion of symbol or color-sheet.
- b. Two lamps are within each key assembly. Access to lamps is obtained by putting the end of a finger under the edge of the key and pulling hard away from the keyboard. Turn lamps off before attempting to remove or replace lamps. A standard #327 lamp, available at most electrical supply houses, is used. Each key assembly has four lamp sockets, but only the two containing lamps are wired. Lamps should be removed or replaced with the tong-like tool provided, with power off.
- c. Each keyboard has a toggle switch to operate the lamps. The right-hand keyboard also has an unused toggle switch, which can be used eventually for turning most any device (such as the recorder or a record player) off and on.

The Keyboard of the Experiential Typewriter

The usefulness of the Experiential Typewriter depends upon the meaningfulness of the experiential language to be coded. The familiar office typewriter is coded in terms of the alphabet and can hammer out any word in the language. But such a device has little use in experiential studies. An experiential language must designate large areas of experience for which there are no words and then must provide more detailed categories within each broad area.

The experiential language should be able to cover generally all the terms now used in our denotational "external" language as well as experiences beyond the present vocabulary. In addition, the experiential language should be based as closely as possible upon biological and physical processes. The language should also be capable of coding the broad range of experiences which jumble together physical sensations and mental constructions—which we call hallucinations.

There are, at present, no linguistic systems set up to distinguish between internal and external, or to distinguish various levels of consciousness.

It is obvious, too, that at this primitive stage of our understanding of the levels of consciousness it is premature to design such a linguistic system.

At this point, ad hoc languages should be set up for each area of consciousness to be explored, for each session; for each raid into the uncharted.

As an illustration we shall now consider one such ad hoc linguistic keyboard for the Experiential Typewriter. The reader is urged to remember that this system is one of many possible codings of the typewriter keyboard.

We divided the two ten-unit boards of the typewriter into: Game-concepts from conventional language: left-hand keys.

Hallucinatory, revelatory, and transcendental experiences: right-hand keys.

Experiential Modes Based on Self Games

The four upper keys of the left hand (numbered 1, 2, 3, 4 on Figure 1) are used to code the four basic modes of perception which concern the self:

- 1. Bodily sensations (e.g., pain, itch, tickle)
- Moods and emotional states (safe-dangerous, pleasant-unpleasant, relaxed-active)

3. Interpersonal feelings towards others

4. Cognitive modes of perception

Each of these four broad areas of experiences can be subdivided into numerous categories. Bodily sensations can be referred to each sensory organ or zone of the body and game designations can be made—"stomach ache," "dizziness," "erotic feelings," etc.

Each of the four "self" keys can be expanded and when more elaborate forms of the Experiential Typewriter are feasible, other rows above the upper keys can be added for specific self categories.

Experiential Modes Based on Cultural Games

The four lower keys of the left hand, (numbered 5, 6, 7, 8 on Figure 1) are used to code four broad categories of cultural games:

- Awareness in terms of body-maintenance games, including sex
- Awareness in terms of social-cultural games, including family
- 7. Awareness in terms of aesthetic-recreational games
- 8. Awareness in terms of intellectual-scientific games

There are, in addition, two thumb keys, set below the two rows of finger keys. The left thumb key (of the left hand) is used to code experiences of a religious-philosophic nature:

9. Awareness in terms of religious-philosophic games

The Negative Experience Key

The right thumb key (of the left hand) is a master key which can modify any other key on the board to indicate a negative experience.

10. Negative modification or interpretation of experience

The negative key is usually used in conjunction with a specific awareness key which it modifies. If the subject is experiencing in "body-game" modes and if the physical reaction is unpleasant than keys 1 and 10 are hit.

Transcendental and Transitional Experiential Modes

The right-hand keyboard is devoted to transcendental and transitional states of awareness. Whereas the left hand simply attempts to summarize the major modes of conventional awareness for which there now exists a vocabulary, the right hand attempts to define a new language for ecstatic experiences, that is to say, for experiences which stand outside current modes.

Following the model of the *Tibetan Book of the Dead* (4) we define two types of "trans-language":

Transcendental: This is pure process-awareness of biological and physical sequences with no imposition of any form or concept interpretations. Elsewhere these were defined as "DPI's," internal and external direct process images (2). In the terminology of mystical or phenomenological psychologies these modes of perception are called "pure being," "the mindless or ego-less state," "white light of the void," etc.

Western psychology does not provide a term for this direct state of direct biological awareness. The psychoanalytic notion of "pure primary process" comes closest to describing the swirling flow of direct process images (DPI's).

Transitional: We have elsewhere made the point (2) that perception, normal-consensual or abnormal-idiosyncratic, is the process of imposing an arbitrary game structure on the endlessly changing Rorschach inkblot of sensed energy transformations. When conventional concepts (for which we have terms) are imposed on awareness—then we are perceiving in terms of self or cultural games. The left-hand key-board is designed to summarize these modes of awareness. We have called these "LFI's"—learned form images. When you are aware of a chair, a tree, of your child's face, of the printed word, your consciousness is being structured by consensual LFI's. Education is the process of teaching the LFI's, of training the person to impose the tribally-designated LFI.

During states of altered consciousness the subject becomes aware of process-flow; of DPI's, internal and external. He has been catapulted through the LFI curtain. Neurologically, we suggest that the imprinted feedback loops of symbolic associations are disrupted by the awareness of previously screened-out DPI's.

At those moments when the subject attempts to impose LFI's, game structures, on to the tumultuous flow of process images, he is in a transitional state of consciousness. Transitional between fixed conventional LFI's and pure process images. The *Tibetan Book of the Dead* calls these Second Bardo apparitions. Our western culture has a variety of names for these states: visions, hallucinations, revelations, delusions, dream-states, hypnotic-trances etc.

In this version of the Experiential Typewriter keyboard we have designated four transitional states and two transcendental states.

The Two Basic Transcendental States

Our strategy is to base the new experiential language as closely as possible on physical and biological events. Thus as these energy sciences increase in precision and complexity the experiential language can expand with them. The two basic classes of transcendental images are coded in the upper board of the right hand:

- Awareness of physical energy processes, phenomenologically labeled "void," "white light," "pure energy," "vibrations," etc.
- Biological processes. Phenomenologically the subject experiences life energy directly and without imposition of any conceptual LFI.

We have deliberately kept these two categories broad and vague. At this time we just don't have the data to spell out more detailed concepts, and premature imposition of LFI's is the classic mistake in this area of understanding. Physical energy processes directly experienced (code 20) can be subdivided into endless categories which must be tied to scientific operations or measurements. Thus we cannot yet allow terms such as "divine illumination" or the Taoist "circulation of the light" quoted in *The Secret of the Golden Flower*. We expect that such experiences can be correlated with measurable space-time phenomena so that we can eventually talk (with consensual validation) about perceiving measurable energy transformations—plasmic, atomic, molecular, electrical, etc.

We are surrounded by energy fields which we cannot perceive and one step in the direction of expanding our perceptions is to develop a semantically valid language.

The experiencing of physical energy transformations sounds, at this time, like wild science-fiction or pseudoscientific occultism. While such conceptions can be abused by the familiar tactic of expressing subjective "truth" in terms of objective "fact," the familiar checks on such abuse must be preserved. By keeping the external-internal differentiation clearly in mind we can expand the languages of both and continue the process of attempting to correlate them, which is the classic goal of science and scientific semantics.

The Four Basic Transitional States

Transitional states of consciousness have been defined as the imposition of external game images upon the suddenly speeded-up flow of direct process. "Normal" perception is the labeling of still photographs. Transitional awareness is the hurried, ecstatic or chaotic attempt to tack on static, ill-fitting labels to the kaleido-

scopic dash of a speeded-up motion picture.

There are thousands of metaphorical classifications used to describe these perceptions. Every theory of human nature has its diagnostic language. We have settled on four general categories of transitional awareness; within these broad categories can be included most of the transitional states employed by other theories:

12. Immediate sensory awareness (without cognitive contact) This category represents those states of direct awareness where the stimulus is so powerful, or the game-sequence is so compelling that the subject loses self-consciousness, forgets who and where and when he is, forgets even the game he is playing and becomes completely absorbed in the moment. The sense of immediacy can come in response to a stimulus-the pure sound, the candle light, the sensual or erotic quiver, the sunset, the repetitious cannonading of the surf. Consciousness is stripped of all ideas, all desire, all qualification. The sense of immediacy can also come as the ecstatic end-point of the game. The game-ecstasy. The complete ego-less absorption in the sequence. The athlete straining for the ball, the artist merged with his brush, the mother swept up in the movement of child-care. The Zen moment of the Haiku.

The lower-right thumb key of the right hand is used to communicate these states of awareness.

13. Revelation

Another transitional state involves a sudden intuitive insight into relationships previously never grasped. This category includes the creative experience, the intuitive flash so frequently described by scientists, mathematicians, artists and philosophers and now being studied by psychologists.

The revelation seems to involve a dramatic combination of elements from games previously separated. Old concepts and clichés suddenly come to life and "exist" in vivid relationship to the experience and to other concepts. The new meaning is felt; one

becomes the new meaning.

The index finger key of the lower bank of the right hand is used to code revelatory experiences.

17. Ecstasy-unity-liberation

Thousands of terms crowd in upon us from hundreds of dialects attempting to recapture the exultant moment of ego-loss. Running through these terms is the notion of sudden ecstatic freedom from the weight of striving, the heavy mind, the enslavement

to identity and social role. There is also the sense of unity. When the mental differentiations are transcended the processes of life are seen to fit together, each in its place, all part of the unfolding pattern. "It all fits together." The ten-billion cell cerebral computer, for the first time since birth, is humming harmoniously, and more deliciously so, because added to the dance are all the memories, concepts, words, experiences of a lifetime. Neurological unity.

Such experiences are coded by the subject with the index finger

of the right-hand upper bank.

These ecstatic moments are differentiated from the pure transcendental because in the latter there is complete submergence, loss of all social artifactual cognition, including that of self. The experiencer is lost in the process either internal or external. In the ecstatic-unity state there is a delighted awareness of self without desires, duties, ambitions. The self is seen as part of the complex unity. Similarly there is awareness of all other man-made as well as natural events. Similarly there is a unified awareness of concepts and artifacts. The awareness has not been broken down into swirling mosaics of cellular and wave visions which are characteristic of transcendental modes.

18. Hallucinations

As the grip of the imprinted, symbolic mind becomes weaker and the pulse of physical and biological processes resonates in consciousness, the sharp edges of learned form perceptions begin to merge with the process flow and hallucinations are registered.

As described above, neo-symbolic patterns develop. Familiar discrete sense modalities become scrambled together. Synesthesia. Sounds are seen; colors are heard. These sensory impulses are not so differentiated in the cortical network—it is the learned mind

which separates the sensory modes.

Familiar forms dissolve into moving, dancing structures. Thousands of images swirl through consciousness each second. Objects which our learned perceptions had persuaded us were solid and fixed begin to vibrate and oscillate. Faces of friends become changed into godlike masks, heroic, futuristic, demonic, saintly countenances. Looking at yourself in the mirror your own face flicks through a hundred changes, infant, child, adult, aged man with beard.

LFI's merge with DPI's. Old remembered forms and concepts

imposed on the new cellular dance.

When these new constructions appear in consciousness, key number 18 is depressed—middle finger, upper bank, right-hand keyboard.

The Recording of Internal (Eyes closed) Experiences

One of the most important descriptive categories for any experience, but particularly for visionary experiences is the distinction between internal and external. Eyes closed versus eyes opened defines one of the most basic determinants of experience. In working up a system description of a psychedelic session it is of central importance to have a record of when eyes were open and when closed. All of the right-hand keyboard modes—transitional and transcendental—can be experienced with eyes open or with eyes closed. Direct awareness can be of things around or processes inside. Revelations, unity-vision, hallucinations, biological and physical processes can be registered with eyes open or closed—and the quality of the awareness is much influenced by the simple factor: Are your lids shut or open?

This factor thus becomes an overall modifier of any specific experience. Just as the negative key (number 10) can be used to modify any mode of awareness, so with the eyes-open-eyes-closed factor.

11. Internal modifier of awareness

The left-hand key in the thumb row of the right-hand board is employed to signify an internal (eyes-closed) awareness.

THE USES OF THE EXPERIENTIAL TYPEWRITER

After a trained subject has over-learned the keyboard and has practiced sending experiences it is possible to use the typewriter in a wide range of empirical studies.

1. Basic Recording of the Flow of Experience

The subject can tap out the second-by-second sequence of experiences—ranging from the most banal thoughts to the most "far-out" visions and hallucinations. At the same time, if the observer keeps a running record of behavior and setting events it is possible to go back over the tape with the subject and reconstruct in great detail the experiential history of the session. At 3:17 when the Mozart record began to play, you murmured "Cairo, Cairo"; the typewriter tape shows you were punching out "revelation," "ecstacy," "eyes-closed." With these cues at hand the subject can then remember and even relive the sensations which flooded awareness at 3:17 of the session.

For the first time we have high-speed, non-verbal methods of converting experiences into language. 2. Session Programming

The typewriter console and keyboards have telephone sockets which make it possible for a person in another room to communicate with the subject. If the observer reads the typewriter and sees that the subject is not experiencing what he had planned he can immediately communicate with the subject and get instant feedback as to whether his intervention has changed the subject's consciousness in the direction of the plan.

For example, let us suppose that the subject wishes to experience revelations about Iranian poetry. The typewriter indicates that he has been hallucinating and has then moved to "negative mood." The session guide can then pick up the phone and remind the subject, "Hello, Frank, we are here with you. You've been having a rough moment. I'm going to read a Sufi verse to help you get back to Persia." The next readings from the polygraph indicate whether the subject has moved the needle of consciousness in the hoped-for direction.

3. Extrasensory Perception Research

The two keyboards are separated and extension wires make it possible to have one keyboard in one room and the second in another part of the building. We have used the device to trace patterns of telepathic communication. The simplest study involves having one person "sending" messages and the other receiving. The typewriter tape then picks up the flow of awareness from each person simultaneously and statistically significant correlations between the two can demonstrate the effect of communication. In using the present twenty-key recorder it is, of course, necessary to work with a ten-item vocabulary—since the keyboards must be the same and both subjects use the same experiential code.

4. Physiological Studies of Consciousness

The most exciting research prospect opened up by the Experiential Typewriter involves correlating experience patterns with neurological recordings. A second polygraph is used to record brain waves, circulatory changes, breathing alterations, etc. The two flow-patterns of data—one experiential and one objective-physiological are then collated. For the first time we have an experiential language which can flow along automatically and provide data directly comparable with physiological readings.

5. Detailed Languages of Consciousness

The keyboard of the typewriter presented in the preceding discussion is by no means fixed or standard. Researchers will, of course, alter the keyboard codes to meet the needs of different experiments. Whatever the variables to be studied—personal or intellectual—the keyboard can be revised. The central methodological issue in research on consciousness is that it must be collaborative. You have to rely on the subject's ability and willingness to tell you what he is experiencing. The subject must agree to learn the keyboard and in most studies it would be expected that the categories of awareness would be within the range of the subject's interests. The day of the psychologist imposing his game, his roles, rules, rituals and above all his language on the subject is about over.

Example of Experiment Using the Experiential Typewriter

For demonstration purposes one subject, a 24-year-old-volunteer, was run on the E.T. for two one-hour sessions, on two separate days. First the code-system was memorized. A simplified scheme, using only ten categories and ten keys, was used.

PEN	KEY	CATEGORY
	Left Hand	Self-Game Categories
1	little finger	cognitive
2	ring finger	interpersonal
3	middle finger	emotional (moods)
4	index finger	body
10	thumb	negative modifier
	Right Hand	Tran-Categories
11	index finger	hallucinations
12	middle finger	internal processes
13	ring finger	external waves
14	little finger	void, white light
19	thumb	direct awareness

In this scheme, the left hand is used to code self- and social-game categories, the right hand transitional and transcendental categories. The first session was run as a control period, without drugs. The set was to meditate in silence. The second recording was made three hours after the ingestion of 250 gamma of LSD. Both sessions were run in a very small room; the subject lay on a mattress on the floor, hands resting easily on the two keyboards of the E.T. The console and recorder were in an adjacent room. The room was lit by one candle; actually the subject kept his eyes closed throughout both sessions.

Table (1) shows the results in summary form, with each period divided into thirds. It can be seen that although the total number of responses for the two sessions is equal, they differ in two respects:

- 1. the percentage of right-hand responses-6.4% vs. 66%
- 2. the percentage of negative responses-9.1% vs. zero

Although no statistical evaluation of results from one subject is possible, the figures do suggest that the E.T. can significantly discriminate drug from control conditions.

TABLE (1): Summary of Data from E.T. (one subject)

(a) Control Period

	0-20 mins.	20-40 mins.	40-60 mins.	Total
Number of responses	42	33	34	109
% right hand responses	7	3	8	6.4
% negative responses	0	15	15	9.1

(b) LSD Period

	0-20 mins.	20-40 mins.	40-60 mins.	Total
Number of responses	48	44	16	108
% right hand responses	62	71	81	66
% negative responses	0	0	0	0

In the control session, a few negative experiences were recorded; the subject reported that these were primarily unpleasant body sensations such as itches or cramps. No negative responses were registered in the drug session. The latter shows a marked drop-off of response in the last third of the hour. The subject reported drifting off into areas of reduced awareness during this time. He was apparently no longer aware of the room, the E.T. and the task. Most of the right-hand responses occurred in the "direct awareness" category. The subject here reported being in a state of acute awareness of the tactile sensations coming from his finger tips.

These results, although crude and preliminary, indicate that the Experiential Typewriter can be used to distinguish sensitively between different states of consciousness and to record the flow of experience as it occurs.

Summary

A communication device—the Experiential Typewriter—is described, consisting of a twenty-key manual keyboard linked to a moving pen-recorder. Subjects are pretrained in a code of experiential categories. The recording paper then gives a moment-to-moment record of the flow of experience. The uses of such a device are outlined in 1) recording the flow of experience, 2) session programming, 3) ESP research, 4) correlation of experiential with physiological recordings, 5) developing languages of consciousness. Different codes should be developed for different kinds of experiential research. A code based on the "The Psychedelic Experience" and an illustrative experiment using a single subject are presented.

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The above paper is a chapter from a forthcoming book-Tranart-The Communication of the Ecstatic Experience, to be published shortly.