PSYCHOLOGY NOTES

SILO

Contents

Introduction

The four conferences compiled in *Psychology Notes* were given by the Latin American thinker Mario Rodríguez Cobos, (Silo), between 1975 and 2006. Psychology I was presented in 1975 in Corfu, Greece; Psychology II and Psychology III in 1976 and 1978, respectively, in Las Palmas, Grand Canary Island, Spain; and Psychology IV was presented in 2006 in Parks of Study and Reflection, La Reja, Buenos Aires, Argentina.

Psychology I is concerned with the psychism in general as a function of life, in its relationship with the environment, and in its expression in the human being. It goes on to describe the characteristics of the "apparatuses" of the psychism—the senses, the memory, and the consciousness. Finally, it outlines theories of impulses and of behavior.

Psychology II focuses on three pathways of human experience: sensation, imagination, and memory. It then turns to the psychism's responses to stimuli external to, and within the body. The levels of work of the consciousness and the mechanisms of behavior are reviewed in light of the theory of the space of representation. Finally, following the path of the sensations, images, and memories, the production and transformation of impulses is explained, and these are then organized in a morphological presentation of signs, symbols, and allegories.

In Psychology III, the system of operative techniques (hereinafter referred to as "Operative") that can intervene in the production and transformation of impulses is studied. A simplified schema of the integrated work of the psychism contributes to the comprehension of the themes of operative. Finally, distinctions between the consciousness and the "I" are established, contrasting the states of reversibility with those of altered states of consciousness.

Psychology IV starts right away with a study of the diversification of the impulses, followed by the differences between consciousness, attention and the "I." The spatiality and temporality of the phenomena of consciousness are also studied, and finally, the structures of consciousness are explored and defined. Structures such as "inspired consciousness" are seen in different fields of human activity, for example, in philosophy, science, art and mysticism. Finally, there is a foray into the profound levels of the structures of consciousness, and it is with these final paragraphs that this psychology is brought to a close—this psychology that began with an analysis of the most basic impulses and ended with a synthesis of the most complex structures of consciousness.

These writings, together with "Psychology of the Image" (which constitutes the first part of the book, *Contributions to Thought*), and *Guided Experiences*, both of which are included in the author's *Complete Works, Volume I*, can be considered as the starting point of a psychology of New Humanism.

In line with these works, *Self-Liberation* by Luis A. Ammann, and *Morfología: Simbolos, signos y alegorías* by José Caballero have already been published, and no doubt in the future we will see other studies that expand upon and enrich these initial ideas.

It would also not be surprising if clinical psychologists later developed a new psychotherapy based on these descriptions of the human psychism.

- The Publishers

Note from the Translators

Since *Psychology Notes* is based on transcriptions of talks by the author, reviewed and edited by him, their apparent informality and compact character are not surprising. They do not constitute a detailed formal treatise on the material but a concise introduction and seminal outline of key areas—an outline that invites future development. At the same time, the author's works as a whole form a coherent and comprehensive system of thought, with a precise conceptual framework and terminology. Because the author has used this terminology across all the texts in the two volumes of his *Complete Works*, in translating *Psychology Notes,* we have tried to maintain a consistent usage—including some established in previous translation versions—even when on occasion this may vary from more common everyday usage (as indicated in translators' notes).

In this translation, we have aspired to balance these factors—the informality of the notes' form and the concise nature of the work along with the scope and precision of the author's works as a whole—to help the reader approach this work in a translation that is free of conceptual error and expressed in an accessible and natural English. In this effort, an important initial step has been to carry out a thorough study of the works directly referenced or indirectly alluded to in the Spanish in order to provide an accurate context for the concepts and terms used in the work.

This translation has benefited greatly from a collaboration among specialists with decades of experience in studying and translating the works of Silo, supported by many others, including a reading group for drafts with participants ranging from those well acquainted with the works of Silo to others new to these works. The translation team would like to acknowledge the valuable assistance of Silvia Bercu, Tony Robinson, Jon Swinden, Jorge Van Schouwen, and Chris Wells throughout the translation process, and Dr. Nathalie Alos and Maria Luisa Mandelli, PhD, for their help with the Appendix. The work has also benefited from the previous translation of this work in 2003 by the team coordinated by Karen Rohn and Elizabeth Medina.

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Psychology I

This summary was prepared by participants in the conferences given by Silo in mid-November 1975 in Corfu, Greece. The Appendix, "Physiological Basis of the Psychism" was added toward the end of the same year.

The Psychism

As a Function of Life

Since its beginnings, life has manifested in numerous forms. Of these, many species have disappeared because they did not adapt to the environment, to new circumstances. Living beings have needs that they must satisfy in their dynamic and constantly changing environments. This unstable and unbalanced relationship produces responses in the organism that tend toward compensating this disequilibrium, enabling the organism to maintain its structure, which would otherwise disappear. So it is that in an environment with many disparate and variable characteristics, we see living nature unfold in a variety of forms, and we observe at its base simple mechanisms of compensation in response to the disequilibrium that threatens the structure's permanence.

For an organism's survival, adapting to external change also implies internal change. When this internal change does not take place in living beings they eventually disappear, and life chooses other paths to continue its growing expansion. Life always exhibits this mechanism of responding to disequilibrium in a compensatory way, with responses of greater or lesser complexity depending on the species' development. This task of compensating both the external environment as well as internal needs is understood as adaptation (and specifically as growing adaptation), and as the only way for the organism to persist in the dynamic of this instability in motion.

The development of animal life in particular depends on the functions of nutrition, reproduction, and locomotion. Of course, these functions also exist in plant and even unicellular life, but in animals these functions clearly maintain the structure's internal stability, keeping organism and environment continually connected. This will be expressed in vegetative tendencies in a more specialized way as "instincts" of conservation and reproduction: the former maintaining the structure of the individual; the latter, that of the species. This predisposition of organisms to preserve themselves as individuals and perpetuate themselves as a species expresses an inertia, something we might call a "memory"—a predisposition tending to ensure permanence and continuity despite a changing environment.

In animals, the function of locomotion is needed in order for the other functions—nutrition and reproduction—to develop. While locomotion, as displacement in space, allows for food to be obtained, there is also internal mobility—the transportation of substances for assimilation by the organism. Reproduction is both internal to the individual and external in the multiplication of individuals. The former can be seen in the generation and regeneration of tissue, the latter in the production of new individuals within the same species. Both require locomotion for their accomplishment.

The tendency toward the environment in the search for food, or to flee or hide from danger, mobilizes and gives direction to living beings. The particular tendencies in each species form a set of tropisms. The simplest tropism consists of the response to a stimulus. This minimum operation of responding to an element foreign to the organism which has provoked disequilibrium in the structure, in order to compensate and reestablish stability, will later manifest in diverse and complex ways. Moreover, all such operations will leave “imprints” that will become preferred pathways for new responses (in Time 2 the living being operates on the basis of the conditions obtained in Time 1). This possibility of recording is of utmost importance for maintaining the structure’s permanence in variable external and internal environments.

In order to express its tendency to move, adapt, and survive, an organism will have to overcome resistances in an environment consisting of possibilities, but also of obstacles. Overcoming difficulties and surmounting resistances requires that energy be invested; the organism must do work, and that requires energy. This free energy will be used in the work of overcoming resistances in the environment. New energy will not be available until the difficulties are overcome and the work is completed. The recording of imprints (memory) will allow responses based on previous experiences, leaving free energy available for new evolutionary steps. Without free energy it is not possible to carry out more complex tasks of growing adaptation.

Moreover, conditions in the environment present themselves to the developing organism as choices, and once again it is the imprints that allow decisions about the various alternative adaptations. Furthermore, this adaptation in the face of alternatives is a matter of seeking the path of minimum effort and least resistance. Less effort implies less expenditure of energy. Thus, along with overcoming resistances, an organism tries to do so using the least energy possible. As a result, the free energy made available can be invested in new evolutionary steps. In each evolutionary step there is transformation of both the environment as well as the living being. This presents an interesting paradox: in order to preserve its unity, the structure must transform both the environment and also transform itself.

It would be an error to think that living structures change and transform only their environment, because over time this environment grows increasingly complex, and it is not possible for an organism to adapt while maintaining its individuality unchanged from what it was originally. This is the case for human beings whose environment has not remained simply natural with the passing of time but has become social and technological as well. The complex relationship between social groups and the accumulated social and historical experience creates an environment, a situation, in which the internal transformation of the human being becomes necessary.

In this way, life appears, and becomes organized with its functions, tropisms, and memory in order to compensate and increasingly adapt to a changing environment. Following this roundabout process, we can see that some coordination (however minimal) among these factors is also necessary for an orientation toward conditions favorable for development. With the appearance of this minimal coordination, the psychism emerges as a function of life in growing adaptation—in evolution.

The function of the psychism consists of coordinating all the operations that compensate a living being's instability with its environment. Without coordination, an organism would only respond partially, without completing the various components of its response, without maintaining the necessary relationships and, finally, without maintaining its structure in this dynamic process of adaptation.

In Relationship with the Environment

The psychism uses the senses and memory in order to perceive variations in the environment and coordinate vital functions. These initially simple senses have become more complex over time (like every part of the organism) and provide information on the environment that is structured in an adaptive direction. For its part, the environment is highly varied, and certain minimal environmental conditions are needed/required for organisms to develop. Where these physical conditions are present, life emerges, and once the first organisms appear, these conditions are progressively transformed in a way that is increasingly favorable for life.

In the beginning, however, organisms require optimal environmental conditions for their development. All of them are impacted by changes in the troposphere. Daily and seasonal cycles, as well as the prevailing temperature, radiation, and sunlight are all conditions that influence the development of life. So, too, does the composition of the Earth, whose riches provide raw material both as sources of energy and objects of labor for those living beings.

All kinds of upheavals around the planet are also decisive for organic development. Glaciation, subsidence, earthquakes and volcanic eruptions, even erosion by wind and water, are all determining factors. Life will differ in the deserts, the mountain heights, at the poles or seashore, but once life emerges out of the seas, large numbers of organisms and diverse species will appear on and subsequently disappear from the Earth's surface. Many individuals will encounter insurmountable difficulties and perish. So also will entire species—species unable to transform themselves or to transform the new conditions arising in the evolutionary process. Nonetheless, life, which through its vast numbers and diversity encompasses so many possibilities, continually opens its way.

Apart from those relationships that exist within a particular species, a variety of relationships arise among diverse species that occupy the same space. These include relationships of symbiosis, of association, as well as parasitic and saprophytic relationships, and so on. All of these can be reduced to three major types: relationships of domination, of interchange, and of destruction. Organisms maintain these relationships among themselves, with some surviving and others disappearing.

We are dealing with organisms whose functions are regulated by a psychism equipped with senses that allow them to perceive the internal and external environments. They also have a memory that is more than the genetic memory which allowed the transmission of the species' characteristics (instincts of reproduction and conservation). This permits individual recordings of new reflexes and allows it to choose among alternatives. Memory also fulfills another function: the registering of time. It is memory that allows for continuity to be given to the "flow" of time. The initial circuit of short (stimulus-response) reflexes grows in complexity, becoming specialized in the nervous and endocrine systems. Moreover, the possibility of acquiring new reflexes gives rise to learning and domestication. It also enables the specialization of multiple mechanisms of response. As a result, we can observe in the environment, in the world, a range of variable behaviors and activities.

Following on from nature's many attempts, mammals began their development, giving rise to numerous and diverse forms. These mammals gave rise to different branches, among the more recent ones, the hominids. From this point on, the psychism develops in a particular way.

In the Human Being

The codification of signs (as sounds and gestures) in hominids marks a notable leap. Later these codified signs become fixed with greater permanence (as recorded signs and symbols). These signs improve communication between individuals, allowing the description of matters of importance regarding the ambit in which they live. Memory expands, and is no longer just what is transmitted genetically, nor is it simply individual; rather, thanks to the codification of signals, data can be stored and transmitted as signs, increasing both information and social experience.

Subsequently, a second important leap occurs when mnemonic data become independent of the genetic apparatus and the individual. Distributed memory appears and progresses from the first signs on walls and clay tablets to alphabets that make possible texts, libraries, schools, and so on. The most remarkable factor at work here is that the psychism is reaching beyond itself and manifesting in the world.

At the same time, locomotion increases (thanks to an inventiveness that domesticates animals and plants on one hand, and creates devices not found in nature on the other), allowing movement over water, steppe, mountain, and forest. From nomadic populations to our own times, locomotion and communication have undergone a remarkable degree of development.

The first farmers perfect a system of nutrition, developing it from primitive gathering, hunting, and fishing to the domestication of plants. This development continues with the domestication of animals, and the progressive systems of storage, preservation, and synthesis of new foodstuffs, along with their subsequent distribution.

The function of reproduction leads to the organization of the first social groups of families, tribes, and hordes who, with the establishment of permanent sites, give rise to rudimentary villages. Over time these acquire a complex form of social organization, with the concomitant participation of several different generations in one same historical and geographical moment. Reproduction continues to undergo important transformations up to the present time, with the emergence of techniques for the production, modification, preservation, and mutation of embryos and genes.

The psychism has become more complex, while still reflecting its previous stages. The apparatuses of response have become more specialized; for example, the neurohormonal centers have developed from their original vegetative function until producing an intellect of increasing complexity. Depending on its degree of work (internal or external), the consciousness has gained levels from deep sleep to semi-sleep and subsequently an increasingly lucid level of vigil[T1].

The psychism arises as the coordinator of the structure “living being-environment”—that is, of the structure “consciousness-world.” The result of this coordination is an unstable equilibrium within which this structure will work and process. External information reaches the various specialized apparatuses, which work with different ranges of input. These apparatuses make up the external senses. Information from the internal environment, from the intra-body, reaches the receptor apparatuses that form the internal senses. The imprints of this internal and external information, as well as that from the operations of the consciousness itself in its different levels of work, are received in the apparatus of memory. In this way, the psychism coordinates sensory data and memory recordings.

Moreover, at this stage in its development the psychism is equipped with apparatuses for very elaborate and varied types of response to the world, including intellectual, emotional,

[T1] Translators’ note: “Wakefulness” or “waking state” may be more common translations of the Spanish word *vigilia* but breaking with our established tradition of translating it as “vigil” in this case risks obfuscation in the attempt to simplify or clarify.

and motor responses. We call these apparatuses centers. The organic basis of the vital functions of metabolism, reproduction, and locomotion is found in the vegetative center, along with the instincts of conservation and reproduction, (although locomotion has become specialized in the motor center). The psychism coordinates these apparatuses as well as the vital functions and instincts.

Furthermore, in the human being there is a system of relations with the environment that cannot be considered as an apparatus with neurophysiological localizations, and which we call “behavior.” A particular case of psychological behavior in interpersonal and social relations is that of the “personality.” The structure of personality serves for adaptation through its continual adjustment to the diverse and changing situations of the interpersonal environment. This capacity for effective adaptation requires a complex situational dynamic that the psychism must also coordinate to maintain the unity of the entire structure.

An individual’s biological process, with its changing needs and environmental relationships—from birth and childhood through adolescence and youth until reaching maturity and old age—markedly modifies the internal structure which undergoes these vital stages. Early on there is a relationship of dependence on the environment; later, there are needs related to becoming established and to expanding, as well as the tendency to conserve this position. Finally, there is a withdrawal from the environment. This process, too, requires precise coordination.

In order to realize an integrated vision of the work of the human psychism, where possible we will indicate the physiological locations of the various functions.[1]

We will also consider the system of impulses which is able to generate, transfer, and transform information between the apparatuses.

Apparatuses of the Psychism[2]

By apparatus we understand those specializations of the senses and memory which work in an integrated fashion in the consciousness by means of impulses. These impulses, in turn, undergo numerous transformations, depending on the psychic ambit in which they act.

Senses

The senses are organized in various ways according to the needs and tendencies of the psychism, and their function is to receive and deliver data from and to the consciousness and the memory.

The sensory apparatuses have their origin in a primitive tactile sense that has become progressively specialized. The external senses detect information from the external environment and can be distinguished from the internal senses which capture information from within the body. Depending on how they function, the senses can be classified as: chemical (taste and smell); mechanical (the sense of touch per se and the internal senses of cenesthesia and kinesthesia); or physical (hearing and sight).

Regarding the internal senses, the cenesthetic sense consists of chemical receptors, thermoreceptors, baroreceptors, etc., and provides information on the intrabody. It also plays an important role in the detection of pain, the activity of the centers, and the various levels of work of the consciousness.

In vigil, the register of cenesthetic information is minimized, the external senses predominate, and the entire psychism functions in relation to the external world. When the intensity of vigil lessens, the transmission of cenesthetic impulses increases. The distorted register of these impulses acts as the raw material for the translations that occur in semi-sleep and sleep. The kinesthetic sense provides data about movement, corporal position, as well as physical equilibrium or disequilibrium.

Common Characteristics of the Senses

a) All the senses carry out activities of abstraction and structuring of stimuli, each in their own way and according to their respective capacities. Perception is produced by the data plus the activity of the sense.[T2]

b) Each sense is in continual movement, scanning a particular range.

c) Each sense works with its own memory, thanks to which it is able to recognize stimuli.

d) Each sense works within a “range” and with its own particular tone that is altered by the stimulus. For this to occur, the stimulus must appear within certain sensory thresholds (a minimum threshold below which the stimulus is not perceived, and a threshold of maximum tolerance, which when exceeded produces sensory irritation or saturation). If

[T2] Translators’ note: The above reflects an accurate translation of the original text; however, we suspect a possible transcription error in the Spanish. On other occasions, Silo explained the sensation as the impulse plus the structuring activity of the sense, and perception as the sensation plus the structuring activity of the consciousness. See for example, “Psychology II.”

there is “background noise” (originating from that sense, other senses, the consciousness, or the memory), then the intensity of the stimulus must increase for it to be registered. To avoid saturation and sensory blockage, this must occur without exceeding the maximum threshold of intensity. When saturation does occur, it is necessary for the background noise to be reduced in order for the signal to affect the sense.

e) All of the senses operate within their thresholds and limits of tolerance, which vary according to training and metabolic needs (where the phylogenetic root of the existence of the senses is to be found). This feature of variability is important in order to distinguish sensory errors.

f) Each sense translates its perceptions into the same system of electrochemical impulses, which are distributed through the nervous system to the brain.

g) All of the senses have nerve endings (discrete or diffuse), which terminate in the central, peripheral, or autonomic nervous systems, from where the apparatus of coordination operates.

h) All of the senses are linked to the organism’s general memory apparatus.

i) Each sense has its own register, given by the variation of the tone presented by the stimulus, and the act of perception itself.

j) Errors of perception can occur in any of the senses. These errors can come from the blockage of the sense (due to sensory irritation, for example) or from a failure or deficiency in the sense (myopia, deafness, etc.). They can also occur due to a lack of participation by one or more senses that help provide parameters for the perception—for example, something sounds “distant,” but when seen it turns out to be “close by.” There can be errors created artificially by mechanical conditions, such as the case of “seeing light” when pressure is applied to the eyeballs; or the sensation that the body has grown larger when the external temperature becomes similar to that of the skin. Such errors of the senses are generically called “illusion.”

Memory

The function of the memory is to record and retain data from the senses and/or the consciousness. When necessary, it also supplies data to the coordinator (the act of remembering). The greater the amount of data available from the memory, the more options there are for responses. When a response has antecedents in the memory, energy is saved, and a surplus becomes available. The work of the memory provides the consciousness with references for its location and its continuity in time. The rudiments of

memory can be seen in the inertia proper to the work of each sense, extending to the entire psychism as memory in general. While theoretically the minimum atom of memory is reminiscence, what is registered is that in the memory, data coming from the senses and the coordinator in the form of structured recordings are received, processed, and ordered. This ordering is carried out in ranges or thematic zones and according to a characteristic chronology. From all this it can be deduced that the real atom of memory is: data + activity of the apparatus.

Forms of Recording

Data are recorded by the memory in different ways: through shock—that is, through a stimulus that makes a powerful impression; through the simultaneous input of data from different senses; through the presentation of the same data in different ways; as well as through repetition. A datum is well recorded both when it has a context and also when it stands out, either due to an absence or a lack of agreement with the context. The quality of the recording improves the more the stimuli can be distinguished, and this depends on the clarity of the signals and the absence of background noise. Blockage of the signal is produced when there is saturation due to repetition. There is a weakening of the recording when there is habituation to the stimuli. When there is an absence of external stimuli, the first stimuli to appear are clearly recorded. In addition, when the memory is not providing information to the coordinator, there is a greater disposition toward recording. Data are recorded better when they relate to the thematic range in which the coordinator is working.

Remembering and Forgetting

Remembering—or more precisely, evocation—arises when the memory sends already-recorded data to the consciousness. Evocation is intentionally produced by the consciousness, and this differentiates it from the type of remembrance that is imposed on the consciousness. For example, without the coordinator's participation the consciousness can be occupied by certain memories—which may at times coincide with searches, or with psychological contradictions.

There are degrees of evocation, depending on whether the data have been registered with greater or lesser intensity. When the data just pass the threshold of register, evocation is possible, but barely. There are even cases in which the data are not initially remembered, but if perceived again they are recognized. Beginning from these minimum thresholds of evocation there are degrees of intensity until reaching the level of automatic remembering or immediate recognition, as for example in the case of language. Recognition occurs when a datum, received and compared to previously recorded data, appears as having been registered previously, and is therefore recognized. Without recognition, the psychism would experience always-being-before-the-phenomena-for-the-first time, even when they are repeated.

Forgetting is the impossibility of bringing previously recorded data to the consciousness. This occurs through a blockage in reminiscence that impedes the reappearance of the information. There is, on the other hand, a type of functional forgetting which prevents the continuous reappearance of memories, thanks to mechanisms of inter-regulation. These mechanisms inhibit one apparatus while another is working, avoiding in this way continuous remembering while the coordinator is perceiving, or coordinating responses, or when it is evoking a particular range of memories. The degree of intensity of recording and evocation is related to the coordinator's fields of presence and copresence.

Levels of Memory

From the permanence and duration of the recordings there arise different levels of memory. In an individual's acquisition of memory, previous imprints remain as the substratum for subsequent ones, establishing an ambit in which new recordings are compared with earlier ones. Moreover, new recordings are received on the basis of the energy available, and the work done by the previous recordings. This is the basis for recognition. The base level of this substratum, the remote memory, continues to be enriched over time. A second level, or mediate memory, arises in the dynamic of psychic work with recent recordings. On occasion these pass into the level of remote memory. There is a third level, or immediate memory, that corresponds to current recordings. It is a level of work that is constantly open to the arrival of information. In this level, data is selected, discarded, and stored.

Memory and Learning

Emotion plays a very important role in the recording and memorizing of mnemonic imprints. Obviously, it is easier to memorize and evoke in an atmosphere that is friendly and agreeable, and this characteristic is decisive in tasks of learning and teaching in which the learned data are linked to the emotional context.

Memory Circuit

The entryways for mnemonic impulses are the internal and external senses, as well as the activities of the coordinator itself. Through these pathways the impulses that make up the registerable information travel to be stored in the memory. The arriving stimuli follow a double path: one leads to the coordinator and the other to the memory. All that is needed is that the stimuli slightly exceed the sensory thresholds in order for them to be registerable. And it is sufficient that there is some minimal activity in the different levels of consciousness for recording to take place.

Relationship Between Memory and Coordinator

In the circuit between the senses and the coordinator, the memory acts as a connective, as a bridge—at times compensating a lack of sensory data through evocation, or through

involuntary memories (as though “metabolizing” reserves). In the case of deep sleep, where there is no input of external data, it is cenesthetic data combined with data from the memory that reach the consciousness. In this case, the mnemonic data are not intentionally evoked; nonetheless, the coordinator is still performing tasks: it is ordering data, analyzing, and carrying out operations with the participation of memory. In the level of deep sleep there is a re-ordering of raw material from vigil that has arrived at the memory (immediate, recent, or ancient) in a disordered way. In the level of vigil, the coordinator can direct itself to the memory through evocation (mechanisms of reversibility), formalizing objects in the consciousness which, while not reaching it through the senses at that moment, have done so previously. The memory, then, provides data to the coordinator, both when requested and when it sends data on its own, for example, in the case of a lack of sensory stimuli.

Errors of Memory

The most common memory error is false recognition. It arises when a new datum is incorrectly related to a previous one. A variant (erroneous remembrance) occurs when a datum is replaced with one that is in fact not in the memory. Amnesias can be registered as the total impossibility of evoking data or complete sequences of data. Conversely, in hypermnesia there is an overabundance of memories. Moreover, every recording is associated with others to which it is contiguous. Hence, there are no isolated memories; rather, the coordinator selects the ones it requires from among all the memories. Thus, another case of error is produced when memories contiguous to those central ones are placed as if central. Even when bypassing the coordinator, data from the memory can directly influence behavior, stimulating conduct unsuitable for a given situation—even when this behavior is registered as inadequate. Finally, there is the case of “déjà vu,” where in an entirely new situation one has the feeling of having lived it before.

Consciousness

The consciousness can be defined as the system of coordination and register realized by the human psychism. Accordingly, we do not consider as conscious any phenomenon that is not registered, or any operation of the psychism in which activity of coordination does not participate. Such a position is possible because there is such a broad spectrum of possibilities for registering and coordination. The greatest difficulties with all this appear when we consider the thresholds, that is, the limits of register and of coordination. This leads us to the following brief consideration: it is common for “consciousness” to be identified with “vigilic activity,” with the result that everything else is excluded from consciousness. This in turn gives rise to poorly founded concepts such as that of the “unconscious.” All of this transpires because the different levels of work of the

consciousness have not been sufficiently studied, just as the structure of presence and co-presence, with which the attentional mechanism works, has not been sufficiently observed.

There are other conceptions of consciousness in which it is seen as passive. In fact, the consciousness works by actively structuring. It coordinates the needs and tendencies of the psychism with input from the senses and memory as it orients the constant variations in the relationship between the body and the psychism, that is, the psychophysical structure with the world.

We consider the mechanisms of reversibility to be fundamental. By means of attention, they allow the consciousness to orient itself toward the sources of sensory information (apperception) and mnemonic information (evocation). When the attention is directed in evocation it can also recover, or make evident, phenomena that went unnoticed at the time they were recorded. This recognition is considered as apperception in evocation. The action of the mechanisms of reversibility is directly related to the consciousness's level of work. As one descends in level of consciousness, the work of these mechanisms decreases, and vice versa.

The Structure of the Consciousness

The minimum structure of the consciousness is the "act-object" relationship, which is bound together by the mechanisms of intentionality. This bond between acts and objects is permanent. It exists even when there are acts that are launched in search of objects which, at that moment, are not precisely specified. It is this act-object relationship that gives the consciousness its dynamic. The objects of consciousness (perceptions, memories, representations, abstractions, etc.) appear as the intentional correlates of the acts of consciousness. Whether intentionality is launched toward the future, or toward the past in evocation, it is always registered as tension in the search. In this way, the times of the consciousness intersect in the present instant. The consciousness both futurizes and remembers, but at the moment of impletion it works in the present.

In the case where one is searching for a memory, the act of the consciousness is not complete until the evoked object appears and "is made present." The completed action is registered as a relaxing of tension. When acts encounter their objects, free energy remains, which the consciousness uses for new tasks. The operations described are characteristic of the level of vigil, since in other levels (sleep, for example), the structure of time is different. Psychological time, then, depends on the psychism's level of work. In vigil, the working time of the coordinator is the present. From there, multiple temporal interplays of protentions and retentions can be carried out—which, however, always

intersect in the present moment. The effectiveness of mechanisms of reversibility and the present time are characteristics of vigil.

Attention, Presence, and Copresence

Attention is a capacity of the consciousness that makes it possible to observe both internal and external phenomena. Thus, when a stimulus exceeds a certain threshold, it awakens the interest of the consciousness and becomes situated in a central field of presence to which the attention is directed. The same thing occurs when the consciousness, following its own interests, directs itself toward a specific stimulus or datum. Whenever the attention is working there are objects that appear as central, and others that appear on the periphery in a copresent fashion. Attentional presence and copresence are given with both external as well as internal objects. Attending to an object makes an evident aspect present, while aspects that are non-evident operate in a copresent fashion. We “count on” those copresent aspects even when we are not attending to them. This is because the consciousness works with more than it needs to pay attention to; it goes beyond the observed object.

The consciousness directs acts toward objects, but there are also other copresent acts which are unrelated to the theme or object presently being attended to. The same thing is experienced in the different levels of consciousness. For example, in vigil reveries are copresent, and in dreams there can be eminently vigilic acts such as reasoning. Thus, presence is given in a field of co-presence. With knowledge, for example, the mass of copresent information matters when it comes to focusing on a specific theme. Knowledge is understood within this horizon of copresence; thus when the horizon of copresence expands so does the capacity to establish relationships. Presence and copresence together configure an individual’s image of the world. Aside from concepts and ideas, the consciousness also has copresent elements such as opinions, beliefs, and assumptions, which are not being thought about and to which it rarely pays attention. When this supporting substratum on which the consciousness is relying changes or collapses, it is the image of the world that changes or is transformed.

Abstraction and Association

The capacity of the consciousness for abstraction increases in the level of vigil. It diminishes in lower levels as the associative mechanisms grow stronger. Both the mechanisms of abstraction and association operate at the base of vigil. The consequence of the former is “ideation,” and of the latter, “imagination.” Ideation consists of the formulation of abstractions that we can define as “concepts.” These are reductions of objects to their essential character (for example, a triangular shape could be abstracted from an area of land and its geometric area calculated).

Conceptualization does not work with isolated elements but with ensembles of elements; and it is from these conceptualizations that classifications can be established (for example, one can make the abstraction “tree,” but it so happens that there are different types of trees, and hence classifications also appear in categories, classes, genera, etc.). Accordingly, thanks to the abstractive mechanisms of the consciousness, ideation occurs on the basis of conceptualizations and classifications.

Imagination arises through the work of the mechanisms of association: contrast (black-white); contiguity (bridge-river); and similitude (red-blood). Two types of imagination can be distinguished: discursive, and plastic or directed imagination. The former is characterized by free, unguided association in which images flow and impose themselves on the consciousness (in dreams and reveries, for example).

In plastic, or directed imagination, there is an interest in formalizing something that does not yet exist, and a certain operational freedom that allows for direction around a creative plan. Depending on whether the impulses that reach the consciousness involve the work of one or another of the aforementioned mechanisms (abstraction, classification, discursive, or directed imagination), different translations will be produced and formalized in multiple representations.

Levels of Consciousness

The consciousness can find itself submerged, not only in deep sleep, semi-sleep, or vigil, but also in intermediate or transitional moments. There are gradations between the levels of consciousness, not sharp divisions. To speak of levels is to speak of different operations and the register of those operations. It is thanks to this register of operations that distinctions can be made between different levels of consciousness; one cannot have a register of the levels as if they were empty ambits.

Characteristics of the Levels

It can be said that the different levels of consciousness fulfill the function of structurally compensating the world (understanding by “world” the mass of perceptions, representations, etc. that originate in the stimuli from the external and internal environments). It is not, then, simply that the consciousness gives responses, but rather that they are compensatory structural responses. These are compensations given in order to reestablish equilibrium in the unstable relationship that is consciousness-world or psychism-environment. When there is free energy left over from the work of the vegetative function the levels ascend because they are receiving energy to fuel them.

Deep Sleep

In the level of deep sleep, the work of the external senses is minimal; there is no information from the external environment except that which exceeds the threshold imposed by sleep itself. Here the work of the cenesthetic sense predominates, supplying impulses that are translated and transformed by the work of the associative mechanisms, resulting in the emergence of oneiric images. The substantive characteristic of the images in this level is their great suggestive power. Psychological time and space are modified with respect to their characteristics in vigil, and frequently there is a lack of correspondence between the elements of the act-object structure. Similarly, emotional "climates" and images tend to become independent of one another. The disappearance of critical and self-critical mechanisms is characteristic of deep sleep. As the level of consciousness rises, the operation of these mechanisms gradually increases. The inertia of the levels and the formal ambit they establish cause the movement or passage from one level to another to occur gradually (thus, both the exit from and entrance into sleep take place after passing through semi-sleep). As in the other levels, the tone can vary from an active state to a passive one, and there can also be states of alteration. In passive sleep there is an absence of images, whereas this is not the case in active sleep.

Semi-Sleep

In the level of semi-sleep, which precedes vigil, the external senses begin to send information to the consciousness—information that is not fully structured because of interference arising from the presence of reveries and internal sensations. Even though the contents of sleep continue to appear, they lose their power of suggestion due to new parameters provided by semi-vigilic perceptions. Nonetheless, suggestibility continues to act, especially in the case of so called "hypnagogic" images which are very vivid and have great power. Moreover, the system of habitual reveries—which can diminish in vigil and disappear in sleep—reappears here. In this level the reverie nucleus and secondary reveries are most easily registered, at least insofar as their basic climates and tensions. The mode of reverie proper to this level tends to be transferred by inertia to vigil, where it provides the raw material for divagation—though elements from vigilic perception also appear there. In this ambit the coordinator can carry out some operations, but we note that the level is extremely unstable and therefore easily becomes disequilibrated and altered.

We also encounter states of passive and active semi-sleep. The former offers direct passage to sleep, the latter, to vigil. It is worth making another distinction: there is an active semi-sleep due to alteration, and another that is calmer and more attentive. Altered semi-sleep underlies the tensions and climates which, persistently and forcefully reaching vigil, give rise to "noise," modifying behavior and rendering it inappropriate for the surrounding situation. Vigilic tensions and climates can be traced in altered active semi-

sleep. The different states—active and passive—are given by the energetic intensity and tone proper to each level. The tone gives the degree of intensity that both emotional climates and tensions can have.

Vigil

In the level of vigil, the internal senses are inhibited and there is a greater flow of information from the external senses. This enables the coordinator to orient the psychism toward the world in its work of compensating the environment. Here the mechanisms of abstraction, criticism, and self-criticism function, manifesting and intervening to a high degree in the tasks of coordination and register. The mechanisms of reversibility, which manifest only minimally in the previous levels, operate fully here, allowing the coordinator to balance the internal and external environments. The suggestive nature of the vigilic contents decreases as the points of reference increase.

Active vigil can have an attentive tone, with maximum control of apperception. There can also be an altered tone in active vigil, in which silent divagation and more-or-less fixed reveries appear.

Relationship Between Levels

In general, the interaction of levels produces reciprocal alterations. Four factors that affect these relationships should be noted: inertia, noise, the “rebound” effect, and “dragging.”

Inertia

Each level of consciousness tends to conserve its own level of work, maintaining some activity even after the conclusion of its cycle. As a result, the passage from one level to another occurs gradually, with the first level diminishing as the new level manifests (for example, in the case of contents from semi-sleep that impose themselves in vigil). The cases described below all result from the inertia of a given level as it maintains and extends its characteristic type of articulation.

Noise

The inertia of the previous level appears in the work of the subsequent level as background noise. Contents from infra-vigil erupt, interfering in the work of vigil, and vice versa. We can also characterize as “noise” those emotional climates, tensions, and contents that do not correspond to the task of the coordinator at that moment. For example, if an intellectual task is being performed it is necessarily accompanied by a certain emotion (a liking for doing the task). There will also be the tension produced by the work itself, as well as contents appropriate to the operations underway. However, when there are other types of climates, or if the tensions do not correspond to the work itself, and if the contents tend toward the allegorical, it is clear that they will interfere in

the activity, introducing noise which will necessarily alter the coordination and consume available energy.

The Rebound Effect

This is a phenomenon that occurs when contents from one level break though the inertial defenses and are introduced into another level. Subsequently, contents proper to the invaded level appear in the level from which the invading contents originated.

Dragging

Contents, climates, and tones proper to one level are transferred to and remain in another level as “draggings.” This will be most important in the case of climates, tensions, or contents that have become fixed in the psychism and dragged over a long time and are found represented in the different levels of consciousness. Special consideration should be given to these factors because of the psychological importance they can have for the growing adaptation and evolution of the psychism.

Tones, Climates, Tensions, and Contents

Tone is defined in terms of energetic intensity. Operations in each level of consciousness can be carried out with greater or lesser intensity (with greater or lesser tone). There are experiences that can manifest with greater or lesser intensity depending on the predominant tone, and they can at times become altered by that tone and be turned into factors of noise.

Climates are variable moods that appear intermittently and can envelop the consciousness for a certain period of time, coloring all of the coordinator’s activities. At times climates correspond to the operations being carried out, and concomitantly accompany the coordinator without perturbing it, in which case they in fact facilitate its work. But when they do not correspond, they act as sources of noise which can become fixed in the psychism, perturbing the entire structure, and impeding the mobility of and ease with which those climates can be displaced by more opportune ones. Fixed climates circulate through the various levels, and in this way can pass from vigil to sleep, persist there, and then return to vigil—and they can do this over a long period of time, reducing the coordinator’s operational freedom. Another type of climate is situational; these arise and hinder appropriate responses in a particular situation.

Tensions have a more physical, more corporal root because they involve the muscular system, and it is in this musculature that tensions are registered most directly. The link with the psychism is not always direct, as muscular relaxation is not always directly accompanied by mental relaxation; instead, the consciousness can continue with tensions and alteration while the body has already managed to relax. This difference

between psychic and physical tensions allows for more precise operational distinctions. Psychic tensions are linked to excessive expectations, in which the psychism is led on a search, a “waiting for something” that produces powerful tensions.

Mental contents appear as formal objects of consciousness. They are compensatory forms that the consciousness organizes in order to respond to the world. This is how a correspondence does, or does not, emerge between the activities or needs of the psychism and the contents that appear in the coordinator. If one is performing a mathematical operation, the appearance of numerical representations is appropriate, but an allegorical figure would be inappropriate and would act as noise and a focus of distraction. Aside from hampering the work being carried out at the time, all factors of noise tend to provoke disorientation and the dispersion of energy. As long as the contents of consciousness are acting within the level of their formation, they have important meanings for the coordinator, but on leaving their characteristic formal level they hinder the tasks of coordination.

The registers of calm states in vigil are also of great utility since they are able to reestablish the normal flow of consciousness. In the case of climates that become fixed, there is a set of operations to transfer these climates from their corresponding images to others of less importance for the consciousness. In this way, climates can begin to lose their fixedness, reducing vigilic perturbation. In synthesis: the four types of experiences described above are favorable factors if they are properly adapted to the coordinator’s operations. However, when they are inappropriate because they do not correspond to such operations, they become factors of noise and distraction and alter the psychism.

Errors of the Coordinator

A distinction must be made between errors of the consciousness itself and errors in the relationships between consciousness, senses, and memory. We generically designate the latter as “dysfunctions.”

Hallucination is the characteristic error of the coordinator. It occurs when phenomena that have not arrived directly via the senses are experienced with all the characteristics of sensory perception, as if they were taking place in the external world. We are dealing here with configurations that the consciousness makes on the basis of memory. Such hallucinations can arise during moments of extreme exhaustion; due to a deficiency of substances necessary for cerebral metabolism: anoxia or lack of stimuli (as in situations of sensory deprivation); through the action of drugs; during delirium tremens (characteristic of alcoholism); and in life-threatening situations. Hallucinations are frequent in cases of physical debility and of “emotional consciousness,” in which the coordinator loses its ability to displace itself in time.

As examples of sensory dysfunction, we could note the inability to relate data coming from different sensory paths (cases of what is known as “eidetic disintegration”). Dysfunctions of the memory are registered as forgetfulness and blockage.

Integrated Circuit Between Senses, Memory, and Coordinator

The connections between senses, memory, and consciousness reveal important aspects of how the psychism functions. These connective circuits operate in complex self-regulation. For example, evocation is inhibited when the coordinator is engaged in the apperception of a perception. Inversely, the apperception of a memory inhibits perception. While the external senses are acting, the entrance of internal stimuli is inhibited, and vice versa. The greatest inter-regulation occurs during changes in the level of work, when, for example, as sleep increases (and vigil diminishes), mechanisms of reversibility are blocked, and the associative mechanisms are let loose. On the other hand, when vigil increases and the critical mechanisms begin their work, they inhibit the associative mechanisms. There is also automatic inter-regulation between the senses: when sight expands its normal threshold, then touch, smell, and hearing decrease; and the same relationship holds for all the senses (e.g., people tend to close their eyes to hear better).

Impulses[3]

Impulses from the senses and the memory that reach the coordinator are transformed into representations. These structures of perception and evocation are then processed in order to elaborate effective responses in the work of achieving equilibrium between the internal and external environments. So, for example, while a reverie is an elaboration-response to the internal environment, a motor displacement is a movement-response to the external environment; or in the case of representations, ideation taken to the level of signs yields another type of representation-response to the external environment.

Moreover, any representation that is placed in the coordinator’s field of presence triggers associative chains between the represented object and its copresence. So, while the object is captured with detailed precision in the field of presence, in the field of copresence there appear relationships with other objects which are not present but which are linked to it. We note the importance that the fields of presence and copresence have in the translation of impulses, as in the case of allegorical translations in which much of the raw material comes from data that have reached vigilic copresence.

A study of impulses is important because of the particular work that the coordinator carries out with representations. There are two possible pathways: the abstractive path, which operates by reducing phenomenal multiplicity to its essential characteristics; and the

associative path, which structures representations based on similitude, contiguity, and contrast.

It is on the basis of these pathways of abstraction and association that forms are structured. These forms are connections between the consciousness, which constitutes them, and the phenomena of the objectal world to which they are referred.

The Morphology of Impulses

At this level of our exposition, we understand “forms” as phenomena of perception or representation. The morphology of impulses studies forms as structures that are translated and transformed by the psychophysical apparatus in its work of responding to stimuli.

From the same object, different forms can be obtained depending on which channels of sensation are used, the perspective from which the object is perceived, and the type of structuring that the consciousness carries out. Each of the different levels of consciousness establishes its own formal ambit. Each level proceeds as a structure of its characteristic ambit, linked to forms that are also characteristic. The forms that emerge in the consciousness are real structuring compensations in response to the stimulus. The form is the object of the act of structuring compensation. The stimulus is converted into a form when the consciousness structures the stimulus according to its level of work. Thus, the same stimulus can be translated into different forms depending on the structuring responses of the different levels of consciousness. The different levels of consciousness fulfill the function of structurally compensating the world.

Color has great psychological importance, but even when it is helpful in considering forms it does not modify their essence. To comprehend the origin and meaning of forms, it is necessary to distinguish between sensation, perception, and representation.

Functions of Internal Representation

1. To fix a perception as memory.
2. To transform what is perceived in accordance with the needs of the consciousness.
3. To translate internal impulses into perceptible levels.

Functions of External Representation

1. To abstract the essential so as to give order (symbol).
2. To express abstractions as conventions in order to be able to operate in the world (sign).
3. To make what is abstract concrete in order to remember it (allegory).

Characteristics of Signs, Allegories, and Symbols

Signs are conventional, operative, associative, sometimes figurative, and sometimes non-figurative. Allegories are centrifugal, multiplicative, associative, epochal, and figurative. Symbols are centripetal, synthetic, non-associative, non-epochal, and non-figurative.

Symbolics

The Symbol as Visual Act

The symbol in space and as visual perception leads us to reflect on the movement of the eye. Viewing a point that is without references allows the eye to move in any direction. A horizontal line leads the eye effortlessly along its length. A vertical line provokes tension, fatigue, and drowsiness.

Understanding the symbol (initially as a visual configuration and movement) allows us to seriously consider the action that it carries out from the external world upon the psychism (when the symbol is derived from a perceived cultural object). It also makes it possible to investigate the work of representation (when the image is expressed as a symbol in an internal personal production or projected in an external cultural production).

The Symbol as Result of the Transformation of the Perceived Object

The compensatory function of the symbol arises here as a reference and a creator of order in space. The symbol contributes to fixing the center in an open field and to arresting time. Symbolic monuments provide peoples with psychological and political cohesion. There is also a type of symbol that corresponds to non-collective productions, in which we can observe the compensatory function of the consciousness in facing the data of reality.

The Symbol as Translation of Internal Impulses

In general, symbolism in dreams and artistic productions is the correlate of cenesthetic impulses translated to the level of visual representation. Certain gestures, known in the East as “mudras,” are another example of the symbolic manifestation of the translation of internal impulses. Certain general body postures and their meanings are familiar to people the world over and correspond to distinctions made in relation to the symbols of the point and the circle (for example, an upright body with open arms symbolically expresses mental situations that are the opposite of those associated with the body’s position when closed in on itself, as in the fetal position).

Signics

Signs fulfill the function of expressing abstractions as conventions for the purpose of operating in the world. They unify in a single level of language phenomena of different natures. In a sign, expression and meaning are one structure. When the meaning of an expression is unknown the sign loses operative value. Equivocal or multivocal expressions are those that allow various meanings, and it is their context that allows them to be understood. The context makes the level of language uniform. But these contexts are usually placed outside the ambit of a given level of language, giving rise to syncategorematic or situational expressions. For example, in the situation of hearing a knock at the door, upon being asked, “Who is it?” different visitors may all give the same answer: “It’s me”—and in each case “who it is” is understood thanks to the voice, the time of day, the visitor’s expected arrival, etc. In other words, understanding comes from contexts that are outside the level of language, in which the response is always the same: “me.” As for the sign per se, it may be the expression of a meaning, or it may fulfill the function of indicating another entity through its associative character.

Differences Between Signs and Signic Categories

The connectives between signs are formalizations of relationships, which in turn are signs. Signs often become seen as symbols when they lose their meanings in transit from one culture to another.

The Signic Function of Symbols and Allegories

When a symbol is given a conventional value and taken in an operational sense it becomes converted into a sign. Allegories can also function as signs.

Allegorics

Allegories are plastically transformed narratives in which the diverse is made fixed or there is multiplication by allusion, but also in which the abstract is made concrete. The multiplicative character of an allegory is related to the associative process of the consciousness.

The Associative Laws of the Allegorical

Searching for something similar to a given object, the consciousness is guided by *similitude.* It is guided by *contiguity* when it searches for what belongs to the object, or what is, was, or will be in contact with the object. It is guided by *contrast* when searching for what is opposed to or in dialectical relationship with a given object.

The Situational Quality of the Allegorical

The allegory is dynamic and articulates situations of the individual mind (dreams, stories, art, pathology, mysticism) and also of the collective psychism (stories, art, folklore, myths, and religions), as well as the human being's confrontation, in different eras, with nature and history.

Functions and Types of Allegories

An allegory expresses situations in a way that compensates for the difficulties of encompassing all the various factors. Capturing situations allegorically makes it possible to act on real situations in an indirect way.

The "Climate" of the Allegory and the System of Ideation

The emotional factor in the allegory is not dependent on the representation. The climate is part of the system of ideation, and it is what reveals the meaning of the allegory to the consciousness. The allegory does not respect either linear time or the structure of space in the state of vigil.

The System of Tensions and the Allegory as Discharge

Laughter, crying, the sexual act, and aggressive confrontation are all ways of discharging internal tensions. Allegories of a certain type also fulfill the function of provoking such discharges.

Composition of the Allegory

Containers (guard, protect, or enclose what is inside of them); *contents* (things included within an ambit); *connectives* (entities that facilitate or impede the connection between contents, between ambits, or between ambits and contents); *attributes* (manifest when highlighted, and tacit when concealed). Allegories feature *levels* (importance, hierarchies); *textures* (quality, and the meaning of an object's quality); and *moments of process* (age). Allegories present themselves to the consciousness with an enormous and dynamic capacity for transformation, inversion, expansion, or reduction.

In order to carry out a complete interpretation of an allegorical system it is useful to follow a plan of work that begins by separating the symbolic and signic components. Subsequently, one must try to comprehend the function fulfilled by each of the elements under consideration, as well as the origin of the allegorical raw material (whether cultural objects or a mix of memories, reveries, or oneiric images).

Behavior

We have been considering the psychism as the coordinator of relationships between different environments—the body's internal environment, and the external environment or surroundings. From both environments the psychism obtains information through the senses, stores experience through the memory and makes adjustments through the centers. We call this continuous adjustment between environments "behavior," and consider it a specific case of expression by the psychism. Its basic mechanisms are the instincts of preservation of the individual and of the species, along with the intentional tendencies.

Behavior is structured on the basis of both the innate qualities proper to the biological structure to which the individual pertains, and on acquired qualities codified on the basis of trial-and-error experiences with their registers of pleasure or pain. The coordinator relies on the biological conditions set by these innate qualities, and it cannot be separated from them without damage. This biological base has an inertia which is expressed in the attainment and conservation of conditions suitable to its expansion.

Acquired qualities arise from individual learning that occurs as the psychophysical structure moves through space and time. Learning modifies behavior in relation to experiences of success and failure. The lessons that result from these attempts improve the individual's adaptation, which is achieved when there is the minimum resistance from the environment—the least amount of work and the least expenditure of energy. This form of adaptation is what makes possible an energetic surplus (free energy) that can be used in further steps of growing adaptation.

In every process of adaptation, the psychophysical structure orients itself by indicators of pleasure and pain. Pain is configured as a signal of something that endangers life, is toxic, repressive, or generally harmful to the psychophysical structure. Pleasure stimulates and motivates the psychism, delineating the optimal directions to follow. Moreover, behavior encounters limits in the possibilities of the psychism, the possibilities of the body, and the possibilities offered by different circumstances. The psychism's limitations can be reduced on the basis of acquired qualities, but corporal limitations cannot be reduced to the same extent, and in fact these limitations increase with age. This does not mean that the body lacks the faculties necessary for acting effectively in the environment; rather, that the body imposes limits and conditions that the psychism cannot disregard without endangering itself. In the relations between psychism, body, and environment, the body will perform its objectal operations with greater or lesser success. In the first case there will be adaptation, and in the second, non-adaptation.

The Centers as Specializations of Relational Responses

In the human structure, what was initially a simple stimulus-response mechanism reaches a high degree of complexity. Characteristic of this is the “deferred response,” which can be differentiated from the “reflex response” by the intervention of circuits of coordination and the possibility of channeling the response through different centers of neuro-endocrine activity.

The centers work in structure with each other and with their own registers, and also with the general register that the coordinator has based on the information received from the internal senses at the moment of acting in the environment, as well as the register from the interconnections between the centers and the coordinator.

Vegetative Center

On the basis of the body’s “plan”—its genetic code—every living being assimilates substances from the external environment and generates the psychophysical energy needed for the conservation and development of life. In the human being, the vegetative center distributes this energy, sending out instructions from its numerous nervous and glandular localizations. Thus, it is the foundational center of the psychism. And it is from this center that the instincts for the preservation of the individual and of the species act, regulating sleep, hunger, and sex. It is primarily signals registered cenesthetically that give instructions (information) to this center, but it can also be mobilized or inhibited by signals coming from the external senses.

Sexual Center

The sexual center is both the collector and distributor of energy. It functions by an alternating concentration and diffusion, mobilizing psychophysical energy in a localized or a diffused way. Its work is both voluntary and involuntary. Tension in this center and the distribution of energy to the other centers both produce cenesthetic registers. A reduction of tension is produced by discharges proper to this center, as well as by discharges through the other centers. It can also connect to tensions in the body and in the other centers. The sexual-vegetative structure is the phylogenetic base from which the other centers have become organized in the evolutionary process of adaptation.

Motor Center

The motor center acts as a regulator of the conditioned and unconditioned external reflexes as well as of the habits of movement. It enables the movement of the body in space. The motor center functions with muscular tensions and relaxations that are activated by nervous and chemical signals.

Emotional Center

The emotional center synthesizes and regulates situational responses through adhesion or rejection. Alterations in the synchronization of the other centers, due to partial blockages, are produced when this center's responses become overwhelming.

Intellectual Center

The intellectual center responds on the basis of mechanisms of abstraction, classification, and association. It works in selection or confusion over a range that extends from ideas to the different forms of imagination—directed or discursive. It elaborates different forms: symbolic, signic, and allegorical. When incorrect responses from this center overflow their ambit, they produce confusion in the rest of the structure, and therefore in behavior.

The Structural Nature of the Work of the Centers

The centers respond to the environment at speeds that are inversely proportional to the complexity of each center. Whereas intellectual responses are slow, the speeds at which the emotional and motor centers respond are faster, while the vegetative center (in some of its expressions such as the short reflex) demonstrate the greatest speed of response. The work of the centers is structural, which can be verified when the work of a primary center produces concomitances in the others. For example: intellectual activity is accompanied by an emotional tone ("a liking for studying") that helps maintain interest, while the level of motor activity is reduced to a minimum. During vegetative recuperation (because of illness, for example) all of the energy is occupied in this task, and the activities of the other centers are reduced to a minimum.

The work of the centers can be desynchronized, giving rise to errors in the response. There is a cenesthetic register and psychological perception of the structural work of the centers, and therefore, in experiences of great internal conflict the work of the centers is experienced as a contradiction between thought, feeling, and action.

Characterology

The task of establishing classifications of character is made very difficult given that people have so many tendencies, varied physical configurations, as well as great diversity in the actions with which they respond to the world. A study of this type would need to consider that the situations of individuals in the environment are dynamic and variable, and that throughout their lives they continue to gain experience and may suffer accidents capable of bringing about profound behavioral transformations.

Any possible "characterology" should attend to the combination of both the innate and the acquired. Innate dispositions (which are also susceptible to change) are reflected in more or less typical attitudes of the psychism and corporal forms. Moreover, these typical

properties will be the result of the work of one particular center, with its characteristic speed of response[T3] and direction of energy predominating over the others, though this could be subject to modifications depending on the structure of the situation.

In other words, a situational typology could also be established since different responses can be found in the same basic types. Adding the basic type to the cultural forms of the times, the social conditions, the nature of daily tasks, etc., together configures what we call “personality.”

The Cycles of the Psychism

Antecedents of the remarkably complex human psychism can be found in other organic forms that are conditioned by macrocycles of nature such as the seasons and the passage from day to night. The internal and external conditions of the psychism can be modified in numerous ways. There can be variations of temperature and luminosity as well as the climatic changes of each season. All organisms are, to a greater or lesser extent, influenced by natural cycles. The human being is not as conditioned by these as some other species, and the human psychism continues to change and to achieve a growing independence from these determinisms. A very clear case can be seen in human sexuality which, unlike that of other species, has become independent of seasonal cycles.

The mechanisms of consciousness possess different rhythms, as is demonstrated by the range of frequencies seen in the bioelectric discharges recorded in electroencephalograms. The centers each have their particular rhythm, and the levels of consciousness reveal their own cycles of work. When vigil completes its period of daily work, its activity begins to “lessen,” and one begins to enter the period of sleep. In this way, the period of sleep compensates the period of vigilic work. The metabolic cycles and general vegetative rhythms operate in the mechanisms of the different levels of consciousness.

The major cycle of the human being is given by vital time and is completed as the individual passes through the various existential stages: birth, childhood, adolescence, youth, first and second maturity,[T4] old age, extreme old age, and death. In each stage there is a transformation of the psychism that corresponds to the individual’s organic needs, their interests, the possibilities offered by the environment, etc. Finally,

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[T3] Translators’ note: The Spanish original has “velocidad de resonancia” which we have treated as a transcription error and rendered as “speed of response.”
[T4] Translators’ note: The Spanish original reads, “*segunda madurez*.” From the context, this would seem to refer to the stage of life between the ages of 40-60.

psychosomatic cycles and rhythms show significant modifications according to the changes of direction that take place as each vital stage develops and declines.

Responses to the World

In facing the world, the consciousness tends to compensate it structurally through a complex system of responses. Responses are expressed through the centers. Some reach the world of objects directly, while others remain in the consciousness and reach the world indirectly, manifesting through particular behaviors. These compensations by the consciousness tend to balance the internal environment with the external one. This connection is established by individuals, spurred on by the urgency of their needs as they respond to a complex world that is natural, human, social, cultural, technical, etc. The “reverie nucleus” arises as a significant compensatory response, and “secondary reveries” as specific responses to these demands.

While reveries can be visualized as images, this is not true of the reverie nucleus. As it is being configured, the nucleus is perceived as an allusive climate, and its power to direct the individual’s tendencies and personal aspirations continues to grow. In the stage where the reverie nucleus is wearing out, it ceases to direct the psychism. It is then that it becomes possible to observe the forms and images that it has utilized. For this reason, the nucleus is easier to register at the beginning and end of its process, but not during the middle stage when it directs psychic activity most strongly. This produces a paradox in which human beings are unable to perceive that which most strongly determines their behavior: the nucleus as that background which responds, in an all-encompassing way, to the multiple demands of daily life.

The aspirations, ideals, and illusions governed by the reverie nucleus change with each vital stage. With these changes or variations in the nucleus, the individual’s existence is oriented in new directions, producing concomitant changes in personality. Just as the nucleus wears out in the individual, so too do epochal reveries that have directed the activities of a whole society.

While on one hand the nucleus gives an overall response to the demands of the environment, on the other it also compensates the basic deficiencies and shortcomings of the personality, imprinting a certain direction on behavior. This direction can be evaluated according to whether or not it is in line with growing adaptation. Reveries and the reverie nucleus imprint the consciousness with their suggestive nature, producing the characteristic blockages of criticism and self-criticism proper to the infra-vigilic levels. For this reason, any direct confrontation with or opposition to the suggestions of the reverie nucleus is useless and simply ends up reinforcing its compulsive urgings.

The possibility of producing a change of direction in an evolutionary line lies in making gradual modifications. The reverie nucleus can regress, or it can become fixed. In the former, the psychism returns to earlier stages, increasing the discord between the individual's vital process and their situation in the environment. In the latter, when the nucleus becomes fixed, the individual becomes progressively disconnected from their environment, resulting in behavior that does not correspond to the dynamic of events.

The reverie nucleus propels the human being in pursuit of mirages which, when they are not reached, produce painful states (dis-illusions), while their partial fulfillment produces pleasurable situations. Thus, we discover that reveries and their nucleus lie at the root of psychological suffering. It is in the great failures, when expectations collapse and mirages fade, that the possibility arises for a new direction in life. In this situation the biographical knot is revealed, that "knot of pain" with which the consciousness has suffered for so long.

Personality

The personality, as mediator with the environment, is organized by the systems of responses (there are no isolated responses). To improve its dynamic, it articulates different roles as codified systems of responses.

The personality fulfills a precise function: it searches for the paths of least resistance in the environment. This organization of roles that offers the fewest difficulties in relationship with the environment is codified on the basis of trial-and-error learning. This accumulation of experience organizes a system of roles linked to various situations, in which certain roles appear while others are hidden. This is a very clear illustration of an adaptive system. Over time what might be called "circles of personality" become organized in strata at different depths. These circles are articulated in accordance with signals from reveries and the habitual environments.

In this interplay of roles that attempt to present the least resistance to the environment, they may or may not conform to a conventionally accepted consensus and thus give rise to responses that are typical or atypical, respectively. Typical responses are codified not only by individuals, but also by broader social groups, in such a way that when a response appears in a group that is different from the usual, it can be disconcerting. This happens especially in new situations for which there is no codified response. The responses given in such cases may prove appropriate or inappropriate. In the case of atypical responses that do not fit the situation, it is possible to evaluate the degree to which they are inadequate.

While typical responses may be appropriate in a relatively unchanging environment, they may not be appropriate in a changing environment whose dynamic modifies customs,

values, etc. In this way, responses that are typical can at times be an obstacle for adaptation to change.

There are other atypical manifestations that act as a catharsis of tensions or, by manifesting negative emotions, in the form of a catharsis of climates. Both of these atypical responses arise as a result of pressure from internal impulses expressed in situations to which they do not necessarily correspond. In such cases, tensions and climates act as situational noise that abruptly irrupts into the environment.

From the point of view of growing adaptation, the types of behavior that are of interest are those that offer multiple options of response and thus enable a saving of energy that can then be used in new steps of adaptation. In this way, there can be responses of growing adaptation, but also of decreasing adaptation, and this will be the case in both atypical and typical responses with their differing degrees of appropriateness. Thus, any particular behavior, whether atypical or typical, may fulfill an adaptive function.

We can evaluate changes in behavior as either significant or circumstantial. A change will be significant if the new orientation goes in an evolutionary direction. It will be circumstantial if there is merely a replacement of roles, of ideology, an expansion of the circles of personality, a peak or decline in reveries, etc. None of these is indicative of important internal changes. From a more general point of view, there is a significant change of behavior when a psychic instance has run its course because the contents that were acting in one moment (with their characteristic themes and argumentation) continue to wear out until finally they are exhausted. Then the psychism, in its relation to the world, articulates a response, and orients itself to a new moment.

Behavior is an indicator of those changes that interest us. Many decisions or plans to change remain enclosed in the psychism and hence are not indicators of change. However, when they are expressed in real behavioral changes, it is because there has been a modification in the structure “consciousness-world.”

Appendix: Physiological Bases of the Psychism

Senses

The senses are the limits of the neuroendocrine system and are capable of sending information signals regarding the external and internal environment to the centers of processing, coordination, and response. The specialization of the information is carried out by cells (or teams of cells) that convert environmental energy and transform heterogeneous impulses coming from the outside into homogeneous impulses, common to any of the senses. Various forms of energy reach these receptors: Mechanical energy (as pressure or contact); electromagnetic energy (as light or heat); chemical energy (as with smell, taste, or the oxygen-carbon dioxide content of the blood). These heterogeneous forms of energy undergo an initial stage of processing in the sensory receptors, where they are converted into a nervous impulse that reaches the information centers as “bits” (signals), differing from each other in their frequency. Receptor cells are numerous in their types and in their activities of transformation. Around 30 different types have been identified up to now and, structured in their own particular way, they give rise to what we call “senses.”

The range and types of energy in the environment, however, are far more numerous than the number of senses capable of detecting them, as in the case of sight, which accepts and recognizes as visible light only 1/70th of the electromagnetic spectrum. This case illustrates how the receptors are specializations that allow for only a restricted detection of phenomena, and as a result enormous zones of silence are produced for the perceptual apparatus. We can acknowledge six additional cases here (hearing, smell, taste, touch, kinesthesia, and cenesthesia) which, if we add up the limitations of each sense, result in an enormous range of perceptual silence.

Regarding the receptors, it is important to consider their distance from whatever is the source of emissions (e.g., telereception, exteroception, interoception, etc.); their distribution in the body; the sensory pathways through which the homogeneous impulses travel; and the processing and coordination centers to which these homogeneous impulses arrive.

At that point the impulses become differentiated once again, resulting in “informative experiences” which allow the apparatus to make perceptual distinctions, in order to later work with structures of interpretation and response appropriate to the “portion” of world detected. We call the particular form of energy to which a receptor is most sensitive its “perceptible range.” For example: the appropriate stimulus for the eye’s receptor cells is light; pressure is specifically captured by another type of receptor, but pressure on the eyeball will also stimulate the light receptors. This means that there are specific and non-

specific ranges for each type of receptor which, under certain conditions, can expand or contract their thresholds to a considerable degree. It is also necessary to make a distinction between range (which refers to the quality of the phenomenon), and thresholds (which refers to the quantity or intensity of the phenomenon). These thresholds work with levels of minimum detectability and variables of maximum tolerance.

Each sense has been organized taking the following into account:

1. Organ: Includes a minimal anatomic-physiological description of the organ, or receptors, as the case may be.

2. Operation: Describes in a simplified way the receptor's possible modes of operation as it transforms energy from the environment into a nervous impulse.

3. Nervous Pathway and Localization: Briefly indicates the path the impulses follow to their destination in the corresponding area of the cortex.

The above is valid for the external senses. Due to the particularities presented by the internal senses (kinesthesia and cenesthesia), there will be minor variations in the form of the explanations.

Sight

Organ: The eyes are complex, light-sensitive organs. Their location enables human beings a three-dimensional vision of objects. This three-dimensional vision is of course integrated into a system of perceptual interpretation that is considerably more complex than the organ itself. Equipped with rectus and oblique muscles, the amplitude of the eye's movement is less than 180 degrees. For a long time, the eye has been allegorically described as a photographic camera: a system of "lenses" (cornea and lens) focuses the images on a photosensitive layer (retina) located in the back of the eye; the eyelids and iris contribute to protecting the system and to regulating (as in a diaphragm in the latter case) the amount of light received by the receptors.

Operation: It is understood that the retina is a thin film made up of several layers of nerve cells. Light passes through them until it reaches the photoreceptors. These have been grouped into two main types: (a) thick bodies or "cones" that are concentrated above all in the center of the retina (fovea), providing information on color, and working best in full light; and (b) thin bodies, called "rods," most of which are concentrated in the periphery of the retina. These are more numerous than the cones and are sensitive to low light, providing information on the interplay of light and shadow as well. Both cones and rods contain pigments which become altered in their molecular structure when absorbing different types of light. This alteration is related to the nervous impulse that is sent to the brain.

Nervous Pathway and Localization: Once the external impulse has been transformed into a nervous impulse, it travels through the optic nerve and, after intermediary stages, to the occipital cortex of both hemispheres of the brain.

Hearing

Organ: Sound waves travel through the external ear canal and strike the tympanic membrane, which retransmits the vibrations to the three ossicles located in the middle ear. These ossicles act like levers and amplify the received vibrations ten to fifteen times, and then retransmit them to the fluid of the cochlea (inner ear), where they are converted into nervous impulses.

Operation: The cochlea ("snail shell") is divided internally lengthwise by two membranes, forming three tunnels or chambers that contain different liquids. The vibrations transmitted by the ossicles as pressures of varying intensity provoke diverse flexions in these membranes, which activate the receptor cells (hair cells) located over one of the membranes (the basilar). This activation appears to be what produces the differences of electrical potential and the stimulation of the nerve endings that carry the impulses to the cerebral localization of hearing.

Nerve Pathway and Localization: The endings of the nerve fibers distributed in the basilar membrane form the auditory branch of the acoustic nerve which carries the nervous impulses to the upper part of the temporal lobe, after passing through intermediary stages that include the medulla oblongata and thalamus.

Smell

Organ: The olfactory membrane, with a surface area of about five square centimeters, is located in the upper part of the nasal cavity. Odor-producing molecules are carried in the air and enter through the nostrils or the pharynx. There, they dissolve in the secretions of the membrane's supporting cells. Ten to twenty million receptors are distributed among these cells, and each one of them is a neuron.

Operation: The receptor neurons terminate on the surface of the mucous membrane, with expanded ends (olfactory rods) from which extend cilia that are about two microns in length. How odorant molecules react with the receptors is unknown, though there are many hypotheses on the matter. The nervous impulse that is generated is transmitted by the receptors that terminate in the olfactory bulb, located above each nostril.

Nervous Pathway and Localization: In each olfactory bulb, the neuronal endings form glomeruli, from which three nervous fiber tracts originate, ending respectively in the opposite olfactory bulb, in the limbic system, and in the olfactory area of the limbic cortex (allocortex).

Taste

Organ: The taste organs, or taste buds, are tiny structures formed by supporting cells and cilia (receptors). They are concentrated above all in the walls of the papillae on the dorsal surface of the tongue.

Operation: The taste receptors (cilia) are chemoreceptors that respond to substances dissolved in the liquids of the mouth. How the molecules in solution interact with the receptor molecules to produce the nervous impulse is unknown, although there are some hypotheses. There are four gustatory sensations registered in different areas of the tongue: salty and sweet on the tip; sour at the edges, and bitter at the back. The taste buds in each of these areas do not appear to be different in terms of cellular structure, but some of them, depending on the area in which they are found, will only respond to bitter stimuli, others only to salty, and so on.

Nervous Pathway and Localization: Nervous impulses start at the taste buds and travel along three nervous pathways that go through the medulla oblongata and the thalamus, reaching the gustatory projection area of the cerebral cortex at the base of the post-Rolandic gyrus.

Touch

Organ: These sense receptors are distributed throughout different layers of the skin. They are more highly concentrated in certain areas of the body and less so in others, thus producing different degrees of sensitivity. These receptors are specialized nerves which differ in their ability to distinguish variations in temperature, pressure, contact, and pain.

Operation: Variations in the stimuli are accompanied by variations in the frequency of the nervous impulses sent continually by the receptors through the nerve fibers. This variation in impulse frequency is the result of a little-understood electrochemical process set in motion by the stimulus.

Nervous Pathway and Localization: The fibers coming from the receptors ascend through the tracts of the medulla to the thalamus, and from there to the somatosensory cortex (post-Rolandic gyrus).

Kinesthesia

Organ: The kinesthetic sense detects body postures and movements via specialized receptors which discriminate between variations in muscle tone (muscle spindles); joint position (joint corpuscles); tendon stress; and linear and angular acceleration of the head and body, including phenomena produced by gravity (receptors lodged in the semicircular canals, saccule, and utricle of the inner ear).

Operation: When movement occurs or is suppressed, the receptors (proprioceptors) register variations in their tone. By means of an electrochemical system that remains obscure, they convert the primary stimulus into a variation of impulses that are transmitted as information.

Nervous Pathway and Localization: The sensory nerves transmit impulses via the spinal cord to the cerebellum and cortex; some nervous branches lead to the sensory layer, and others to the motor area of the cerebral cortex.

Cenesthesia

Operation: Certain variations in the internal environment are detected by a set of nervous receptors called “interoceptors.” The psychic information that they provide is normally registered in a distorted way (deformation and translation of impulses). These tiny organs (receptors) are related to points of automatic vegetative coordination (hypothalamus, thalamus, and medulla oblongata). Basically, they intervene in respiratory, cardiovascular, and temperature adjustments, as well as inciting the body in general to satisfy its needs through translations of “hunger” (arteriovenous difference in blood sugar), “thirst” (osmotic pressure of plasma), and “pain.” Visceral pain, such as deep somatic pain, initiates the reflex contraction of nearby skeletal muscles, and these contractions in turn generate pain, creating a vicious circle. Moreover, the excitation of viscera frequently produces pain, not in itself but in some other structure that may be located some distance away from it. This “referred” pain has numerous variants or forms of irradiation. Variations in sexual economy are also registered cenesthetically.

Nervous Pathway and Localization: The sensory nerve fibers reach the central nervous system through the sympathetic and parasympathetic pathways. The cortical reception area encompasses almost the entire archicortex (limbic cortex) and part of the paleocortex, maintaining specialized connections with other areas. The theory of convergence attempts to explain the case of “referred pain” mentioned above. It maintains that there is a convergence of visceral and somatic afferent fibers that act upon the same spino-thalamic neurons. Since somatic pain is more common and has “recorded” the referenced pathway, the impulses coming from visceral areas are “projected” over somatic areas. In synthesis, it would be an error of signal interpretation.

Memory

Physiological research has made important advances in the field of memory, but the experiments are not yet fully interconnected (as of 1975). Therefore, a satisfactory overview cannot be presented to accompany the psychological explanations. The results obtained through electroencephalography (EEG) are significant, as are those obtained through the application of electrodes to the brain, observations of the hippocampus, and

studies of reflexes. But the nature of stable reminiscence itself is still not known. Advances in the field of genetics have been greater. With the discovery of the role of DNA, research is currently being carried out into certain basic amino acids that participate in the phenomenon of genetic memory.

In broad terms, and from the current state of research, we can establish a classification of memory: hereditary or genetic memory (through the transmission of the characteristics of the same species from progenitors to descendants), and individual or acquired memory. In the first kind, besides maintaining individuals within the same species, the genetic code regulates organic changes in the different life stages of the individual. Acquired memory, on the other hand, has layers of depth, from the oldest to the more recent and the immediate, according to the passage of time. Much more cannot be added, except that it does not have a precise localization in the brain.

Range. The recording range is identical to that of the senses (information is recorded when the sensory tone changes) and to that of the activity of the consciousness in its different levels. It is agreed that everything that reaches or is produced by the consciousness is memorized, although not everything can be evoked. In theory, the only case in which no recording would take place is deep, passive sleep (i.e., without images) with minimal cenesthesia.

Nervous localizations. It is accepted that there is no precise localization for the memory, but rather that it is spread throughout the entire nervous system. Memory traces are said to be located in “low” and “high” levels; the former referring to the medulla and limbic system, the latter, to the cortex in its association areas: frontal, temporal, and parietal-occipital. Stimulation of temporal areas allows us to infer that memories are not stored there, but rather that there are “keys” in this lobe that unlock memories located throughout the nervous system, normally working through a similarity between memory and sensory impulse, or current of thought. Moreover, the areas of language, vision, and writing would carry out specific recording on a par with their specific work. The indispensability of the cortex for memory and the importance of the hippocampus for recording have been experimentally verified. It is known that when one hemisphere is damaged (but where some traces remain), the other can regenerate memory, although not completely. So, it is assumed that the memory is diffuse and spread throughout the brain and brainstem.

Levels of Memory

There can be a level of genetic memory that depends on inherited information, as there is an acquired memory that depends on acquired information. This acquired memory has three levels according to the moment of recording and its duration: immediate, recent, and remote.

Inheritance has its biochemical basis in the cellular chromosomes that transmit genetic characteristics from progenitors to descendants, with 22 basic amino acids responsible for the “genetic code.” Immediate memory is susceptible to being easily lost, not so recent memory. Remote memory can persist through severe brain damage. In controlled experiments with electroencephalographs, it has been observed that the hippocampus is involved in recent memory, the hypothalamus in maintaining and retaining memory, and the hippocampus tissues of the temporal lobes in long-term memory. On the other hand, clinical therapy relates cases of amnesia such as anterograde amnesia (loss of ability to form new memories after a “shock”); retrograde (loss of memories formed before the “shock”); and the combination retro-anterograde (before, during, and after a shock). In any case, remote memory is difficult to affect, at least in its general outline. Memory is recovered gradually. At first, isolated images begin to be completed, until finally acts of recognition appear with permanence. The nature of the stable engram is totally unknown, but its resistance to electroshock and concussion leads to the presumption that at its base is a biochemical change in the cellular nucleus, in RNA. The use of drugs like caffeine, nicotine, and amphetamines to facilitate remembrance or recording, or drugs like puromycin to inhibit memory, implies chemical alteration. Finally, cerebral electrography reveals the electric waves of cellular work, and makes clear the phenomenon's electrochemical basis.

Mechanisms of Memory

Certain neuronal connections seem to explain the immediate and recent levels of memory through reverberation, the reinforcement of recording, lateral association, and forgetting. This is because the nerve fibers coming from the larger pyramidal cells radiate collaterals that feed back to the original dendrites with association neurons. The recurrent collaterals also connect with neighboring neurons that associate other information, and with an inhibitory one that returns to the original neuron. These deep fibers receive specific and non-specific thalamic fibers that terminate in the first and fourth layer of the cortex.

There are indications that the hippocampus participates in recent memory and memory encoding. It is possible that within it, “recollection” is distributed through the anatomical connections of the closed circuit which, along with the thalamus and amygdala, includes the frontal areas of the cortex. Information could reach here and follow a cortical distribution until it is finally stored, bearing in mind that the frontal lobe is mentioned as being important in tasks of abstraction as well as being related to emotional behavior. In this way, there would be a “re-collector,” “distributors,” and “storage” of information.

The thalamus, for its part, is connected with the reticular formation, through which pass the non-specific and specific (or classical) paths that carry information to be disseminated through the cortex. This would seem to be a direct sensory or memory circuit closely linked to the levels of work of the nervous system and might explain why memory is

recorded better in vigil. The dissemination that could take place through the thalamus (reticular activating system) would be an indirect path based in the limbic system that would give an emotional substratum to every mnemic activity. The hypothesis regarding the specific dissemination that might be carried out by the reticular substance would explain a distribution of stimuli that is highly varied. The interconnection between lobes could explain the possible combinations that occur (for example, frontal with occipital and temporal, and how touch and vision are related in the temporal lobe; and the phenomenon of stereognosis would be the basis for a kind of remembrance, as well as for the translation of impulses). A difficult point is the encoding and discrimination of data: is it that an image arrives to the memory, or is it formed there and then recorded? Questions such as these are currently difficult to answer. This “internal circuit” allows one to think and remember one’s own thoughts or remember images from dreams and reveries. The impulses could originate in the neocortex, for example, and through the transmission of axons (white matter), could relate to other cortical areas; or it could be that the thalamus and reticular substance might also be involved. As we will see further on (in considering levels of consciousness), the participation of the latter is fundamental to activate and maintain vigil, a level that is essential for complex learning.

Reversibility in Memory

While the reversibility of the mechanisms is not very clear, the need for the vigilic level is. In vigil, there is a synchronization between the broad range of external perception, and spontaneous and involuntary data from the memory (the former diminishes toward sleep, in which internal perception with impulse-transforming imagination increases). Thus, evocation can only occur in vigil. It could be assumed that data that reaches its point of storage provokes a memory at the same time that it is recorded. This would explain automatic recognition (i.e., to suddenly recognize, through progressive conditioning, habitual objects). Finally, evocation would work through “preferential paths,” that is, through those in which the trace gets formed.

Memory and Learning

It is known that for simple learning, all that is required is for the medulla to work. But in more complex cases the subcortex is involved, and for large areas of storage, the cortex. Learning is understood as conditioning, in the sense that under certain repetitive conditions, the animal or human being responds as it has been conditioned or taught. This is not so simple in human beings, due to their complex mechanisms of understanding and comprehension, but in any case, responding with something learned requires the reiteration of the mnemic trace. The process of memory and learning involve various cases, such as the decoding of signals in order to retain a concept; making associations with similar, contiguous, or contrasting images; repeating a simple motor reflex and associating it with others; and these forms all allow for numerous combinations. The basic

mechanism is to pair an unconditioned reflex (for example, hunger) with a conditioned stimulus (for example, light) in such a way that when it is paired with an artificial stimulus, a conditioned response is produced. What is important in this simple activity, which can be made more complex, is the duration or reiteration of the conditioning, and the fact that over-insistence can lead to saturation or blockage. We speak of “reflex discrimination” when the reflexes are directed toward something specific; “immediate reflex” when they are conditioned with a quick response; and “delayed reflex” when conditioned with a slow response.

Conditioning is known to be more effective when there is a reward, or the alternating of reward-punishment, pleasure-pain. There is an “avoidance reflex” that leads to the avoidance of unpleasant situations, and a state of alertness or vigilance that may be considered an “orienting reflex.” When conditioning is dedicated not only to responding but also to operating in the world, reference is made to the “operant response.” In general, habituation and contradictory stimuli weaken the reflex response. Originally it was thought that reflexes were based in the cortex, but then (through observations with electroencephalogram, or EEG) it was seen that what was active was the large base of subcortical, thalamic, and infra-thalamic structure. Experiences with electroencephalography have also shown how, in the presence of an unknown object, evoked secondary responses can be detected. Through this, along with evidence in the memory, it was possible to infer the constant, structuring activity of the consciousness.

The relation between learning and vigil is fundamental for complex recordings but varies in other respects. For example, a sudden memory can awaken someone who is sleeping, or a stimulus that would automatically be recognized in vigil may not be recognized in semi-sleep. Sudden sensory data can awaken the sleeper, but so can the disappearance of habitual stimuli, or the distinguishing of one particular stimulus among others. These variable relations have led to the idea of the existence of a possible information “analyzer” located within the ambit of the cortex, to make all the required distinctions. Such an “analyzer” would be an important factor in the coordination of the psychism.

Levels of Consciousness

The brain is the apparatus responsible for the dynamic of the levels. It carries out this work with various components. We highlight the most notable ones here:

Sensory pathway (classical). These are nerve tracts that ascend through the spinal cord carrying sensory impulses directly to the cortex. In their ascent, they branch off to the cerebellum and to the reticular formation (RF), which process and distribute this information within the subcortex before also sending it on to the cortex via the thalamus.

Brainstem. Connects the spinal cord (the collector of impulses from the whole organism) to the brain. In turn, it is connected to the cerebellum. It contains, at the anatomical level, the reticular formation, and at the functional level, the centers that regulate vegetative functions such as heartbeat, respiration, and digestion.

Reticular Formation. The reticular formation does not constitute an anatomical unit per se but is instead a mass of tissues formed by a fine network of fibers and neurons of structures that are very different from one another. These are located longitudinally in the center of the brainstem and in the midbrain. All the fibers coming from the senses pass through here and are connected by it to all the parts of the subcortex (via the hypothalamus) and cortex (via the thalamus). Within it, sensory information is analyzed and evaluated. Together with the other subcortical centers, it transmits “non-specific” (sensory) impulses that modify the reactivity of the cortex. What is of interest to us is that it appears to be the center of gravity for the alternating circuit of the levels of consciousness.

Hypothalamus. Located above the brainstem, the hypothalamus is a neuroendocrine nucleus, connected to the cortex by the thalamus and to the pituitary gland through numerous capillaries and nerve fibers. The pituitary and hypothalamus form a structure of neurohormonal inter-stimulation which integrates and coordinates various autonomic vegetative functions, in conjunction with the entire hormonal system. On its own, the hypothalamus coordinates information (especially cenesthetic information) between different zones of the brain.

Pituitary gland. This is an endocrine gland composed of an anterior lobe, an intermediate part (both made of glandular tissue), and a posterior lobe (made of nerve tissue), and each of these parts has different functions. The pituitary gland is stimulated and regulated by hypothalamic hormones. Through the hypothalamus (feedback) it is connected to the brain and the nervous system in general. In addition, it regulates and controls the entire hormonal system through the bloodstream (and more specifically, it stimulates the thyroid, gonads, and adrenal glands as well as functions such as growth, diuresis, and blood pressure, among others).

Thalamus. Transmitter of information from the subcortex to the cortex. Center of control and integration of impulses, and a relayer of tension.

Limbic system. An ancient system of nerve regions located in the subcortex in which emotional and vital functions are based, such as nutrition, the vegetative system in general, and the sexual system in part. This structure of emotional-vegetative functions explains psychosomatism. It includes the hypothalamus, among other important structures.

Cortex. The most external layer of the brain (2mm thick), or gray matter (neuronal cell bodies). It controls the limbic center, and sensation and movement in general (motor localization). It is also the base for “higher order or thinking functions” (intellectual) due to the many interrelated localizations of response control and coordination, which in turn are based on the retrieval of current and memorized sensory information.

The subcortex includes the limbic system, hypothalamus, thalamus, and midbrain. White matter refers to a mass of connective fibers (axons) between the subcortex and the cortex (gray matter).

Functioning of the Levels of Consciousness

The nervous system receives information about changes in the external and internal environments through the sense organs. It then makes adjustments through effector mechanisms of response which are expressed through the action of the centers, and which include changes in the secretion of hormones.

Through chains of neurons, the different sensory pathways carry impulses from the sense organs to particular sites of interpretation and coordination in the cerebral cortex. In addition to these systems of conduction, another entry system exists: the reticular formation (RF). The RF is the transmitter-modulator of impulses from all senses (it is a non-specific conductor) and is located in the central axis of the brainstem. This modulation of sensory impulses is related to our subject: levels of consciousness. The first evidence that the brain regulates the generation of sensory impulses or their transmission along specific pathways was the observation that stimulation of the RF inhibits transmission in various sensory nuclei and nervous pathways. This demonstrated the existence of brain mechanisms capable of increasing or decreasing the volume of sensory input through effects on their pathways or on the sense organs themselves. Additional effects on sensory input were observed in experiments where the RF was electrically stimulated and the adrenaline that was released lowered the receptor threshold and increased the capacity for nerve transmission (in the synapses), a mechanism which is also present in states of arousal or emergency.

At the same time, more complex experiments revealed a second function of the RF when it was observed that RF activity maintained the state of vigil, while its inhibition or destruction produced indicators of sleep and coma. Once it was determined that the RF regulated and modulated the input and distribution of sensory impulses in the brain, its central role in maintaining or inhibiting brain (cortical) activity, characteristic of the level of vigil, also became clear.

Finally, we can add to this a similar action carried out by the RF over the impulses of response that go from the brain toward the body. These impulses also pass through the

RF, which “facilitates” or “suppresses” them, according to the level of consciousness. In this way, how the RF participates in maintaining the inertia of each level becomes clearer, as does its role in producing the rebound of stimuli that would modify the level.

As a result, the RF appears to be the center of gravity for the regulation of the different levels of consciousness. These, in turn, correspond to the increasing degree of integration of the functions of the central nervous system that coordinate and regulate the sensory system, the autonomic system, and the other organ systems, together with the glandular system. These functions are found in the brain, represented by structures of growing complexity that go from primitive autonomic vegetative localizations, to the emotional limbic system, and finally to the intellectual in the cortex. Each fraction or level that is integrated corresponds to a new level of consciousness.

As we know, in principle these levels can be sleep, semi-sleep, and vigil. We can register the electrical activity that each one generates through electroencephalography, where they are referred to as “delta,” “theta,” “alpha,” and “beta” respectively, according to their intensity and amplitude. These states vary with age and are subject to daily cycles (depending to a large degree on light) as well as vegetative biorhythms.

In synthesis, according to sensory information about the environment, the internal state of the organism, and hormonal reinforcement, there will be different levels of activity and integration of: the reticular functions in the maintenance of a state of alert vigil; the functions of the limbic system-midbrain circuit involved in the maintenance of (homeostatic) vegetative equilibrium and the regulation of instinctive and emotional behavior; and finally the cortex, in charge of the so-called superior functions of the nervous system, such as learning and language.

Neurophysiologically, the levels of consciousness correspond to different levels of work of the central nervous system. These result from the integration of increasingly complex nervous functions that coordinate and regulate the peripheral and autonomic nervous systems, as well as the other organ systems in conjunction with the glandular system. In the dynamics of the levels of consciousness, this mediating factor of the amplitude of the work of the nervous system combines with an external factor given by the characteristics of the sensory impulses, and with a synthetic internal factor given by the “transmission capacity” of the nerves. The electrical activity of the brain (a reflection of its level of work) fluctuates between one cycle/second (delta state) in the case of sleep, up to an undetermined maximum frequency, considering in this case a functional limit of 30 cycles/second (beta state) which corresponds to active vigil.

Range of work. Each level of work (theta, delta, alpha, and beta states) corresponds to the predominance or greater presence of one type of frequency (wave) and micro-voltage over others. Finally, these levels are in general subject to typical daily cycles of sleep,

semi-sleep, and vigil. It is worth pointing out that with age, the dominant wave in the state of rest varies, accelerating until reaching the alpha pattern of an adult.

Afferent Pathways

A sensory stimulus generates impulses that reach the cortex through both the reticular formation and the sensory pathways. These impulses are processed slowly by the RF (due to its multiple synaptic relays), until they reach extensive areas of the cortex. Those that follow the sensory pathways are propagated with great speed (only two to four synapses) to the specific, primary areas of the cortex. The stimuli that produce awakening in the cortex (synchronizing stimuli) frequently produce hypersynchrony in the limbic system (specifically, the hippocampus). Needless to say, the diminishing of external sensory stimuli (darkness, silence) predisposes the level of sleep; systems of tensions and climates make sleep difficult (the presence of adrenaline, for example); and a low tone (tiredness, for example) induces sleep. In any case, the action of stimuli must be considered (from the point of view of the levels of consciousness) both quantitatively and qualitatively. In terms of the characteristics of the afferent sensory impulse, we would consider: its nature or specificity (receptor); frequency; duration; extent; and action potential. The sensory impulses that ascend through the specific pathways reach the RF in its ascending pathway, which modulates and regulates them according to the state of activity in which they are found. Moreover, general chemical information arrives through the bloodstream to the RF, as well as to the other nerve and glandular structures of the brain.

a) Sleep. When the RF is inhibited (concomitantly with a general, low vegetative tone, little neuronal transmission activity, and impulses of low intensity and/or quality), an inhibiting action is also produced on the structures of the brain, especially the cortex. In addition, the RF acts as a suppressor or inhibitor of ascending sensory impulses (and in some cases, of the sense organs themselves), resulting in a predominance of internal (cenesthetic) information over external information (from the environment).

Passive sleep. In this level the suppressing activity of the RF blocks cortical and limbic functions, and diminishes those of the other subcortical structures, reducing brain activity to its most primitive functions. This corresponds to a level of sleep without images, with a low-frequency, delta EEG pattern. In sum, this level includes the brainstem-limbic circuit in which impulses do not excite the cortex.

Active sleep. At regularly spaced intervals, the thalamic-cortical circuit is activated and joins the circuit above, producing short periods of sleep with dreams. These produce spikes of activity (de-synchronizations) in the delta waves and are recognized externally by rapid eye movements (REM).

b) Semi-sleep. This is an intermediate, graduated level in which the RF is active, disinhibiting the subcortical structures and gradually integrating the limbic system and cortex, an effect which is reinforced by the hypothalamic-cortical feedback that is established. At the same time, the RF unblocks the specific sensory pathways, producing an unstable equilibrium between external and internal information, and increasing the activity of the brain at the moment of passage or “awakening.” The EEG pattern is one of high frequency and low voltage and is called theta. All the brain structures have become integrated, but their level of activity is not complete, and nerve (synaptic) transmission capacity is still relative.

c) Vigil. The RF integrates and “facilitates” sensory and association impulses, maintaining a state of cortical excitement which predominates over subcortical functions, just as the impulses of the external senses predominate over the internal ones. Transmission capacity increases considerably. Although diminished, subcortical activity continues, and this in part explains the basis of numerous psychological phenomena such as reveries and the reverie nucleus.

Transformation of Impulses

The brain exhibits different levels, which we order as follows:

a) Center of gravity of the circuit: The reticular formation, which modulates and regulates the input of sensory and association impulses, cortical excitability, and efferent impulses of response, in a non-specific way.

b) Coordinator of stimuli: The cortex, which acts basically as the localization of motor and intellectual functions, and the subcortex, which acts as the localization of the vegetative (instinctive) and emotional (behavioral) functions. The cortex and subcortex transform and relate specific complex impulses, developing effector impulses of response that are also specific and complex.

c) Processors of stimuli: The brainstem, cerebellum and midbrain are nerve nuclei of impulse confluence that carry out an initial simple processing, producing autonomous reflex responses that are also simple. The other nerve structures basically appear as connective pathways that carry impulses. These are: the brainstem and midbrain (in their fibrous portions), the thalamus, and white matter. At the cortical level, the specific pathways allow for discrimination among sensory perceptions (an intellectual function as such), while the reticular formation has functions related to the levels of consciousness (among them, “awakening”), without which this sensory discrimination and the production of effective responses would be impossible.

Efferent Pathways

Impulses coming from different encephalic points also pass through the RF in its descending part, which regulates and modulates them according to its state of activity. Other efferent pathways are the pituitary gland, the bloodstream, and the direct fibers of the hypothalamus, which are like a valve connecting the brain to the glandular system and the organism in general, allowing ordered responses to be carried out in a coordinated way.

a) Sleep. In both kinds of sleep (passive and active), efferent impulses are inhibited or suppressed by the RF, especially when they would engage functions (motor, for example) that would modify the level. From the subcortex, the brain maintains basic vegetative functions at a minimum, corresponding to this moment of energetic regeneration and recuperation.

b) Semi-sleep. The most notable efferent variation in this case is the one corresponding to the moment of awakening, in which the brain sends stimuli that strongly activate all organ functions, increasing the flow of nervous discharges that circulate. Two basic chemical mechanisms are involved: a change in the sodium-potassium ratio, as well as a massive discharge of adrenaline (which, through feedback, activates the whole brain in its nerve transmission capacity, and the RF in particular).

c) Vigil. The “igniting” of the cortex that the RF produces in this level, its “facilitating” action, and the integration of all the functions of the central nervous system liberate efferent, encephalic stimuli that maintain all the functions proper to this state through the pathways described and express themselves in ways appropriate to each center. To note one case, when the attention concentrates on a particular object, certain of the RF’s mechanisms of modulation are set in motion. The resulting narrowing of the field of presence in this case is due in part to some of the incoming stimuli being “turned off” before they reach the cortex. There are many other cases like this of encephalic central control over sensory input (kinesthesia, for example). Also, within the alerting system there are cortical areas that (transforming and coordinating memory impulses) emit impulses of response that disinhibit the RF and provoke awakening, but without producing any movement.

Chemical (neurohormonal) Aspects of the Mechanism of Levels

The endocrine system regulates and coordinates the diverse functions of the organism through hormones that pour from glands into the bloodstream. Glandular participation in the phenomenon of levels of consciousness is regulated by the hypothalamus (neuro-gland), the encephalic localization of the vegetative center. The hypothalamus acts indirectly through the pituitary gland, but in cases of alarm or emergency does without it and sends efferent impulses directly to the glands involved in elaborating the responses

required by the situation in the environment. The most significant case is the insurance provided by the backup circuit established with the adrenal glands in the secretion of adrenaline.

Secondary elements in the circuit are the thyroid glands (thyroxine) and the gonads. This relationship with the hormonal system is of interest to us because of its participation in the encephalic activity that determines levels of consciousness. So, we must consider those substances that act directly on the different encephalic structures and/or on the impulse transmission capacity of the connective fibers. By looking at these substances in their work as synaptic mediators, and by observing their concentration in different encephalic structures, we obtain another point of view. Modifications in the balance of sodium/potassium, the level of sugar in the blood (insulin), the metabolism of calcium, and thyroid and parathyroid gland secretions, among others, appear as chemical feedback mechanisms of great importance in the dynamics of the levels of consciousness. A drop in glucose, calcium, or potassium, and the depletion of adrenaline are all related to marked functional imbalances within each level, and in extreme cases produce mental and emotional stress. On the other hand, proper metabolic balance will also correspond to the work of each level being carried out properly. Moreover, and as a secondary aspect, we note that any increase in blood pressure will correspond to the increased excitability of the reticular formation, and consequently to its activating function. At the same time, an increase in level (general reticular and encephalic activation) coincides with an increase in oxygen, whose rate of flow peaks at the moment of awakening.

Centers

The “control keys” of the nervous system are found primarily in what we call the cerebrospinal apparatus, composed of the brain and the spinal cord. We are not disregarding the role of the endocrine system, which through connections such as the hypothalamus-pituitary establishes an intimate relationship between both systems. However, in this work it is the action of the nervous system that is being emphasized. If we see the senses as having the general characteristic of “bringing” information from an environment (whether internal or external), the centers may be seen as systems of structured response, even though any one of them may predominate in the presence of any given stimulus. So, the close connection between the emotional, vegetative, and sexual centers will mean that although one of the centers is acting primarily, all of them will be involved. The endocrine component works above all in systems of slow response. It conserves its activity through inertia and maintains a constant level of activity that can be mobilized, to a greater or lesser degree, according to the occasion and type of response required. This will always occur in relation to the nervous system, which for its

part is characterized by rapidity of response and the tendency to quickly break or re-establish equilibrium.

As for the “centers of control,” we can divide them into three groups according to their localization: those solely in the cortex; those in the subcortex; and those in both. In this way, we locate the intellectual center in the cortex, the vegetative and emotional centers in the subcortical region, while the motor and sexual centers are located in both. The order of presentation is as follows: vegetative, sexual, motor, emotional, and intellectual.

Vegetative Center

Range. From the point of view of its activity, we associate: regulation of temperature, reflexes of thirst, and hunger; reactions of defense and regeneration; regulation of the digestive, respiratory, and circulatory systems, and the metabolic activity of the functions of locomotion and reproduction.

Organ. Primarily the hypothalamus. It is composed of various nuclei and is located above the brainstem, under the thalamus. Very close to and beneath it is the pituitary gland, to which it is directly connected.

Afferent pathways. Transformation. Efferent pathways.

a) Afferent pathways: The hypothalamus receives input from the reticular formation, the hippocampus, the amygdala, the thalamus, the lenticular nucleus, the olfactory bulb, and nerve fibers with sensory impulses.

b) Transformation: We can take reflex action as an example. When the hypothalamus registers, through osmoreceptors and chemoreceptors, a reduction in the concentration of sodium chloride in the blood, it produces an increase of the antidiuretic hormone (ADH), which is made by the hypothalamic supraoptic nucleus and stored in the posterior pituitary. When ADH is released into the bloodstream, reactions are produced in the kidney that contribute to water retention. As another example: when there is a decrease in the concentration of cortisol and corticosterone in the bloodstream, the hypothalamus stimulates the release of ACTH from the anterior pituitary. In turn, ACTH stimulates the adrenal gland to release glucocorticoids.

c) Efferent pathways: In complement with the pituitary and through it, the bloodstream to the thyroids, adrenal cortex, and gonads. Through the nerves to the adrenal medulla, and through the hypothalamotegmental tract to the reticular formation of the tegmentum, and from there to the motor nuclei of the medulla and spinal motor neurons. To the pituitary from the supraoptic nucleus.

Synthesis. We see the vegetative center basically as a regulator of vital functions, operating with mechanisms of equilibrium and feedback.

Sexual Center

Range. Regarding the activity of the sexual center, we refer to the sexual act itself, and see it in terms of “charging and discharging.”

Organ. Important points are the gonads, the spinal cord, the hypothalamus-pituitary structure, and the cortical localization in the occipital lobe.

Afferent pathways. Transformation. Efferent pathways

a) Afferent pathways: Pathways that are tactile and diffuse in origin, comprising the erogenous zones and touch in general; b) pathways from the genitalia that are tactile but concentrated and precise; c) a pathway that contains stimuli that are sensory-perceptual, from the memory, and of cortical-subcortical-cenesthetic association. The first two in part make up the short spinal reflex and pass through the medulla, the thalamus, and the reticular formation, until they reach the cortex. Endocrine-type afferent pathways: these have to do with the production and maintenance of a constant though cyclical level of sexual hormone secretion that is mobilized according to opportunity. Here, the hypothalamus-pituitary-gonad structure is the main secreting element (with the participation of other glands).

b) Transformation: Its character is complex, involving: a) a short medullary reflex; b) the activity of spinal motor neurons that create longer reflexes that combine with the above; c) neural interconnections at the subcortical level; d) cortical projections and their interconnections.

c) Efferent pathways: Here we could consider two possibilities: a) the sexual act itself; and b) when fertilization occurs, and the process of gestation follows. We will consider the first case. Starting at the interconnection of cortex and subcortex, tracts of the autonomic nervous system descend along the medulla and excite the genital apparatus, facilitating a stimulus-transformation-excitation feedback loop that produces an increase of activity, until a threshold of tolerance is reached, and a discharge is produced.

Synthesis. We locate the sexual center as operating within the mechanisms of the reproductive function. In the individual, this activity is the expression of the instinct of preservation of the species, whose mechanisms are the sexual act, fertilization, gestation, and birth.

Motor Center

Range. The mobility of the individual in space, consisting of voluntary and involuntary movements effected by the skeletal and muscular system, coordinated by and with the nervous system.

Organ. The motor center which coordinates these activities is found at the level of: a) the cortex, in the pre-frontal lobes of the cortex, the center of voluntary movements; b) the spinal cord, acting as the center of involuntary movements, short reflex arcs, and as the connection between the receptors and the cortex; c) the cerebellum, which coordinates movements (balance).

Afferent pathways. Transformation. Efferent pathways.

At a first level, we study the system of the short reflex.

a) Afferent pathways: From the receptor along the sensory fiber to the pre-spinal ganglion which acts as a retainer, to the medulla where the first transformation takes place.

b) Efferent pathways: From the medulla to the post-spinal ganglion and along the motor neuron fiber to the effector.

At a second level we find: from the receptor along the afferent pathway to the medulla, from here along the motor neuron fibers (pyramidal and extrapyramidal tracts) to the cortex by way of the cerebellum. The second transformation takes place in the cortical localizations and then leaves through the efferent pathways to the hypothalamus connected with the pituitary gland, to the medulla and from there to the effector which in this case are the muscles.

Synthesis. The motor center is a transformer of electrical-nervous sensory stimuli that gives responses of movement to an individual for their adaptation to the environment and survival.

Emotional Center

Range. Corresponds to what we usually recognize as feelings, moods, passion (with its motor implications), and intuition. It is involved as the “like” or “dislike” that accompanies any activity.

Organ. Its principal activity is linked to the limbic system, which is located in the diencephalon or rhinencephalon and is composed of the septum (septal nuclei of the hypothalamus), the anterior thalamic nuclei, the parahippocampal gyrus, the anterior hippocampus, and the amygdala.

Afferent pathways. Transformation. Efferent pathways

a) Afferent pathways: The principal afferent pathways are: the olfactory pathway, which connects directly to the amygdala, and the sensory fibers that reach the limbic system through the reticular formation. Fibers coming from the cortex (frontal and temporal lobes) and the hippocampus reach the amygdala as well. One of the branches of the olfactory bulb also goes to the septum.

b) Transformation: The afferent stimuli (impulses) produce chemo-electrical modifications in the limbic system, and as a response there is an immediate viscero-somatic modification (due to the structural relationship with the hypothalamus) that includes the cortical areas. The activity of the limbic system in turn includes a structural emotional-vegetative-sexual expression.

c) Efferent pathways: These modifications express themselves not only internally at a chemo-electrical and hormonal level, but they also modify the behavioral activity of the subject. An element that clearly expresses this is motricity. Moreover, fibers from the limbic system are projected through the hypothalamus, which are sent to the autonomous bulbar centers and the reticular formation of the brainstem. From there, the corresponding organs as well as the muscles are innervated by somatic motor neurons.

Synthesis. The activity of the emotional center can be defined as “synthetic.” It includes not only its specific area with its own neurohormonal characteristics, but elements of the vegetative and sexual centers as well. Its localization and connections (thalamus-hypothalamus-reticular formation) allows us to comprehend its extensive activity even in cases with “non-emotional” characteristics, and its prolonged action beyond the initial impulse.

Intellectual Center

Range. The activities of learning in general, the relating of data, elaboration of responses (beyond the reflex response), and the relating of stimuli of diverse origins.

Organ. We localize this center in the cerebral cortex, which is composed of gray matter. The cerebral cortex is usually divided into three layers; from the deepest layer outwards: archicortex (phylogenetically the oldest layer); paleocortex (the intermediate layer); and neocortex (the most recent layer). The cerebral cortex is also divided superficially in a way that corresponds to the four cerebral lobes: frontal, in the anterior part; parietal, in the upper-middle part; temporal, in the lower-middle part; and occipital, in the posterior part.

Afferent pathways. Transformation. Efferent pathways

a) Afferent pathways: The principal afferent pathways are those that make up the sensory pathways that convey impulses to what is called the sensory cortex, which predominates in the parietal and occipital lobes and to a lesser degree in the temporal and frontal lobes. The thalamus, hippocampus, hypothalamus, reticular formation, and cerebellum receive afferent projections.

b) Transformation: We can have an idea of the transformation in this center by looking at the interconnections between the cortices. In general terms, we can see with the case of stereognosis (tactile recognition without vision), which requires the suitable reception of stimuli (transmission), one of the complex functions carried out in the parietal lobe. This information is synthesized and compared to previous, similar sensory memory traces so that the given object can be recognized.

c) Efferent pathways: Besides the intercortical connections, the efferent pathways are generally directed to the subcortex and mainly to the caudate nucleus; to the pons and cerebellum; the midbrain; the thalamus; the reticular formation, and the mammillary bodies (hypothalamus).

Synthesis. We note that, in comparison to other mammals or other species in general, this center reaches its maximum specialization in the human being. A general idea of the center is given by its principal function of association and elaboration, along with its characteristic ability to defer responses to stimuli.

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[1] This phrase justifies the addition of the “Appendix” on the physiological bases of the psychism at the end of this summary. The author has previously explained: “In order to have an integrated vision of the human psychism, we are presenting its various functions through the metaphor of ‘apparatus’ which can be associated with physiological localization.”

[2] One application of these studies of the psychism’s apparatuses, consciousness, impulses, and behavior can be found in Ammann, L. *Self Liberation*. Samuel Weiser, 1981.

[3] An explanation about the subject of impulses can be found in Caballero, J. *Morfología: Símbolos, signos y alegorías.* Ed. Antares, 1997.

Psychology II

This is a summary prepared by participants attending the explanations given by Silo in Las Palmas, Canary Islands, Spain, in mid-August 1976. Certain passages preserve the colloquial style of the presentation, and this marks an important difference with Psychology I. On the other hand, this work returns to themes treated in those notes, reexamining them in the light of the theory of the impulse and that of the space of representation.

The Three Pathways of Human Experience: Sensation, Image, and Memory

Personal experience arises through sensation, through imagination, and through memory. Of course, we can also recognize illusory sensations, illusory images, and illusory memories. Even the “I” is articulated thanks to sensation, image, and memory. And when the “I” perceives itself, it is also working with these pathways, be they real or illusory. These same pathways can be recognized in all the mind’s possible operations. One can acknowledge the existence of errors, the existence of illusion in any of these pathways, but it is more difficult to acknowledge the illusory nature of the I, even though this can also be proven and demonstrated.

The three pathways of suffering and that which registers suffering are themes of special interest for us. We will therefore examine the sensation, the image, and the memory, and that which registers and operates with that material, and which is called “consciousness” (or “coordinator”), and which is at times identified with the I. We will study the three pathways through which suffering arrives, and we will also study the consciousness which registers that suffering.

Pain is experienced through the pathway of the sensation, of the imagination, and of memory. There is a “something” that experiences that pain and it is identified as an entity which, apparently, has unity. This unity which registers pain is given basically by a sort of memory. The experience of pain is compared to previous experiences. Without memory there is no comparison, there is no comparison of experiences.

Painful sensations are compared to previous painful sensations. But there is something more: the painful sensations are also projected, they are considered in a time that is not the present, in a future time. If painful sensations are remembered or if painful sensations are imagined, there is also sensation of this remembering and of this imagining. Neither memory nor imagination could provoke pain if there were no sensation of the memory, or of the imagination.

One has a register not only through the pathway of direct primary sensation, but one also has a register, has a sensation, through the pathway of memory, just as one does through the pathway of the imagination. Sensation therefore invades the field of memory, invades the field of imagination. Sensation covers all the possibilities of this structure that experiences pain. Everything is working with sensation and with something that experiences, with something that registers this sensation. Whether it is called, more specifically, sensation as such; whether it is called memory, or imagination, sensation is always at the base, the detection of a stimulus is at the base, and something that registers that stimulus is in the other point, at the other extreme of that relationship.

The initial structure is configured between a stimulus and the something that registers that stimulus. And it seems that this structure will move, trying to avoid painful stimuli. Stimuli that arrive and are detected; stimuli that are stored; new situations that arise and action by that structure to avoid the new stimuli that are related to previous data. A stimulus that arrives at a point that receives that stimulus, and from that point, a response to the stimulus.

If the stimulus that reaches that point is painful, the response tends to modify that stimulus. If the stimulus that reaches that point is not painful but is experienced as pleasurable, the response tends toward maintaining that stimulus. It's as though pain desires the instant, and pleasure desires eternity. It's as if, with this thing of pain and pleasure, there is a problem of times for the point that registers them.

Whether painful or pleasurable, the stimuli are stored, they are kept in that time-regulating apparatus that we call 'memory.' We call those stimuli that arrive 'sensations,' but those stimuli that arrive to the center of register not only come from what we could call the 'external world', they also come to that apparatus of register from the 'internal world' itself. We have already seen that we can remember something painful, and we can remember something pleasurable. We can imagine something painful, just as we can imagine something pleasurable. And this remembering and imagining are not linked to the external sensation as closely as the other direct primary sensations.

The scheme is simple: a stimulus that arrives, a response that is given. But let's not simplify to the extent that we consider the arriving stimuli as pertaining exclusively to the world external to that structure. If there are also stimuli in the internal world of that structure, there must also be responses in the internal world of that structure. Sensation in general has to do with the register, with what arrives at the structure. Imagination, in contrast, has to do with what that structure does to move closer to the stimulus if it is pleasurable, or to move away from the stimulus if it is painful. In the image, there is already an activity proposed in front of those stimuli arriving to the structure. We will later take a closer look at the function fulfilled by the image.

The memory, to the extent that it delivers pleasurable or painful stimuli, also mobilizes the imagination, and this imagination mobilizes that structure in one direction or in another. We have a stimulus that arrives, a structure that receives that stimulus, and a response given by the structure. This is a very simple scheme: stimulus—receiving apparatus—center of response.

Faced with a stimulus the center of response mobilizes the structure, not in whatever direction, but in a more or less precise direction, and we can recognize different activities that could respond to those stimuli, different directions, different possibilities of response. We therefore distinguish between different possible centers that could give possible

responses to different types of stimulation. Of course, all these centers of response will be moved at their base by pain and by pleasure, but the response will differ according to whether it is one or another center that acts. We will call this world of arriving stimuli, the "world of sensation." We will call that which is expressed toward the world of sensation, "response" (that which responds to the world of sensation will be called "center of response"). Since the responses are numerous and differentiated and each system of response has its own range, we will distinguish various centers of response.

We will call this entire structure that encompasses the register of the sensation and the response to those sensations that arrive, this entire structure that manifests itself, we will call "behavior." And we will observe that this behavior does not manifest in a constant way, but that it suffers numerous variations according to the state that structure is in, according to the moment that structure is in. There are moments when that structure perceives the painful stimulus more clearly. There are moments when it does not seem to perceive it at all. There are moments when that structure seems to be disconnected from those sensations, when it seems to have no register of the painful sensations. The registering with greater or lesser intensity of the sensations that arrive, and the launching of responses of greater or lesser intensity to the stimuli that arrive, will depend on the general state of the structure. We will generically call this state the "level of work" of that structure. This level, according to whether it is in one moment of its process or another, will allow more accelerated, more intense responses to be given, or less accelerated, more muted responses.

Let us review our schema.[4]

Not much is explained when it is said that human beings do certain things to satisfy their needs, that the human being does certain things to avoid pain. What happens is that, if these needs are not satisfied, they provoke pain. But it is not that someone is moved by an abstract idea of satisfying their needs. If someone moves, it is due to the register of pain.

There is often a great deal of confusion about these things, and it seems that these primary needs, when unsatisfied, are the ones that cause the greatest pain. The sensation of hunger, like that of other types of sensation, is so painful that, if not satisfied, it provokes ever greater tension. For example, if violence is done to a human being, or for example they burn some part of their body, they experience pain and, of course, try to give responses to stop that pain. This is as great a need as nourishment, as eating, this doing something to prevent the intensification of the painful sensation. In this case, this human being will try to flee from that which endangers the structure of their body.

It can happen that someone has painful registers of hunger, but they aren't hungry. They think of the hunger they might feel, they think of the hunger that someone else could be

feeling, and the hunger that the other person could be feeling gives them a painful register. But what painful register do they have? Could it be a physical pain? Not exactly. They can remember hunger, they are talking about the pain of hunger, but they don't register the pain of hunger; they register a different type of pain. And that register that they have of the pain can mobilize them tremendously.

Through the pathway of the image, through the pathway of remembrance, they are able to experience a significant range of pains, and also of pleasures. They know that by feeding, by satisfying their immediate needs, a particular relaxation of their structure is produced. And they know that it is interesting to repeat that relaxation each time that tension increases. They grow fond of certain forms of feeding; they become habituated to certain experiences that relax tensions.

The study of the centers allows us to differentiate between activities that human beings carry out, primarily trying to satisfy their needs. On the other hand, the levels of consciousness explain the variation of those activities, according to whether the entire structure is acting in vigil, in semisleep, or in sleep.

And we will observe in this structure a behavior that is the form in which it will express itself in front of stimuli, and according to the particular level of consciousness that is operating.

Specialization of Responses in Front of External and Internal Stimuli: The Centers

The idea of "center" encompasses the work of various physical points that are sometimes very distant from each other. In other words, a center of response results from a relationship among different points of the body. If we speak of the center of movement, we notice that it is not located in a precise physical place, but rather it corresponds to the action of many corporal points. And the same thing occurs with operations that are more complex than the simple operations of the body's response. When we speak of emotions in the human being, the impression is given that there is a point from which all emotions are managed. But it is not like that; there are numerous points that work in coordination, provoking that response that we will call "emotional."

Hence, the apparatuses that control the output of impulses toward the world of the response are what we know as "centers." The mechanism of stimulus and reflex response becomes increasingly more complex, until responses can be deferred, and coordination circuits intervene that enable the precise channeling of responses through different

centers. In this way a deferred response has traveled through numerous twists and turns before it is launched toward the external world.

We differentiate between a stimulus that arrives to the consciousness from the senses and an impulse that arrives from memory. In this second case, numerous operations are carried out and, according to the level of the signal elaborated in the consciousness, one or another center is selected as the exit. To illustrate: we tap on one part of the leg, the knee, and the leg moves without the need for the stimulus to go through the complex mechanisms of consciousness that would eventually elaborate the signal in the form of an image, an image that seeks the corresponding level in the system of representation, and from there acts on the appropriate center in order to launch the response toward the world.

It's true that an image is configured almost simultaneously with the reflex response, but the stimulus has traveled directly from the receiving apparatus to the center. Now taking the signal that unfolded as an image, we can follow its transformation until it arrives to the memory as an impulse, to be stored there and then returned to the mechanism of coordination, where a new image is elaborated. And although the stimulus may have already disappeared (with the reflex response), information can continue to be sent from the memory, maintaining an image which, in turn, reinforces the activity of the output center.

The centers work structured among themselves and with their own registers (together with the general register of the coordinator) by way of the information that arrives from the internal senses at the moment of acting in the environment, as well as through the connections among the centers and the coordinator. One is also aware of what is happening with the activity of the centers since the centers also send internal signals to the sensory apparatus as they do their work of giving responses.

So, the centers can continue to give a signal of the response, they can stop that signal of response, the signal in question that reaches the centers can shift and seek another channel, and so on, thanks to the fact that in the output itself there is a return of the signal toward an internal apparatus that registers what is occurring with the response.

So, if I fling my hand in a certain direction, it could just keep going; it might not reach the object; there could be numerous errors if I did not also have an inner sensation of this movement, along with sensations from the other senses that register the various operations. Now, if I had to gently push this book that is in front of me on top of the table, I would have to regulate the thrust of my hand, because if I miscalculated, the book could fall to the floor. Moreover, the resistance presented by this book indicates how much pressure I must apply, and I know that thanks to the response. That is to say, the motor action that I apply to the book meets with a certain resistance of which I have an internal

sensation, and thanks to that internal sensation I regulate my activity. In this way, one has sensation of the activity of the centers of response.

The *vegetative center* is the base of the psychism where the instincts of conservation of the individual and the species are activated. These, excited by the corresponding signals of pain and pleasure, mobilize in defense and expansion of the whole structure. I have no register of these instincts apart from certain signals. These instincts manifest themselves strongly at the moment when a part, or the structure as a whole, is compromised. The vegetative center is also mobilized by images, but images with a cenesthetic register. States of sleep or fatigue, for example, promote such images. One has a cenesthetic register of this state, one has a cenesthetic register of what will later be converted into a sensation of hunger; one has a register of the sexual reflex. The cenesthetic register increases in the case of illness but also in the case of absence of external sensations.

This center gives compensatory and equilibrating responses to the cenesthetic impulses arriving from various parts of the structure. Even when the sensory signal goes to the vegetative center and it gives a response, that signal can also act on the memory, and from the memory arrive at the coordination where those signals are made conscious. However, it is not consciousness of those signals that mobilizes the vegetative center's response.

The *sexual center* is the principal collector and distributor of energy. By alternating concentration and diffusion, it is capable of moving the energy in a localized or diffuse way. Its work is both voluntary and involuntary. Something similar happens with the sexual center as with the vegetative — of which the sexual center is, in turn, a specialization, the most proximate specialization. The tension in this center gives strong cenesthetic registers, and energy is distributed from it to the rest of the centers. Decrease of tension in the sexual center is produced through discharges proper to this center, through discharges by means of the other centers, and by transmission of a signal to the consciousness which converts the signal into an image. Also, since it is strongly connected to the vegetative apparatus which picks up the signals of all the cenesthetic impulses, the sexual center can accumulate tensions from the body, as well as from the other centers.

The vegetative-sexual structure is the base from which all the centers and, in consequence, the entire system of responses is organized. This is so because they are linked directly to the instincts of conservation of the individual and of the species. This instinctive basis is that which nourishes the functioning of all the other systems of response. If this base of responses (on which the other apparatuses of response rest) fails, disturbances will be registered in the entire chain of responses.

The *motor center* acts as the regulator of the external reflexes and of the habits of movement. Working with tension and relaxation, it allows the displacement of the body in space.

Working with adhesion and rejection, the *emotional center* regulates and synthesizes situational responses. From this work of the emotional center there is a register of the particular aptitude of the psychism for experiencing sensations of approaching what is pleasurable, or of moving away from what is painful, without the body necessarily performing an action. And it might happen that no external, objectal reference exists, and yet the emotion of rejection or the state of adhesion is experienced, because it is objects of one's own representation which provoke (due to the arising of images) the triggering of the emotional center. For example, there is no need to flee since there is no objectal danger, yet one flees from the "danger" of one's own representation.

The *intellectual center* responds to impulses of the mechanisms of consciousness known as abstraction, classification, association, etc. It works through selection or confusion of images, in a range that goes from ideas to the different types of imagination, directed or divagational. It can elaborate responses in the form of symbolic, signic, and allegorical images. Though these images seem abstract and "immaterial," one has an internal sensory register of them and can remember them, follow the sequence of their transformation, and register sensations of correctness or error.

There are differences of speed in the delivery of responses to the environment. That speed is proportional to the complexity of the center. Whereas the intellect elaborates a slow response, the emotion and motricity do so with greater speed; the internal velocity of the vegetative and sexual functioning being considerably greater than the velocity of the other centers.

The functioning of the centers is structural. This is registered by the concomitances in the other centers when one is acting as the primary one. Intellectual work is accompanied by an emotional tone, for example, a certain liking for the study that is being carried out, and which helps maintain the work. Whereas the motricity, in this case, is reduced to a minimum. So, while the center of intellectual response is working, the emotional center is maintaining the charge to the detriment of the contiguous center, i.e., the motor center which tends to be immobilized in the measure that intellectual interest increases. In the case of vegetative recovery after an illness, the subject would experience fatigue or weakness and all the energy would go toward the body's recovery. The vegetative center would work flat-out giving equilibrating internal responses, and the activity of the other centers would be reduced to the minimum.

The centers can malfunction, creating errors of response. Contradictions in the work among the centers arise when the responses are not organized structurally, and the centers trigger activities in directions opposed to each other.

These centers that we separate in order to better understand them are really working in structure, with psychophysical energy, or more simply nervous energy, circulating among them. In general, when activity increases in some centers, it decreases in others. It is as though we were always working with a fixed charge; so, given the same quantity of charge, when some centers work more, the others will have to work less.

When someone runs, the motor center works at its maximum, but the vegetative center must regulate internal functions. Emotivity may even be the motive for that race, for why that person is running. And finally, the runner could be carrying out intellectual operations. Let's give an example: they are running because someone is chasing them, and while running they're trying to figure out where they can go to slip away more easily; they are looking for a way to escape from that threatening thing that is in pursuit. So, there are many things that can be done while running.

In this case, motor activity is what is most notable. The energy in the intellect diminishes each time the motor center goes into action. In our example, it is quite difficult to run away with someone in pursuit while you simultaneously carry out mathematical calculations. Something happens in the intellect while the motor center is being mobilized, but that does not mean that its activity disappears completely. Energy is practically canceled out in the sex center, while the energy acts in the emotions but in a variable way, depending on what it was that initiated the race. If a person carries out complicated mathematical operations, their vegetative center will tend to quiet down. Either the vegetative center quiets down, or the intellectual work stops.

All these considerations have practical importance because they explain that over-activity in one center decreases the activity of the others, particularly those we call 'contiguous.'

We have assigned an order to the centers, talking about the intellectual, the emotional, the motor, the sexual and the vegetative. We consider as contiguous those centers that, in this order, are laterally located with respect to any given center. We said that the over-activity of one center diminishes the activity of the others, particularly the activity of the contiguous centers. This last point allows us to understand that, for example, emotional blockages or sexual overcharges can be modified through a specific activity of the motor center.

The motor center acts 'cathartically' (this is the first time we will use this word; later we will use it frequently), discharging tensions. It also explains that the negative activity of the emotional center, depression for example (which is not an overcharge but the

contrary), reduces the intellectual as well as the motor charge. And a positive charge in the same center, enthusiasm for instance (unlike depression), can cause an overflow of the emotional center and produce an overcharge in the contiguous ones: intellectual and motor overcharge.

It is clear that when a center overflows and gives energy to others, it does so to the detriment of some other center, because the energetic economy of the whole is more or less constant. And so, suddenly, a center spills over, “is full of enthusiasm,” it begins to launch energy to contiguous centers, but someone is losing out in all this. In the end, the center from which all the energy is being suctioned, and from which the other centers benefit, becomes discharged. The center is in the end left discharged, and this discharge starts invading the other centers until, in the end, all of them are discharged. In this sense, if we had to speak of a center that gives energy to the entire machinery, we would refer to the vegetative center.

The sexual center is an important collector of psychophysical energy. It will weigh on the activity of all the other centers, influencing them in a manifest or a tacit way. It is included therefore, in even the superior activities of the consciousness, in the most abstract activities, causing the consciousness to search in one or another abstract direction, experiencing a special like or a special dislike for these directions.

Independently of the stimuli that arrive from the external world, the centers work with characteristic cycles. The normal rhythm of a center is modified when stimuli arrive but later resumes its level of work with the rhythm proper to it. These cycles and rhythms are varied and produce certain characteristic repetitions. We recognize respiratory cycles, circulatory cycles, and digestive cycles. They pertain to the same center, but it isn’t that the vegetative center has just one rhythm; rather, in this center a variety of activities take place and each one of them has its own rhythm. These types of rhythms, like the others we have mentioned, are known as short cycles. Likewise, there are daily cycles and others of greater amplitude. There are cycles proper to biological stages. Everyday work, for example, is organized according to age and it is inappropriate to place a five-year-old child, or an 80-year-old senior, in activities that are proper to young adults.

Finally, we should add that the activity of the centers is registered in certain points of the body, even though these points are not the centers themselves. The register of the vegetative center, for example, is a diffuse, internal, corporal register. When one feels one’s body, one experiences it in a diffuse way, and not just in a precise part or area. The register of the sex center is experienced in the sexual plexus. Some emotions are registered in the cardiac plexus and in the respiratory zone. Intellectual work is registered in the head (“Think with your head…” they say). But one should not confuse what mobilizes the activities with the register of those activities. We call what mobilizes the

activities a ‘center,’ and while it has a dispersed neuroendocrinal basis, the register of the centers’ activities is mainly felt in certain localized points of the body.

Levels of Work of the Consciousness; Reveries and Reverie Nucleus

Recalling the framework we proposed above, there was nothing more than a structure, a system of stimuli, and a center that gave a response to those stimuli. That center later specialized in different ranges; these were ranges of activities of response in front of the stimuli. And so, we distinguished between different centers, but we also knew that the centers varied in the response not only due to the variation of stimuli, but also because of the state that they were in themselves. We called that state in which the centers were found at a given moment their “level of work.” That level of work, therefore, modulated the activity of the center in its responses. If the level of work was high, the response toward the world was more effective, more manifest. If the level of work was low, the response toward the world was less effective.

In this structure we find the level of vigil, which favors activity toward the external world. On the other hand, we find sleep as a level that apparently blocks the response to the external world, even when stimuli seem to fully reach the sleeping person. And there is an intermediate level of semisleep through which one passes when connecting and disconnecting from the external world. We speak of the levels of work and refer to them as the internal mobility that the structure of consciousness has in order to respond to stimuli.

These levels have their own dynamic and cannot be considered as simple valves that open or close. In reality, while working in one level there is still mobility in the other levels, but with less energy. That is, if we are for example in the vigilic level, the level of sleep continues to work, though with reduced activity. In this way, there are strong pressures from the other levels with respect to the level being expressed at that moment.

In this way, there are numerous phenomena proper to vigil that are affected by phenomena of the other levels, as there are numerous phenomena proper to sleep that are affected by the activity of the other levels. This conception of the levels—not as static compartments but rather as an ensemble of work potentials that are in simultaneous dynamic—is important to later understand phenomena that we will refer to as the ‘rebound’ of contents, ‘pressure’ from contents, etc.

Just as there are neuroendocrinal localizations that regulate the human being's activities of response (and which we include under the designation "centers"), there are also localizations that regulate the levels of work of the consciousness. In fact, certain points transmit signals that initiate the activity of vigil, semisleep, or sleep.

In turn, these points that send signals receive instructions from different parts of the body before they begin firing off their orders, resulting in a closed circuit. In other words, when the body needs rest at night, it supplies data to certain points which begin to emit their signals, and then the level of consciousness drops.

We do not want to get into any of the physiological or psychophysiological complications and instead we will rely on very general terms.[5] When certain substances start accumulating in the body, or when the day's work has provoked fatigue in the body, these accumulated substances and this fatigue send out signals to a point that collects them. And this point that collects those signals also begins to send out its messages, whereupon the level of consciousness lowers. The level drops until the subject feels sleepy and enters that state of sleep, and the reparative stage of the circuit begins.

Of course, it is not a matter of merely repairing the body with this 'lowering' of the level of consciousness. The drop in level of consciousness makes it possible for numerous complex phenomena to be produced, not only those of recuperation. Nonetheless in principle, we can look at it in that way. In turn, when rest has had its reparative effect, those points begin to send signals to the control point, which in turn emits its signals to provoke awakening.

It's quite evident that external stimuli or strong internal stimuli can also trigger this phenomenon and produce the ascent in level, even when sleep has not yet completed its reparative effect. Our subject is recovering, is resting, but a loud noise will wake them. Cycles, then, are produced and expressed in these levels each with its own rhythm; but when a phenomenon intervenes that breaks through the limits of the threshold, a discharge is triggered from that center of internal control and awakening takes place outside of the normal rhythm.

In the level of vigil, we find a better deployment of human activities. The rational mechanisms work fully, and one has direction and control of the activities of the mind and body in the external world.

In the level of sleep, in contrast, the rational mechanisms appear greatly reduced in their work, and there is practically no control over the activities of the mind or the body. At times, sleep is clearly vegetative and without images; at times, sleep seems to be under

the total, absolute dominion of the vegetative center, and it seems as though only this structure were working, giving responses to internal stimuli. There are no images populating the screen of the consciousness; one is in a state in which internal data arrive and one 'responds' to those data also internally, and the vegetative center does all this with its characteristic automatism. But afterwards a cycle of sleep with reveries, with images begins, that later is once again interrupted, and another period of sleep without images begins. This happens every night. So even in the level of sleep, deep sleep, we find a completely vegetative state, without images, and a state in which the images appear. All of this has its cycles and rhythms.

We differentiate, of course, between levels and states. The images of sleep are very fast; they have a strong affective charge and are powerfully suggestive for the consciousness. The material of these images is taken from daily life, though articulated capriciously. Later we will see that it's not so capricious after all, since when we get to the theme of allegorical forms and other types of conformations in oneiric productions, we will see that all of this is subject to a set of laws that are quite precise. However, for now let us simply say that things are articulated capriciously. Sleep serves to restore the body and to order the mass of information received in the course of the day, besides serving to discharge numerous physical and psychic tensions.

In semisleep, phenomena from the other two levels are intermixed. One rises to semisleep from sleep, reaching that level before awakening completely. Also, in full vigil one descends to semisleep in states of fatigue, and the mixing of levels becomes clear. The level of semisleep is rich in fantasies and long chains of images that fulfill the function of discharging internal tensions.

Reverie in vigil is not a level but a state, in which images proper to the level of sleep or semisleep break through by exerting pressure on the consciousness. These reveries act, manifesting in vigil through pressure from the other levels. The purpose of this is to alleviate tensions, but reveries in vigil also serve to compensate situational difficulties or necessities experienced by the subject. This is, in its ultimate root, related to the problem of pain, and that is the internal indicator and the internal register you have when you cannot express yourself in the world, and, therefore, compensatory images appear. When we speak of fantasizing or reveries in vigil, we do not refer to the level of semisleep, since the subject can continue to perform their daily activities mechanically, "dreaming while awake," so to speak. The subject continues with their daily activities; they have not descended to semisleep or to deep sleep. Nonetheless, the reveries begin to close in.

We observe that, moment after moment, the mind shifts from one object to another, and that it is very difficult to stay with an idea, or a thought, without unrelated elements, that

is, other images, other thoughts, infiltrating. We call these erratic contents of consciousness, “reveries.” These reveries or divagations depend on pressures from other levels, as well as on external stimuli such as noises, odors, shapes, colors, etc., and on corporal stimuli such as tension, heat, hunger, thirst, discomfort, etc. All these internal and external stimuli, all these pressures that are acting in the other levels manifest, forming images and putting pressure on the vigilic level. Reveries are unstable and changing and constitute impediments for the work of attention.

We call “secondary reveries” those that are triggered in daily life and that have a situational, i.e., temporary character. An individual is in a situation, is subjected to a complex of external pressures, and secondary reveries arise as responses. This person enters a different situation, and other secondary reveries arise as responses. We consider these reveries as secondary or situational because they are triggered as responses to more-or-less precise situations.

However, there are other reveries that are more fixed or repetitive which, though they vary, denote the same mental climate, the same mental ‘atmosphere.’ Those images that emerge just once in a given situation and later disappear are quite different from these other images, which, even if we change situations, appear repeatedly. These reveries which are not secondary can also change, in their own way. But they have permanence, even if only in the aspect of their mental climate. They have a similar flavor. We can observe as a digression that the words we are using are completely sensorial. We speak of ‘climate,’ as though the perception of the phenomenon were tactile. We speak of ‘flavor’ as if one could taste a reverie… we will return to these particularities later.

Sometimes these same reveries appear in the fantasies of semisleep and in sleep at night. The study of secondary reveries and of reveries in the other levels is useful for determining a certain fixed nucleus which strongly orients psychic tendencies. In other words, a person’s vital tendencies, aside from the conditions imposed by circumstances, are launched toward attaining that image, that fixed reverie that guides them. This fixed nucleus is going to manifest as an image; this image will have the property of orienting the body, of orienting the activities in a direction. The image points in a particular direction and the entire structure goes that way.

The reverie nucleus orients numerous tendencies of human life in a direction that is not clearly noticed from vigil. Many of the reasons that a person might offer for various of their activities are in reality moved by that nucleus and not by those ‘reasons’; rather these reasons are a function of that nucleus. Consequently, changes in the nucleus provoke changes in the orientation of certain personal tendencies. So that person continues seeking ways to satisfy their needs, but that nucleus is permanently influencing their

direction. In other cases, although the general activities may change, the nucleus remains fixed; it remains stuck to one stage of life. This reverie nucleus is not visualized; rather, it is experienced as a mental climate. The images guide the activities of the mind, and we can register them, but the reverie nucleus is not an image; the reverie nucleus is what will determine the compensatory images. So then, the reverie nucleus is not an image but rather is experienced as a mental climate. The nucleus will motivate the production of particular images that, as a consequence, will lead toward an activity.

An example of a negative nucleus is, for instance, a permanent feeling of guilt. A person has a permanent feeling of guilt. They may or may not have done anything reproachable, but what they experience is this state of guilt; they feel guilty. They have no image whatsoever, but they experience that particular state of consciousness. Let's take, as another example, a tragic feeling about the future. Everything that will happen will turn out badly. Why? One doesn't know. Or take a continual feeling of oppression; the subject feels oppressed, they say they can't "find themselves" and feel that everything is closing in on them… However, there is no reason to think that all nuclei are negative.

Nuclei remain fixed for years while the compensatory reveries of such nuclei go on appearing. These nuclei operate for a long time, giving rise to compensatory reveries. So, for example, if the nucleus that constantly exerts pressure is similar to the feeling of abandonment, if this person finds themselves abandoned, if this person finds themselves vulnerable, if they experience that feeling of vulnerability and abandonment, it is very probable that compensatory reveries of acquisition, of possession will arise, and that these images will guide their activities. Surely, this does not just happen at the individual level, but also at the social level and in certain historical moments. Surely, in times of historical rupture, these images of excessive possession increase because of an increase in climates of abandonment, climates of deprivation, and the lack of inner references.

Because their function is to discharge the tensions produced by these internal difficulties, secondary reveries give compensatory responses to stimuli, whether these stimuli are linked to a situation or to internal pressures. Therefore, secondary reveries are very variable though certain constants are observed in them. It can be observed that these reveries revolve around a particular climate. These reveries vary depending on the situation, they are expressed in different ways, but they have something in common. And that thing that they have in common makes us notice the presence of a particular climate that has to do with each one of them. That common climate of the secondary reveries is what reveals the very fixed nucleus, which is not something that changes according to the situation, but rather is something that remains constant in different situations.

In one of the examples mentioned, the subject is in a situation that is extremely disagreeable and thinks that everything will turn out badly. We put them in a different situation that is very pleasant, and they continue to think that everything will end badly. And so, even when the situations vary, that climate continues exerting pressure and firing off images.

When the reverie nucleus begins to manifest as a fixed image, that nucleus begins to vary since its basic tension is already oriented in the direction of discharge. We can use an illustrative example: the sun is invisible when it's up high overhead; the sun is visible when it's on the horizon, when it's rising and setting.

The same thing occurs with the reverie nucleus: it cannot be seen when it is most active, even though its pressure is at its maximum. It can be seen when it is just beginning, or when it is in decline. The nucleus can last for years or for one's whole life, or it can be modified by accident. Also, when a vital stage changes, the nucleus may change. If a particular nucleus, if a particular fixed climate has arisen, it is because it is related to particular tensions; and when the vital stage changes, those tensions change considerably. With that, life's orientation begins to change, and behavior undergoes important modifications. The orientation of life changes because those reveries that give a direction toward objects have changed. And those reveries that give direction have changed because the climate that determines them has changed; and the climates have changed because the internal system of tensions has changed. And the system of tensions has changed because the subject's physical stage has changed or because an accident has taken place that has also provoked the change in the system of tensions.

In some cases, the centers that we have examined issue instructions to other centers. Those voluntary centers, such as the intellectual center, give instructions to the voluntary parts of the other centers, but not to the involuntary parts of the other centers, and much less to the instinctive centers, particularly the vegetative center in its internal work. The intellectual center does not give orders and if it does, no one replies. The blood pressure doesn't change, and neither does the circulation. Nor do the deep tones vary just because the intellect issues orders. Things are the other way around.

The internal pressures that lead to the birth of the reverie nucleus are linked to the functioning of the instinctive centers, and because of this, the nuclei vary with changes of physiological stages, in the same way that serious physical accidents produce similar effects. And so, these nuclei don't change, for example, when the intellectual center gives out orders, but rather they change when the vegetative activity changes. And therefore, it is very difficult to voluntarily modify these nuclei. Such nuclei vary with the changes of physiological stages.

We have said as well that emotional shocks may also form or modify a nucleus of internal pressure since, as we explained, the involuntary part of the emotional center sends signals to all the centers, modifying their action. If the emotional shock is intense, it may modify the functioning of the vegetative center for a long time. There are numerous examples. An emotional shock can unleash, from that moment on, a new nucleus of pressure, along with the resultant consequence. Despite their variability, the secondary reveries will also show the emergence of a new permanent theme. The subject's searches or vital intentions will be oriented in another way, and their behavior in the world will also change.

The subject received a powerful shock, and from the moment of that shock their life changed. Ever since that shock, their activities and vital searches changed. Emotional shocks can act with such force that they also provoke serious alterations in some points of the vegetative center, since the involuntary part of the emotional center can act over the vegetative and modify it. Shocks that reach those levels of emotional depth may provoke serious alterations in some points of the vegetative center, followed by dysfunctions and somatizations; these are somatizations due to emotional action, i.e., physical illnesses caused by emotional accidents.

Let us summarize. We have talked about levels of consciousness, saying that there are points in the body from which these levels are managed, just as there are other points in the body that manage the centers. These points in the body detect signals and in turn give signals so that the structure's level of work rises or falls.

We have said that, in the level of vigil, the intellectual activities are fully deployed; that in the level of sleep these activities diminish considerably, even when the power of the images increases. And that in the level of semisleep, we find these things mixed together.

We have differentiated between levels of consciousness and the states in which we may find a given level. We have said the reveries that appear in the level of vigil are products of situational tensions or products of pressures from the other levels. So, the reveries that appear in the level of vigil are not indicative of levels, but rather they reflect states.

We have also said that these situational reveries have a type of relationship among themselves, a relationship not through the image, but through the climate. That relationship of climate that secondary reveries have with each other allows us to speak of a reverie nucleus. This reverie nucleus has great permanence and corresponds to deep tensions. The nucleus varies little over time, but modifications can be produced in it

through certain deep emotional shocks that can blast it, as well as through changes of vital stage.

It is the reverie nucleus that orients the tendencies of human life. Secondary reveries give compensatory responses to situational stimuli and are permeated with the climate of the reverie nucleus. The internal pressures that give rise to the birth of the reverie nucleus are linked to the functioning of the instinctive centers. In this way, these nuclei are strongly linked to the vegetative and sexual centers. In reality, it is these that motivate the emergence of the reverie nucleus.

Behavior. Formative Landscape

The study of the centers, of the levels of consciousness, and behavior in general, should allow us to articulate an elementary synthesis of how the human psychic structure functions. It should allow us to comprehend, also in an elementary way, these basic mechanisms that guide the activities of the human being according to suffering or pleasure. And it should enable us to comprehend not just the real capturing of surrounding reality realized by this human structure, but also the illusory capturing that this structure does of the surrounding reality and its own reality. These are the points that matter to us. Our guiding thread is launched in the direction of comprehending suffering, pleasure and psychological data that may be true or illusory.

Let’s begin with the theme of behavior.

The study of the functioning of the centers and the discovery of their cycles and rhythms allows us to understand velocities and types of reaction in front of the world in their more mechanical aspects. On the other hand, examination of the reveries and the reverie nucleus puts us in contact with the inhibitory or mobilizing forces of certain behaviors assumed in front of the world. But besides the mechanical, psychic, and corporal aspects, besides the mechanical aspect of behavior, we recognize factors of a social type, of an environmental type, and the accumulation of experience throughout life, all of which act with a strength equal to that of the mechanical factors in the formation of behavior.

And this is so because, apart from the stimulations that can reach the psychic structure (and to which it responds immediately), there are other, non-occasional stimuli that remain in the structure and continue to give signals with relative fixedness. We are speaking of this phenomenon of the retention of the instants in which the phenomena are produced. It is not that these phenomena are simply produced and then disappear forever. Every produced phenomenon which modifies the stance of this structure is also

stored within it. So, the structure's memory (memory not just of the stimuli, but of the responses to the stimuli, and also of the levels that were working at the moment of the stimuli and responses) will exert pressure and will decisively influence the new events that take place in the psychism. And so, with each phenomenon that is produced, we are not dealing with an initial situation; rather, *we have the phenomenon and everything that happened to the structure previously*. When we speak of behavior, we are referring to this extremely important factor of temporal retention.

An important factor in forming conduct is one's own biography, which is everything that has been happening throughout one's life. This weighs on the human structure as much as the event that is taking place at the moment. Seen in this way, in a given behavior in front of the world, the stimulus being received at that moment has a weight equal to everything that formed part of this structure's previous process. Normally, the tendency is to think that this is a simple system of stimulus and response; but if we speak of stimulus, everything that has happened before is also a current stimulus.

In this sense, the memory is not a simple accumulation of past events. The memory, in this sense, is a system of stimuli acting from the past. The memory is something that has not simply accumulated in that structure, but rather it is alive, it is current and is acting with an intensity equal to that of the present stimuli. These events may or may not be evoked in a specific level of consciousness, but whether they are evoked or not, their action is decisive at every instant when the structure is receiving stimulation from the world and is acting in front of the world.

It seems important to take into account the biographical, the historical aspect of human life, and to consider it as acting in the present way, not merely in an accumulative way as though it were a reservoir that opens up its outlets only when past events are recalled. Whether those events are remembered or not remembered, they were the formers of behavior.

To speak of biography is the same as to speak of personal history. But that personal history, as we understand it, is a living and acting history. This personal history leads us to consider a second aspect, and it is the one that appears as a code in front of given situations. That is to say, the events originating from an environment arouse not one response, but a structured system of response. And in subsequent moments this system of response serves to achieve similar behaviors.

These situational codes, that is to say, these fixed conducts that human beings acquire (probably both to save energy and to protect their integrity), are the ensemble of roles.

Roles are fixed habits of behavior progressively configured through confrontation with the varied environments in which a person is called upon to live: a role for work, a role for the family, a role for friends, etc. These roles do not act only in the moment of confrontation with a given environment. They are acting at every moment, even when we are not confronted with the given situation. They manifest, they become evident, when the situational stimulus enters a specific range of human conduct.

We distinguish family roles, work roles, various situational roles that a person may have established, may have recorded. And so, it is clear that when that person goes to their workplace, their behavior adapts and they take on a role proper to their work, which is different from the role they have with their family. Yet in the role they adopt in that particular situation there are many components proper to the roles that have to do with dealing with other situations. It is as though various roles from other situations leaked into the situation that is recorded for responding within that environment.

At times, other roles filter in not only through action; that is, they do not manifest their characteristics through action but through inhibition. For example, a person has recorded many roles, a role for work, another for their family, and so on. But their family role is inhibitory; there is no reason whatsoever for their work role to manifest as inhibitory, but it happens that these infiltrations proper to the family relationship appear in their work relationship, and inhibitory phenomena arise that have not been recorded in the work role. This is extremely frequent, and it produces a sort of transfer of inhibitory data, or of role activators, which correspond to other ranges of confrontation with the world.

Just as we have been speaking of a work of the centers that is dynamic and structural, and we have not spoken of those centers as if they were isolated and closed-off compartments; just as we have talked about a structural and extremely dynamic work of levels, in which those levels act mutually on each other, when speaking of behavior we are also talking about a structure (in this case, of roles) in which something more than the activating of a computer file card in front of a given stimulus takes place.

One can observe a continual dynamic in the human structure. Looking for examples, we see that very young people have not yet formed that protective layer of roles. Those young people find themselves unprotected in their confrontation with the world because they have not yet recorded certain codes. They may have recorded the basic code of the family relationship and little more besides.

As they grow older, and in the measure that the environment requires an increasing number of behaviors, they go on expanding these layers of roles. Rather, this is what should happen, but in reality, it does not happen quite like that because of the numerous

phenomena that stand in the way of gaining confidence in managing the environment. Errors of role are produced. This is the case of the individual whose behavior in one place uses a role proper to another situation. For example, in their job they behave with family roles; they relate to the boss in the way they relate to their brother, and this logically brings with it numerous problems and confrontations. There can also be an error of roles when, in a new situation, the subject does not adapt successfully.

The study of one's personal history, of one's biography and behavioral codes, these roles of behavior, clarifies and sheds light on some aspects of, and inhibitions in, other areas. For example, in the work of the centers and in the structuring of the reveries, since the codifications made by personal history, by the biography, modify the action of these centers and levels of work.

We can further define our study of behavior by introducing some simple and operative concepts. Thus, "formative landscape" is what we call the collection of recordings that configure the biographical substratum, over which habits and basic features of personality are deposited. The formation of this landscape begins at birth.

These basic structured recordings comprise not just a system of memories, but also affective tones, a characteristic form of thought, a typical way of behaving and finally, a manner of experiencing the world and of acting in it.

The structuring of the world around us that we progressively carry out is strongly influenced by that base of memories comprised of tangible objects, but also intangibles such as values, social motivations, and interpersonal relations. We can consider our infancy as the vital stage in which the formative landscape was fully articulated. We remember the family as functioning differently than today; our conception of friendship, of camaraderie and, in general, of interpersonal relations have also changed.

At that time, social status was defined differently and what one was supposed to do and not do (the epochal norms), as well as personal and group ideals, were also different. In other words, the intangible objects that constituted our formative landscape have changed since then. Nonetheless, that landscape of formation continues to be expressed in our conduct as a way of being and of moving among people and things. That landscape is also a general affective tone and the 'sensibility' of a time period that is not in agreement with the present one.

We should consider our own 'look' and that of others as important determinants of our landscape of formation. Numerous factors have acted on us to produce a personal behavior over time, a codification on the basis of which we give responses and adapt to

the environment. One's own look regarding the world and the looks of others regarding oneself acted to produce readjustments of conduct; and thanks to all of this, a behavior was formed. Today, we rely on a vast system of codes that was minted in that stage of formation, and we experience it as a biographical "background" that our behavior responds to as it applies itself to a world that, nevertheless, has changed.

Numerous conducts make up our current, typical behavior. We can understand these conducts as 'tactics' that we use to function in the world. Many of these tactics have proven appropriate up to the present, but there are others that we recognize as inoperative, and even as generators of conflict. And all of this is of no little importance when judging our own life in terms of growing adaptation.

By now we are in condition to comprehend the roots of numerous compulsions associated with behaviors that began in the landscape of formation. However, the modification of conducts that are linked to values and to a particular sensibility will be difficult to carry out without touching the overall structure of relationships with the world in which one lives today.

The System of Detection, Register and Operation: Senses, Imagination, Memory, Consciousness

The three experiential pathways that we mentioned at the beginning (sensation, image, and memory), should be studied more carefully.

Without sensation there is no pain or pleasure. Imagination must be registered; without this register, we cannot speak of imagination. If we register the work of the imagination, it is because it reaches the point of register as sensation. Pain also makes its way through the memory. The register of this pain that comes through memory is possible thanks to the fact that memory is expressed as sensation. Whether we are dealing with imagination or memory, everything is detected as sensation. Pain is not in the imagination; pain is not in the memory—pain is in the sensation to which every impulse is reduced. One has a memory of something because that event is registered; one imagines something because that event is registered. And so that register, that sensation, is what gives us information on what is remembered, what is imagined. It is clear that in order not to confuse things we distinguish between sensation as such (that which comes from the senses), and other sensations (that do not come from the senses), such as those that come from the memory or the imagination. We will not call these last two 'sensations,' in order to not confuse our description.

However, if we are going to reduce things to their ultimate elements, we can affirm that both an image and a mnemonic datum arrive at something that registers them as sensation. We say that the activity of the senses is registered; we say that the activity of the memory is registered, that the activity of the imagination is registered. By saying "register," we make a distinction between something arriving from one pathway and something arriving from another. And we note that there is "something*"* that registers. Without that "something*"* that registers, we cannot speak of what is registered. And that which registers must also be constituted somehow. So surely, we shall also have a sensation of it. We are speaking of the register of the entity that registers, and we call this entity, "consciousness."

That apparatus that registers is in motion as are the activities it registers. Nonetheless, it has a certain unity. Sometimes this apparatus is identified with the "I." But unlike the consciousness, the "I" does not seem to be constituted from the beginning but rather becomes constituted within the human being. Moreover, one cannot speak of the "I" if its limits are not defined, and it seems these are given by the sensation of the body. This "I" must constitute itself in the human being in the measure that the entirety of the bodily sensations is constituted… of course, the memory is in the body, the imagination is in the body, the senses are in the body, and the apparatus of register of all of that is in the body and is linked to the sensations of the body.

Since the sensations of the body operate from birth (and even before) from the beginning this general sensation of the body goes being constituted. Some confuse this general sensation with the "I" but in reality, we are talking about the consciousness as an apparatus of register. Let's say that in very early infancy, very soon after birth, the "I" does not function. One is not born with an "I." Identification with one's own "I" is realized as the sensations of the body are codified, thanks to the apparatus of memory. There is no "I" without memory, and this memory cannot function if there is no data. These data begin to be articulated in the measure that experience develops. We are saying that an infant does not have an "I." A child can perceive a "we," but does not know if his body begins or ends in an object. A child does not know if he is "I" or if his mother is "I." This "I" is gradually articulated through the accumulation of experience.

We said that all psychic phenomena and processes are in the body; but where is the body? For the "I" that has been constituted, the body is outside of it, and it is inside the body. What are the limits of the body? They have to do with sensations but if the sensations are extended beyond the body, what are the body's limits then? This point has a certain importance, because, if for example, we distinguish external touch as the body's limit, then the body ends where external touch ends. The body begins there where sensations are registered on the skin. But it could happen that one did not have tactile

limits, that the temperature of the skin was at the same thermal level as the environment around the skin, and then one would not know exactly what the limits of the body were, how far that body reached. We know of many sensory illusions and we know that when a person stretches out in a relaxed state and the ambient temperature is very similar to that of the skin, they experience the sensation of the body growing larger, not because any extraordinary phenomenon is taking place—on the contrary, the illusion of the body's enlargement takes place because the body has no limits, and there are no limits because the temperature of the skin and of the environment is the same. So it is that the sensation of one's own body is constituted depending on the limits put on the sensations.

We say that one of the pathways of pain is the pathway of sensation, and when we speak of sensation, we are referring to what is perceived through certain apparatuses with which the body is equipped. Let's see. I have the sensation of an external object. However, I also have the sensation of an internal pain. Where is the sensation of that internal pain? Surely, I register it in that apparatus that we spoke of at the beginning. But where is the sensation? The sensation seems to be in the interior of my body. And when I see the external object, where is the sensation? The sensation is also in my body. And what makes me distinguish between the object that is inside and the object that is outside? Not the sensation, certainly, since both the sensation of what happens outside and of what happens inside are registered inside me. I cannot register a sensation of what there is outside, outside of my body. I have to register the sensations whether they are external or internal objects inside of my body. Nevertheless, I say that an object that I perceive is outside of me. And how can I say of one object I perceive that it is "outside," and of another, that it is "inside," since in all cases the register is always inside? There must be some particular functioning of the structure that makes it possible to establish these distinctions.

I remember some work I was doing. Where do I register the memory of that event? I register it inside me. I imagine some work that I will do right now, or that I will do in the future. Where do I register that which I will do? I register it in my interior, of course. But the events that appear on my screen of representation appear as though they were "outside" of me. I am remembering, perceiving, or imagining activities that seem to occur outside. The internal representation that I have of all that appears before me as though it were occurring in the external world.

If I now observe where I register these images (whether they are proper to my imagination or my memory), I see that I register them on a kind of "screen," in a sort of "space" of representation. And this space of representation is inside me. If I close my eyes and remember something, I observe that what I remember arises on a kind of screen, on a space of representation. So, what am I doing with all of this that happens inside me, with

respect to the objects and events that take place on the outside? Surely, I must be doing something different from what happens outside of me. I will say that I “reflect” it, I’ll say that I “translate” it, I’ll say whatever I want, but in every case, I am carrying out operations in my interior that have something to do with phenomena that are not proper to it.… How all of this machinery functions is a matter for careful study.

How might a sensation that I attribute to an object of the external world and a sensation I attribute to an object of the internal world be differentiated? By the sensations in themselves or by certain limits that the body imposes on these worlds?

We must recognize that a certain relationship exists between the sensations one has of the external world, the memories one has of the external world, and the imaginings one has of the external world. We cannot simply say that all that is illusion. It is not illusion, for the simple reason that if I think of an object and then I move toward that object and I have the sensation of that object, there is something that agrees between what I have remembered of the object, between what I have imagined about the object, and what I now perceive of the object. It is evident that I can recall an object and then open my eyes and find it. Maybe I don’t get the shapes, colors and distances totally correct, but it’s there, I see it, all that stuff is there. Moreover, I can tell someone else that there is an object over there, and that person can represent or find the object. That is to say, there is something that, whether distorted or not, agrees. However, it is also clear that I could be color blind, for instance, and perceive an object which is of one color, as if it were of another. And so, even if there is agreement among all these functions, there can also be agreement among illusions. For us, it is important to comprehend how it is possible for such heterogeneous functions to agree because somehow, they do agree, thanks to that apparatus that coordinates and processes all those different data.

It is evident that these signals are coordinated amongst themselves and there is a consciousness that coordinates them. Among the functions of the consciousness there appears the “I” that I register as the point that decides my activities in the external world, and certain activities that I regulate voluntarily in my internal world. The “I” is in the body. But how is it that the “I” is in the body? Is it in the body as a physical localization, or has this “I” been constituted by a mass of experience, a sum of experience? Or perhaps this “I” is a structure articulated by different signals that reach a specific point? It could be that this “I” that coordinates, begins coordinating once a critical mass of information is acquired; because if this mass has not yet been formed, the “I” does not appear and the body itself is confused.

We will study, step by step, how this is – this thing of the sensations that are registered in the interior or toward the exterior of the body.

We have a scheme in which there appears this structure to which impulses arrive and from which responses go out. These arriving impulses reach a specific apparatus that detects them. This impulse-detecting apparatus is the apparatus of the senses. This apparatus gathers the data from the external world and from the internal world. The data reach this apparatus, but furthermore I perceive that these data can be updated even if they are not arriving at this moment. I say then that these data that reach the point of register, simultaneously also reach an apparatus that stores them. These data are stored, whether they are data from the external environment or from the internal environment, the data that arrive are stored. At the point where I register the data, I have also simultaneously recorded them, and this allows me to now extract previous data. All this occurs through senses that have different physical localizations and that are in continuous movement, but that are related to one another and not absolutely compartmentalized. And so, when one sense detects something, the others are modified. If one perceives through or by means of the eyes, it is thanks to the fact that the sense of sight is in motion (not only external physical muscular movement to locate the light source); it is active. The eye does not become active simply upon perceiving light. The sense of sight is in motion, it is active, and a variation is produced within it when an impulse arrives. All the other senses are also active and when the eye perceives a phenomenon external to it, a variation in the motion of the other senses is also produced.

What happens with the external senses also happens with the internal senses. The internal senses are also active, and so it could very well be that someone is perceiving an object with the eye and, at the same time, internally perceiving a stomachache. And this simultaneous perceiving of the object with the eye and perceiving of a stomachache with the internal senses means that the information goes to the memory simultaneously. For example: I arrive in a city, and everything goes badly. Later I recall that city and what do I say about it? I say, “That’s a terrible city.” And why do I say it’s a terrible city? Because things went badly for me there. And what is this, “things went badly for me?” Is it simply because of the perceptions I have had? Or because of a number of situations I was in, a number of registers of another kind that are not external perceptions? No doubt other registers were at work, other internal sensations. Surely, it’s what happens with everything and not just with that unpleasant city. It seems that when I register something, I record it, and if I register it simultaneously with data from other senses, I also record it simultaneously with them. It seems that one is continually receiving information from all the senses and continually recording all that information. And it seems that the information from one sense is conditioned by and connects with the information from another sense.

Sometimes, upon capturing certain fragrances through the olfactory sense, complete visual situations arise from the memory. And what does the sense of smell have to do

with all those visual situations? It's obvious that the senses are linked to one another. Sometimes when one sense is set in motion, the others lower their level of activity. When all the senses are being bombarded, a problem is created with the register. But when paying attention to one sense (and we will see later what this "attention" is about), the other senses tend to quiet down. It's as if all the senses were alerting the "I" with the noise they were making with their scanning, as if all the senses were engaged in a search. Then, when a signal reaches a sense, all the others tend to quiet down. The senses, even when they don't perceive any external data, are in movement and are producing their noise, providing information on themselves. There is a background of noise that lowers as the senses specialize in a certain area of perception.

And what does the memory do? It gathers data from the senses and on the operations of that apparatus of registers. I remember, for example, the mental operations that I've been carrying out. First, I have a sensation of the mental operations themselves; I can speak of my mental operations because I have a sensation of them. I have a sensation of my operations, they are internal sensations, sensations as much as is a stomachache. We are taking certain precautions and arguing against certain positions that are circulating, positions that presuppose that mental operations have nothing to do with the body because the body has to do with the operations of the digestive apparatus, or with what the eyes perceive, and when we talk about matters of the "spirit" such things should not be related to the body. We are challenging those who assume that there is a spirit that has nothing to do with the body. And if there is a spirit that has nothing to do with the body and it is the one that carries out these operations, then who registers these operations? Where are these operations registered? And how are these operations then evoked? If one speaks of a spirit, it will be because I have a register of that spirit; and if I have a register of that spirit, it's because something can receive an impression from that spirit. And if I don't have any sensation of that spirit, then I can't speak about it.

There are others who think that the psychic apparatus is the sum of sensations, as if there were no other complex and delicate apparatuses coordinating these sensations, that cause them to function in structure. We disagree with them as well, with those who believe that the activities of the mind are a simple sum of sensations. It is very different to say that I have sensations of the work of the senses, the memory, and the imagination than to say that "they are sensation." There are distinctions among them and there are very different functions that the apparatuses of sense and the apparatuses of representation fulfill. And so, we do not exactly share that crude, sensualist thinking. Neither do we share those other odd ideas that speak of the "spirit" as if there were an entity that had nothing to do with registers or sensations. There are those who speak of the mind, of the pain of the mind, because the pain of the body has nothing to do with it. And this pain of the mind—how is it experienced? "It is experienced through the spirit," they say, in the same

way that artistic sensations are experienced in the spirit. And who is that gentleman (“the spirit”) who performs so many operations outside the body, and how is it that I have data about that gentleman?

By “apparatus,” we understand the structure of the senses, the structure of the memory and the structure of consciousness with its different levels. These apparatuses work in an integrated way, and the connections between them are effected through impulses that, in turn, undergo distributions, translations and transformations.

Senses

The sensory apparatus finds its origin in a primitive sense of touch that has become specialized. The chemical senses (taste and smell) work with particles that produce certain chemical transformations, and as a result they deliver that datum. The mechanical sense (touch) functions on the basis of pressure and temperature. The internal senses of cenesthesia and kinesthesia function sometimes chemically and sometimes mechanically. One also has the register of what happens in the intrabody through pressure, through temperature and through chemical transformations and reactions. We consider the senses of hearing and sight as physical senses. Hearing functions through percussion; sight through the physical reception of a vibratory action.

In the internal senses, the cenesthetic sense provides information on the intrabody. We know there are many small intrabody organs that take chemical samples, as well as those that sample temperature and pressure. The detection of pain also plays an important role. On reaching a certain point of tolerance almost all the senses give us a register of pain. It could be thought that there is a particular specialized apparatus for detecting pain but, in reality, all the senses send us painful sensations when they reach a certain limit of tolerance. These sensations are what immediately set in motion an activity of the structure to reject, to eliminate these intolerable sensations. So, the sensation that is captured by a particular sense is immediately linked to the activity of rejecting what is painful.

The work of the centers is detected cenesthetically, internally, as are the different levels of work of the consciousness. The sensation of sleep, the sensation of fatigue, can also be experienced. Cenesthesia is an extremely important sense to which very little attention has been paid. The internal sense later becomes specialized and differentiated between kinesthesia and cenesthesia. When vigil drops in its level of work, when the level of consciousness lowers, more impulses are emitted by this internal sense.

Since the senses work in structure and dynamic, all of them are searching, scanning, and producing a background of noise in the information. However, when a person sleeps and

closes their eyelids, contact with the external world doesn't totally disappear. Rather, the background of noise is considerably reduced, and with this decrease of information from the external world, information from the internal senses increases in a relative way. We cannot say precisely whether the internal impulses increase when the level of consciousness drops, or whether when the level of consciousness goes down, the work of the external senses is reduced as well; but the work of the internal senses becomes evident. With the lowering of the level of consciousness, the impulses from the internal world manifest with greater intensity.

These internal senses are not localized in the face, as are almost all the others, neither are they located in specific points, nor can they be directed precisely. They are involved in everything and provide their data without any voluntary effort on our part. One can, for example, close one's eyes and make the perception that was reaching the eye disappear. One can direct the eye in one direction or another, but one cannot do this with the internal senses. One can pay closer attention to certain internal sensations, but these internal sensory apparatuses do not have that mobility and cannot be suppressed. Thus, they are characterized, on one hand, by their not having precise localizations and, on the other, by their lack of mobility, i.e., they cannot be directed like the other senses. Among the internal senses we distinguish the kinesthetic sense, which we said provides data on movements, corporal postures, physical balance and imbalance.

And so, we have a collection of dynamic apparatuses that supply us with data on the external and internal worlds. The traces of this internal and external information, as well as the traces of the operations of the consciousness itself in its different levels of work, will be received in the apparatus of memory. The psychic structure (the consciousness) will coordinate data from the senses and recordings from the memory.

As we have said before, data does not simply reach an inactive apparatus that perceives it; rather, the data reaches an apparatus that is in motion. The datum that arrives at this apparatus in movement is configured as perception. And so, sensation is a theoretical atom; but, in reality, there is a datum that on reaching a sense in motion is configured and structured. This is what we call "perception," which is the sensation plus the activity of the sense. The register is therefore a structuring that the sense does with the data, and not the data itself.

Characteristics Common to All the Senses

a) According to their aptitudes each of the senses carries out activities of abstraction and the structuring of stimuli. We are saying that the senses eliminate much of the data that reach them and configure other data that do not reach them. Recalling some examples about how a frog's eyes perceive you will recall that this little creature perceived that there was another living being in front of it when a certain form appeared (curved and convex),

and only when that form was in movement. If either that form did not appear but there was movement, or vice versa, no register was produced in this little animal's apparatus of detection. If you remember this, you will understand what we are referring to when we speak of the abstraction that the sense carries out, and furthermore, the structuring that the sense performs. And from this structuring of diverse data, perception arises.

b) All senses are in continuous movement. They are like radar sweeping different ranges, and there is experimental proof of this as well.

c) All of them work within a range according to a particular tone that must be altered by the stimulus. In other words, each sense is in motion within a specific tone. When perception arises, it is because of a variation of the tone proper to that sense. You remember the experiments with the frog's optic nerve that was always cycling at one pulse per second, but when the nervous stimulus arrived, it began to cycle with greater velocity. The sense was in movement. For perception to be produced, it is necessary for the stimulus to appear between sensory thresholds. The sense is pulsating, but if the arriving stimulus doesn't have enough energy, it is not perceived. If it goes beyond the limit of tolerance, it is not perceived as a sensation or perception proper to that sense, but as pain. These thresholds have mobility. The thresholds also expand or contract. So, normally, when certain internal activities such as attention are focused on a sense, its threshold tends to expand, and the thresholds of the other senses tend to contract. When the internal senses work fully, widening their threshold of perception, the external senses tend to reduce their range. When the attention is focused on the external senses, the range, the threshold of internal perception, tends to contract. So, for there to be perception, the stimulus must appear between sensory thresholds: a minimum threshold below which perception does not take place, and a threshold of maximum tolerance that, when surpassed, produces sensory irritation or saturation, or what we generically call, "pain." If there is a background of noise coming from the same sense or from other senses, or there is a background of noise coming from memory that is supplying data while perception is taking place, or there is a background of noise because consciousness in general is supplying data, the stimulus must raise its intensity for it to be registered, without going beyond the maximum threshold so that saturation and sensory blockage do not occur. When a person is divagating, daydreaming, and their images are occupying the field of consciousness, the stimulus that appears must increase its activity to be detected. In any case, when one is divagating or daydreaming, the internal cenesthetic activity is increasing, and therefore, the ranges of external perception are lowering. So, it is necessary that we increase the activity from the external world and, for example, say: "Hey! Wake up friend!"

d) All the senses work between thresholds and limits of tolerance that allow for variations according to their education and metabolic needs (in reality, it is here that we encounter the root of sensory existence). The characteristics of variability are important for distinguishing sensory errors.

When the maximum threshold is exceeded or there is sensory blockage, it is necessary to make the background noise disappear so that the signal reaches the sense. Another case is established by the law of decrease of constant stimulus through the adaptation of the threshold. That is, the clothes we're now wearing at first give us a tactile sensation, but time passes, and we no longer feel them. Not just because we've been distracted from the problem of the clothes and we are into something else—not just because of this—but because the constant stimulus decreases in intensity. As time passes, the constant stimulus decreases for the perception. So, when a stimulus lies within the threshold but becomes constant, the threshold adapts to exclude the stimulus at its limit and no longer sustain that register which would disturb other activities of the apparatus. And so, we have numerous stimuli, but when the stimuli become constant, the thresholds of the senses adjust so that the background of noise disappears. Otherwise, the perceptual bombardment would be constant, and we would have such a background of noise that there would be very little distinction made between the new perceptions that might appear. In this way, perception takes place between ranges, minimum and maximum thresholds of tolerance; thresholds that are in continuous motion. When there are constant stimuli that appear within these ranges, they adjust so that the perception of those stimuli decreases. We call this the law of decrease of constant stimulus through adaptation of the threshold.

e) All the senses translate perceptions into the same system of impulses. These impulses are distributed in various ways. We don't want to get into questions of physiology, but let's note that all senses translate perceptions into the same system of impulses. We call this "homogeneity of impulses from the different senses." So, I see one thing, hear another thing, and taste a third thing, but all this of hearing, tasting, seeing, etc., is translated into the same system of homogeneous impulses. It's the same type of impulse at work. It is not sounds that go through the inside of one's head, or visual images, or gustatory or olfactory sensations.

f) All the senses have physical localizations, terminal physical localizations, whether precise or diffuse, connected to a system that coordinates them. All the senses have terminal nervous localizations, whether precise or diffuse, always connected to the central

nervous system and to the peripheral or autonomic nervous systems, from where the apparatus of coordination operates.[T5]

g) All the senses are connected to the organism's general apparatus of memory.

h) All the senses have their own registers, given by the variation of the sense's tone when a stimulus appears.

All the senses can commit errors in the perception of data. These errors can originate from a blockage of the sense, for example, due to sensory irritation. A sense becomes irritated, and we reach the threshold of tolerance. The perception we have of the irritating datum is one that is greatly modified and that has nothing to do with the object. So, these errors can come from a blockage of the sense caused by sensory irritation, but also from a failure of, or deficiency in, the sense. You are familiar with cases of myopia, deafness, etc. Errors also arise when there is a lack of involvement of one or more of the other senses that help to provide parameters, or references for the perception. For example, you hear something that is apparently far away, and on seeing the object in question you begin to hear it differently. This is a very frequent case of auditory illusion. One believes that the object is far away, but the perception is adjusted on seeing and locating it visually.

Normally, data is being received, information is being received from the different senses and as we know all the senses are working in structure. And with this information, perceptions are being configured about the world that surrounds us. So, when the parameters fail and we have just one sensory datum, we have cases where an illusion is produced in the perception. There are also errors of sensation or perception caused by mechanical agents. This is the case of seeing light by applying pressure on the eyeballs. We find examples of illusions produced by mechanical action in almost all the senses.

Imagination

It is very difficult to differentiate between the stimulus that, coming from a sense, reaches the apparatus of register, and the image that it arouses, the image produced by the stimulus. It is very difficult to distinguish between the impulse of the sense, and the image that corresponds to that impulse. We cannot say that the image and the impulse of the sense are one and the same. Neither can we distinguish, psychologically, the velocities of the internal impulse and the velocity of the image. It is as though the image and the impulse were one same thing, when in reality they are not.

[T5] Translators' Note: This is possibly a transcription error. The nervous system is normally divided between the central and peripheral systems, and the latter is divided into autonomic and somatic.

When considering the image, it is necessary to take a few precautions. In the first place, we should recognize that images do not correspond only to sensorial stimuli but can also arise from memory. And secondly, we must always be alert to the naïve interpretation that construes the image as if it could only correspond to the visual sense.

Some primitive scholars of these matters saw the image as fulfilling a second-class function in the economy of the psychism. For them, an image is a kind of degraded perception, a second-class perception. In other words, they noted that if a person looks at an object and then closes their eyes and evokes that object, it seems of inferior quality compared to the perception. They can perceive the object better and more clearly with the eye than by evoking it. Besides, this memory is tinted by a number of extraneous elements that contribute to the resulting confusion about the object. Therefore, the representation of the presented object appears as degraded; that is, there's a kind of fall in the perception. Understood in this way, the image was filed away by some scholars as a secondary phenomenon of the consciousness. They were also unclear regarding the fact that images do not just correspond to the visual sense, but that each sense is a producer of corresponding images. And finally, it was believed that the image only had to do with the memory, and not that it was closely linked to the senses.

In reality, the image fulfills numerous functions. We need to comprehend the function of the image in order to later understand that this image, when mobilized, acts over the centers and carries energy from one point to another, producing transformations of vital importance in the economy of the psychism. For one thing, if the senses appeared to provide information about the phenomena of the external or internal worlds, the images that accompany sensory perceptions are not there simply to repeat the data from the received information, but rather to mobilize activities relevant to the incoming stimulus.

Let us observe this in an example from daily life. I'm at home and the doorbell rings. The doorbell is a stimulus for me that I perceive. I quickly jump from my chair and go to open the door. The following day, the doorbell rings and the stimulus is the same one, but instead of leaping from my chair and going to open the door, I stay put. In the first case, I was waiting for a letter that was supposed to be delivered that morning. In the second case, I was expecting a neighbor to knock on my door and ask to borrow a saucepan. In each case, the stimulus mobilizes a specific image depending on whether in my presence or my co-presence there was one datum or another. In the first case, the stimulus mobilized the image of the delivery I was expecting. Of course, I was occupied with something else and at that moment I was not expecting the delivery. Certainly, I was into something else, but when the stimulus arrived, the set of images I was counting on were somehow mobilized. When these images were mobilized, I leapt from my chair and went to the door. However, in the second case, I had another system of ideation and when the stimulus arose it did not mobilize the image of the delivery person; rather, it mobilized the

image of my neighbor, among other reasons, because I had already received the letter I expected the day before. Therefore, when this second image arose, my body was mobilized in a different way, or it was not mobilized.

And so, it's not like in the old story that everything works so simply through stimuli and responses that correspond to those stimuli. Even in an elementary circuit such as that of the reflex where, in a short reactive arc, the stimulus arrives and without any voluntary action the response occurs, apart from setting in motion a response, an image has been immediately generated which also produces an effect. In this way, a sensation is always accompanied by the arising of an image. The activity is in fact mobilized not by the perception, but by the image. So, in reality what mobilizes activities is not the perceptions but the images.

We are going to see how these images have properties that we have studied in reference to what we call "muscular tonicity," where the muscles take on a certain active tone according to the visual images. The visual images go in a specific direction and the muscles adjust in that direction. Is it perhaps the stimulus that is moving the muscles? Not at all. The image is moving the muscles. We must recognize that certain images not only activate our external but also our internal musculature and, in that way, numerous physiological phenomena are set in motion. The image mobilizes internal phenomena, which produces activity toward the external world, as if the function of the image were to return energy to the external world from where the sensations came.
The internal senses also have to receive information on what is happening with the activities of my consciousness, because if I did not have that information, I would be unable to give continuity to those processes. So, the internal senses detect not only visceral data, that is, data from the intrabody, but also what is happening with my activities and with the operations of my consciousness.

The "apparatus" that produces images functions in different levels of work, contributing to modifying not only the activity of the consciousness, of the coordinator, but also of the specific apparatuses pertaining to information from memory and the activities of the centers themselves.

Clearly, data about the functioning of the consciousness reach the internal senses. The consciousness, in turn, can also act to orient the senses in one direction or another, making them pay attention to one sensory range and disregard another. In reality, these are functions of the consciousness, rather than of the senses. We should study this when we touch on the topic of the structuring carried out by the consciousness. In any case, it is good to note that the senses are moved by the activity of the phenomena that reach them and that they are also moved by the direction given to them by the apparatus of

coordination. When the senses are not limited to merely receiving impressions from the external or internal worlds but are intentionally directed, we are then in the presence of the phenomenon of reversibility.

Hearing a noise produced without the participation of my intention is very different from searching for a specific noise. When I use my senses to look for something in particular, I am directing the activity of the sense with the mechanisms of the coordinator. Apart from directing the senses, simply perceiving data is also very different from being conscious of the perception of that data. I hear the doorbell, and it does not mean a great deal to me. But when I hear the doorbell and this hearing of the doorbell is something that involves my awareness, in the sense that I isolate it from an undifferentiated mass of stimuli and I pay attention to it, then I am working not with the perception of an undifferentiated stimulus, but with the apperception of that stimulus. So, there is a work that is not simple detection and later perception but rather a work in which I pay attention to the perception. I call this “apperception.” Moreover, I can arrange all my senses in the direction of the apperception. Observe the difference between limiting oneself to being immersed in a mass of perceptions and taking an apperceptive attitude. In this attitude, all the incoming stimuli are registered with attention. I can be in an attitude of boredom and the stimuli arrive anyway, or I can be in an attitude of attentiveness to the stimuli jumping at me, as a hunter waits for the hare to jump. I can be very attentive, waiting for certain stimuli to emerge, and even if they do not, I am in an apperceptive attitude. Taking into account the mechanism of reversibility will be very important in order to comprehend the issue of levels of work of the consciousness, and to clearly recognize various illusory phenomena.

We are trying to emphasize, among other things, that the senses do not just bring in information from the external world, but that they work in a very complex way, directed in some of their parts by the activity of the consciousness. It is not the case that the senses are influenced simply by visceral internal phenomena, or by phenomena of the external world; the activity of the consciousness also influences the work of the senses. If this were not the case, there would be no explanation for the way certain perturbations of the consciousness modify the register of the external world. By way of an example: ten different people can each have a different perception of the same object (even though they are at the same distance, under the same lighting conditions, etc.), because there are certain objects that lend themselves to the consciousness projecting its work on them. In reality, the consciousness does not project its work on the objects; the consciousness projects its work on the senses, and in this way, it modifies the system of perception. The consciousness can project its images on the apparatus of reception, the apparatus of reception can return this internal stimulation, and then one can have the register that the phenomenon has arrived from the outside. If this is so, then certain workings of the consciousness can modify the structuring that the senses perform on the data from the external world.

Memory

Neither the memory, the senses, nor any other component of the psychism works in isolation. Memory also works in a structured way. As we have said before, memory has the function of recording and retaining data coming from the senses and the consciousness. It also has the function of supplying data to the consciousness when those data are required. The work of the memory supplies the consciousness with references that allow for its temporal location among the phenomena. Without this apparatus of memory, the consciousness would have serious difficulties to locate phenomena in time. It would not know whether a certain phenomenon happened before or after, and it could not articulate the world in a temporal sequence.

The consciousness can locate itself in time thanks to the existence of the memory's different ranges and thresholds. Also, thanks to the memory, consciousness can locate itself in space, since mental space is by no means disconnected from the times of consciousness—times which are given by phenomena that come from memory. Thus, these two categories of time-space function in the consciousness thanks to the supply of data provided by memory. Let us look at this more carefully.

Just as we speak of a theoretical atom of sensation, we can also talk about a theoretical atom of reminiscence. These are theoretical because they do not exist as experienced phenomena. What can be registered is that data coming from the senses and from the consciousness are received, processed, and arranged in the memory as structured recordings. Memory receives data from the senses, it receives data from the operations of the consciousness, but more than this, it organizes and structures them, carrying out a very complex work of compilation and organization. When the level of consciousness descends, memory starts organizing all the data that had been filed away in another level of consciousness. At one level memory works, recording and filing away all the data, all the data received that day. And at another level of work, memory begins to classify and to organize all that data received in vigil.

During sleep, which is another level of consciousness, we can observe that memory processes data. The arrangement of the received data carried out by the memory differs from the organization of that data that was carried out as they were received.

Right now, I am receiving information through my senses, and this incoming information is being filed away in my memory. Yet it turns out that when my level of consciousness descends and I go to sleep, I also encounter those data from the daily world, from the world of vigil. All that raw material I have received and recorded during the day reappears, but this raw material is not articulated in the same way in my internal system of representation. What had a certain sequence during the day follows another order when

the level of consciousness falls. So, what took place at the end now happens at the beginning; recent elements are connected to very old elements in my memory, and an entire internal structuring is carried out with the raw material received during the day and with previous data from the different layers of memory that correspond to an ancient memory and a more-or-less mediate memory. Memory is an ‘apparatus’ that performs different functions according to the level of work in which the structure of consciousness is found.

Data are recorded by memory in different ways:

1) A strong stimulus is recorded strongly in the memory.

2) Data is also recorded strongly when it enters through different senses simultaneously.

3) Recording also takes place when the same data about a phenomenon is presented in different ways. If the object is presented one way, I record it that way. If presented in another form, I record it in another way. My consciousness is structuring and articulating the object, but apart from that I have received an impression A and an impression B. The recording takes place because of repetition, as well as because the data that the consciousness is structuring about the object in question is recorded as well.

4) There is also recording simply through repetition.

5) Data are recorded better in context than by themselves.

6) They are also recorded better when they stand out or are noticeable because of a lack of context. Something that stands out, something not possible, draws greater attention and is therefore recorded more strongly.

7) The quality of recording increases when the stimuli are easily distinguished, as happens in the absence of background noise, or due to the clarity of the signals.

When there is saturation due to a repetition, blockage occurs. Advertisers have somewhat exaggerated the law of repetition. Data are incorporated through repetition but that also causes sensory fatigue. Moreover, what is valid for the senses in general is also valid for memory, i.e., the law that a stimulus decreases the longer it is sustained. The repetition produced by a constant dripping of water does not help the recording of that dripping. What it achieves is that the recording threshold closes up, just as the threshold of perception also closes up, and therefore the datum ceases to stimulate. When, by relying on the law of recording through repetition, an advertising campaign becomes excessively

repetitive and inconsiderately insistent, the memory becomes saturated, and the datum no longer enters; sensory irritation and memory saturation are produced instead. Working with animals using the repetition of stimulus, one can see that instead of strongly recording the stimulus and obtaining an appropriate response, the animal ends up just falling asleep.

When there is an absence of external stimuli, the first stimulus that appears is recorded strongly. The memory is also better able to record when it is not sending information to the consciousness. And when there is no data arriving to the consciousness, memory compensates by releasing information. Let us imagine the following case: A person is locked up in a cave where no stimuli from the outer world can enter. No light gets in, there is no sound, no gusts of wind to stimulate their sense of touch, the temperature is more or less constant. External data are reduced. Then, memory begins to release its stored data. This is a curious function of the memory. A person is locked up in jail, or placed inside a cave, and then despite the external senses not working and the loss of external data, the memory begins supplying data to the coordinator. If we eliminate the external sensory data, memory immediately begins to compensate by supplying information. Memory does this because, one way or another, the consciousness needs all this data to locate itself in time and space. When consciousness has no references from data to stimulate it, it loses its structurality. And the “I,” which arose out of the sum of the stimuli and the sum of the work of the apparatuses, now finds that it has no stimuli or data coming from the apparatuses. The “I” loses its structurality and experiences a sense of disintegration, of losing inner cohesion. So, to sustain the precarious unity of the “I” it appeals to references from data, even if they are only coming from the memory.

Remembrance, or more precisely, evocation, arises when memory supplies previously recorded data to the consciousness. This evocation is produced intentionally by the consciousness, which differentiates it from another type of remembrance that is imposed on the consciousness.

For the sake of symmetry, let us make an analogy with mechanisms discussed in reference to the senses and the consciousness. When stimuli arrive to the consciousness from memory, we refer to this as “remembrance.” When consciousness goes toward the stimuli, we call it “apperception.” And when consciousness goes toward the data of memory, that is, when it searches for the datum that interests it, then we speak of “evocation.” Evocation takes place when the attention directs itself toward a specific band of stored memories.

We know that data from the external and the internal senses reach the consciousness simultaneously. This means that when I evoke, when I go to the memory in search of an

external datum, very often I recall it mixed with other data that accompanied the perception. In other words, if I am now receiving external information that goes to memory, I am also receiving internal information that goes to memory. When I evoke what happened, it is not only the external datum that appears in my consciousness, but also the internal data that accompanied that moment. This is extremely important.

Consider what happens when I remember. I observe the object, I close my eyes, and I remember the object. Depending on whether the education of my visual sense is good, average or bad, the reproduction of that impression will be more or less accurate. Do I remember only the object, or do I remember a few other things, too? Observe carefully.

We are not talking about a stream of ideas, about associations triggered by the memory of that object—which are also there. I remember the object and various other things come up as well. Let us go to the memory of the object itself. I observe the object, and I close my eyes; the object is reproduced from memory—an image of the object appears. But this image of the object that appears, aside from having other visual components since I am working with my eyes, also comes to me with components having to do with my internal registers: with muscular tones, with a certain flavor, a certain climate that has nothing to do with the perception. And so, when it comes to that object, I am remembering not just the recording that the object offers up, but also the recording of my state at the time it was produced. Of course, this has tremendous consequences. Because if this was simply an archive of sensory data, things would be easy. But it turns out that the information that I receive from the external world is linked to the state that the structure was in at the moment of the recording.

Moreover, we are saying that evocation can take place and that data stored in memory can reach the consciousness, thanks to the fact that the data about the phenomena are recorded together with data about the state of the structure. Because you'll notice that evocation does not work through a search for images but through a search for states. Images that correspond to one situation or another are identified not by the image itself, but by the state that corresponds to it. Observe what you do when you remember. You want to recall your house—how do you go about recalling your house? Notice what you do. You experience a kind of internal sensation, don't you? And that internal sensation you experience before the image of your house arises, is it a sensation of images? No. It is a cenesthetic sensation. That cenesthetic sensation is searching among different internal states for the general climate that corresponds to the recordings of visual images of your house.

And when you want to evoke a horrible image, do you search among different monster masks to find the right one, or do you search for the corresponding climate in that

particular level of memory that strikes you as “horrible?” You do not search through images; you search among masses of internal stimuli that accompany particular recordings. Once the image is finally evoked by the consciousness, it becomes available to carry out operations, trigger discharges, mobilize muscles, or mobilize an apparatus that can start working with that image, and so intellectual operations appear, emotions are mobilized, etc. When the image has leapt onto the screen of representation that is when it is ready to act. So, the system of evocation does not work through images; it works by searching among states. If we took a physiological approach, it would be like saying that visual images are not recorded in the neurons; small, microscopic images are not left inside the neurons. Rather, there are electrochemical currents that are not images, and when the phenomenon of evocation occurs, we do not go looking for those microscopic images until we find them; rather, we search for electrochemical levels that give us the register that corresponds to the level in which that image will later be articulated. So, evocation does not take place through images, but through the states that accompanied the sensory perception at the time.

Let’s take an example that we always use. I leave a place and realize I have forgotten something. What do you register then—an image? Or do you register a curious sensation? Certainly not an image, because in that case you would know what you had forgotten. You have the register of a curious sensation of something that you have forgotten. And what do you do, right away? You start searching through images. One appears and you say, “Not that one.” Another one appears and you say, “Not that one.” You start working by eliminating images. What guides you in this search? Are you guided by the image? No, the image doesn’t guide you. You are guided by a state that makes these different images arise, and when an incorrect image appears, you say: “No, this is not what I forgot because I have it with me.” And so, you continue, guiding yourself by the internal states until, finally, you hit on the object and experience the sensation of finding it. And you say, “That’s what I forgot!” In all that work, you were searching among states and those states triggered images, and you continued until you found it. The state of the act that searches for an object is very different from the state that corresponds to the act of finding the object, of impletion. The registers are very different. However, in every case we are talking about states which almost immediately are accompanied by images.

In the example we gave earlier of recalling an “unpleasant city,” I can say that I recognize it not just because its images appear, but because the state I was in at the time of recording the data of the city appears. And that city will be pleasant or unpleasant, or a city with such and such characteristics, not through evoking simple images that I may have but according to the states that arose in the moment I recorded them. Observe a photograph from another era, a kind of crystallization of past times. You see a photograph that recalls the happy event of that moment, and it immediately triggers in you the

nostalgic sensation of something that is clearly present but lost. There is a comparison, a confrontation between what is present and what is lost; this state that had to do with the recordings of that moment, and the present state in which I am recording this data.

We said that remembrance, or more precisely, evocation, occurs when the memory delivers previously recorded data to the consciousness. Evocation is produced intentionally by the consciousness, which differentiates it from other forms of remembering that impose themselves on the consciousness. For example, when certain memories, at times coinciding with a search or psychological contradiction, invade the consciousness without any participation on its part. There is a difference between searching for a datum in memory, and this case in which data arise spontaneously from memory and, depending on their charge, more or less forcefully invade the consciousness. There are states of memory that reach the consciousness, release images, and these images impose themselves obsessively. This image that arrives from memory or is released by memory and that invades the consciousness, obsessively imposing itself—is this due to the image itself, to the memory itself, or to the state that accompanies the image? No doubt, it is due to the state that accompanies the image. That obsessive image that corresponds to a situation I was in a long time ago, that image that is imposed on me, has a powerful (as we will later say) “climatic” charge. And so, the image arrives associated to a state, the same state in which that phenomenon was recorded.

There are different degrees of evocation, depending on whether the datum was registered with more or less intensity. Data that barely reach the threshold of being registered will also be barely evoked. There are even cases when there is no memory of the datum, but when it is perceived again, it is re-cognized. And there are data operating at the threshold of perception, which for us in this case is also the threshold of memory. Something called “subliminal” action or subliminal advertising became fashionable at one time and it appeared to be an interesting phenomenon, but later it turned out to be a fiasco. It involved a simple, pretty elementary mechanism in which a stimulus was launched at the threshold of perception. The subject did not fully register the datum, but the datum entered in any case. We know that the datum entered because it later appeared, for example, in the subject’s dreams; and because the subject, when in a certain state, was able to remember what they had apparently not perceived or seen at the time. So, in any case there is a lot of data that reach the threshold of perception. They are not registered at that moment by the consciousness, but they go to the memory. And if those data go to the memory, they go associated to the particular state that accompanied them.

Moreover, for the data to be able to have an influence in terms of advertising, it was necessary to associate a specific emotion to the subliminal object being projected. If the

idea was to advertise a drink, it was not just a question of putting the drink into the filmed ad once every 16 frames (we know that if we insert the object into a film once every 16 frames, we will see the movie, but we will not see the subliminal flash since it would be working at the limit of the perceptual range). If we chose certain parts of the film (the ones with the most emotional warmth) and we inserted the product into those parts, then when the subject evoked the film, the subliminally recorded phenomenon would act over them with greater intensity. That was the idea; it was a very simple one, but it doesn't look like the sales improved for the products that used this system of advertising. But there are still people who believe in the "power of that terrible, secret weapon." In any case, we are not dealing with the problem of subliminal propaganda. We are dealing with the problem of images or phenomena being recorded at the edge of the threshold, but that are recorded simultaneously with a state. Starting from the minimum thresholds of evocation, more intense degrees appear, until we reach automatic recall which features fast recognition.

Let us take the case of language. When one is speaking a language that they have deeply integrated, they don't need to recall the words they must articulate in order to speak them. This happens when a language is being learned, but not when the system of that language has become incorporated at an automatic level. In the first case, we are working with ideas as well as emotions, and so the memory supplies data according to the states that arise in the person who wants to express their ideas. How strange it would be if memory were a simple recording of sensory data! To be able to speak, we would have to reproduce everything that took place when we learned to speak—at the very least, we would have to reproduce the entire system of signs. But when I am speaking, I am not searching through the signical system; I am searching my ideas and my emotions, and the signic articulations arise, those signic images that I then express through language. What is at work is automatic recall, a recall of rapid recognition. And the recognition of an object takes place when its perception is compared with previously perceived data.

Without recognition, the psychism would experience a continual being-there-for-the-first-time in front of phenomena, even when they are repeated. It would always be the same phenomenon and there could be no recognition, and so the psychism would be unable to advance, despite what certain fashionable currents maintain. They are of the opinion that it is an "interesting psychological breakthrough" for the consciousness to work without memory. If the people who preached this worked without memory, they would not even be able to explain this system to others.

On the other hand, forgetting is the impossibility of bringing the already-recorded data to the consciousness. It is very curious the way complete ranges of memory, situations, and concepts are sometimes forgotten. In some cases, whatever might trigger a particular climate is erased and with it, all the phenomena recorded in memory that have anything

to do with that state. Entire ranges are erased because they might call forth that image associated to painful climates.

In general, forgetting is the inability to bring already-recorded data to the consciousness. This occurs because of a blockage in the reminiscence that prevents the reappearance of the information. However, there also exists a kind of “functional” forgetting that prevents the continual appearance of memories, thanks to mechanisms of inter-regulation that operate by inhibiting one apparatus while another is functioning. This means that, fortunately, we are not continually remembering everything; that fortunately it is possible to remember, locating the objects and the phenomena in different moments, in different times.

Fortunately, we are not continually remembering since this would greatly perturb the reception of data from the external world. Clearly, with the background noise of continuous remembrance, we would have problems observing new phenomena. Likewise, our intellectual operations would also be deeply disturbed if we were subjected to this kind of continuous bombardment from memory. We will even see how forgetting, amnesia, and blockage also operate, not due to a defect, but in order to fulfill an important function in the economy of the psychism. This is not because this structure is badly put together, but rather because it fulfills a function even in the errors it makes.

We can observe different levels of memory. In the acquisition of individual memory, we are already starting to record in the first moments; even as we begin to perceive, a kind of “substratum” is formed—to give it a name—a kind of ancient substratum of memory, a layer of deep memory. Over this foundational memory, which is the database with which the consciousness will work, a system of relations becomes structured that the consciousness then makes use of. This is the most ancient memory, from the point of view of the basis of operations. All the recordings that continue to be made throughout life are “deposited” over this older memory. This forms a second level of memory.

There is also a third level of memory, which is the immediate memory, consisting of the immediate data we work with. Normally, the profound memory is securely filed away, without significant operations being produced in its substratum. On the other hand, an intensive work of data organization, classification and filing is required in the recent memory. Also, what we might call “differences in potential” are established between these levels (the most recent, immediate level, and the mediate level), in which new data enter and also go about modifying the mediate memory.

If we were to make a scholastic categorization, we would speak of an ancient memory, a mediate memory, and an immediate memory. The biggest job of classification would be

given to the immediate memory, more than to the other types. Even if we don't work intensely with the oldest data, they are very deep-rooted. It is as though they create the field into which the new data fall. For this reason, we find serious difficulties in doing work with the ancient memory. We can carry out works with the immediate memory, acting indirectly over the mediate memory, but it is extremely difficult for us to modify the deep imprints of the substratum. This is the background that has remained, and it is strongly recorded; it exercises its influence over the new potentials that end up in the archive. Thus, in reality the internal tensions of the memory—those sorts of internal climates of the memory—exert their influence over the new data.

The work of the emotions plays a very important role in any recording, as well as in the memorization of what is recorded. So, painful emotions or painful states that accompany a recording later give us a register that is different from the register of the recordings carried out in pleasant emotional states. Therefore, when a certain external sensory recording is evoked, the internal states that accompanied it will also arise. If this external datum is accompanied by a defensive emotional system, a system of painful emotions, the evocation of what was recorded will come tinted by that entire system of painful ideation that accompanied the recording of the external datum. This has important consequences.

There is also a kind of situational memory. One records a person in a certain situation. Soon afterwards, one sees that same person but in a totally different situation. So, one encounters that person and registers them as familiar but can't fully recognize them; the images do not coincide because the image of the person does not coincide with the situation in which the person was first recorded. In reality, all recordings are situational, and we can speak of a kind of situational memory in which the object is recorded by context. When the object's context is modified, we detect a certain feeling of familiarity with the object, but we cannot recognize it because the parameters of reference have changed. So, we have difficulties recognizing it because when we compare the old image with the new one, the context is different. In the mechanisms of evocation, in remembrance in general, there are problems because sometimes we do not know how to locate the object if we cannot find everything that came with it. What we have said about evocation, that one does not search images but rather certain tones, holds here as well.

The entry ways of the mnemic impulses (the impulses of memory) are the internal senses, the external senses, and the activities of the apparatus of coordination. The stimuli that arrive follow a double pathway: one that goes directly to the apparatus of register, and one that goes to the apparatus of memory. The stimuli that slightly exceed the sensory thresholds can be registered. And recording takes place even with only minimal activity

in the various levels of consciousness. Moreover, memory is reinforced when it gets updated through the translation from impulse to image and from image to center, since there is a register of the center's functioning, in turn. What we are saying is this: if an impulse of memory arrives to the consciousness and the consciousness converts this impulse into an image, this image acts over the centers and the centers send out a signal. The activity of the centers is registered by the internal senses when that signal is sent out. So, how does one really learn? Does one really learn by way of the datum that reaches the senses and gets filed in memory, or does one learn by doing? It's a bit of both.

At the scholastic level, it has been assumed that learning consists of a source who transmits a signal and a receiver who captures it. But it seems that things do not quite work like this. It seems that learning takes place when a datum from the memory reaches the consciousness, is translated into an image, mobilizes a center, and goes out as a response (whether intellectual, emotional or motor). When this impulse, converted into an image, mobilizes a center and that center responds, there is a simultaneous internal register of that center's action. The recording is reinforced when this entire feedback circuit is established. In other words: one learns by doing and not simply recording. If you work with a child and give them explanations and the child is simply in a receptive attitude, their learning situation will be very different than if you were to give them data and ask them to structure relationships with the data and explain what they have learned. Since there is also a circuit between the person teaching and the one learning, the operations of the person learning and their questions to the teacher cause the teacher to have to do things and establish relations that they themselves had not thought of. In this way, in this relational system, everyone learns. It is a system of relations between both interlocutors in which, clearly, the scheme of cause and effect does not work. What is at work is a continual, structured reorganization, in which the datum is observed from different points of view, and where there is more than just the active attitude of the person supplying the data and the passive attitude of the one receiving it.

In the circuit between senses and coordinator, memory works like a kind of connective, like a bridge, occasionally compensating for a lack of sensory data, whether through evocation or through involuntary remembrance. In the case of deep sleep, where there is no entry of external data, cenesthetic data combined with data from memory reach the consciousness. In this case, mnemic data do not appear to be intentionally evoked, but at any rate the coordinator is performing a job – it is putting data in order, it is analyzing, carrying out operations with the participation of memory. Consciousness is carrying out these operations even in the state of deep sleep.

As you know, we do not equate consciousness with vigil. For us, consciousness is something much more ample, and for this reason we speak of levels of consciousness. So, in the level of sleep, consciousness is faced with the mechanical work of classifying and ordering data. In the level of deep sleep, vigilic raw material is reorganized, that is, material from recent memory. This is why dreams at night have mainly to do with the raw material received throughout the day. Of course, long associative chains are established there and the data of the day, the day's raw material, in turn hooks up and connects with previous data; but it is basically the day's raw material (recent memory) that is working on forming the fantasy imagery of the dream.

The coordinator can direct itself to the memory through evocation. We call this evocation a "mechanism of reversibility." It requires an action from the coordinator in the search for sources. There exist, also, numerous errors of memory. The most common error of memory is false recognition, which occurs when a new datum is incorrectly related to a previous one. The situation I am in now is extremely similar to a previous situation, except that I have never seen an object that I now see. Since situational-type recordings exist, I now experience the sensation of having already seen the object, but in fact, I never have. Rather, I recognize previous situations, similar to the one in which I am now. And so, I put this new object in that situational memory, and it appears to me as familiar. Sometimes the opposite happens; an object that I recognize brings up a situation I have never experienced before but which it seems to me that I have. A variation on this, called a "mistaken memory," occurs when a datum that fails to appear in memory is replaced by another, as if filling in the gap of information.

The generic term for the register of being completely unable to evoke data or entire sequences of data is "amnesia." There are different classifications of amnesia, of this kind of forgetting. There can be amnesias that refer not only to a specific object, or to objects linked to it through contiguity, contrast, or similarity, but also amnesias where what is erased is not a certain object but a certain situation, acting in the different levels of memory.

For example, I do not only forget what happened five days ago, but also situations that are connected in different stages of my life. Forgetting is, therefore, not just linear within a temporal range, but sometimes selects for a certain situation that is repeated in different stages of life. That entire range is apparently erased, but in reality, it is very difficult for something to be erased from memory. Normally, what happens is that the datum cannot be evoked because there is no register of the sensation, because the sensation of the register that corresponds to that range has been influenced by various types of sensations, painful ones, among others. The painful sensations that accompany the recordings of certain phenomena are the ones that tend to disappear from evocation.

Since these painful sensations are rejected by the entire structure, everything that accompanies them is rejected as well. Basically, it is the mechanism of pain in the recording of data that, sooner or later, will cause the data to fade away, make them disappear, at least in terms of evocation. In any case, whatever was recorded with pain is either forgotten or is once again consciously evoked, but the lateral contents that accompany it will have been transformed. There are painful recordings, some would say they are “burned in.” But if one examines these painful recordings closely, one will see that many phenomena that accompany them have been radically transformed. Every recording is associated to other, contiguous ones. So therefore, there is no such thing as an isolated memory; rather, the coordinator selects among memories for the ones it needs.

In reference to painful and pleasurable recordings, one might ask: what happens when a sensory stimulus is recorded as pleasurable but, due to other circumstances, it provokes moral, or intellectual pain? Imagine a person who, because of their moral formation, has problems with certain sensory data of a pleasurable kind. There, pain and pleasure are mixed together. It turns out that this person registers physical pleasure, and that register of physical pleasure at the same time creates a problem with their moral values. How will they then evoke that register? It’s probable that in the future they will not even want to remember what happened. But it is equally probable that a kind of obsessive state may arise in them with respect to that situation. And so, we find this good person who, on one hand, represses the evocation of the pleasurable registers, but in whom, on the other hand, the pleasurable registers arise, imposing themselves on their consciousness.

Consciousness

We understand consciousness as the system of coordination and register carried out by the human psychism. Sometimes we speak of “consciousness,” sometimes of “coordinator,” and sometimes of the “apparatus of register.” More simply: What is happening is that these are not different entities, but a single entity carrying out different functions. This is very different from what we call the “I.” We do not identify the “I” with the consciousness. We consider the levels of consciousness as different ambits of work of the consciousness, and we identify the “I” with that which observes the (not necessarily vigilic) psychic processes that are developing.

In vigil, I register and carry out numerous operations. If someone asks me, “Who are you?” I will answer, “Me,” and I will add to that an ID card, a number, a name, or things of this sort. And I have the impression that this “I” will register the same operations from the inside, it will observe the operations of the consciousness.

For now, we already have a distinction between the operations carried out by the consciousness and this observer that refers to those operations of the consciousness. And if I pay attention to how I go about observing things, I see that I observe things “from the inside.” And if I observe my own mechanisms, I see that my mechanisms are seen “from the outside.”

If my level of consciousness lowers and I go to sleep, how do I see myself? I walk along the street, in a dream; I see cars that pass, people that walk by. From where do I see the people who walk by, the cars that drive past? From inside myself? (As I see you now, and I know you are outside of me, and therefore I see you from inside of me.) Is this how I see myself? No, I see myself from the outside. If I observe how I see from the level of sleep, I see myself seeing the passing cars, the passing people, and I observe myself from the outside.

Do it another way, try it with the memory. Now remember yourselves in a situation when you were children. Good. What do you see in that scene? Do you see from the inside, the way you now see the things that surround you? Do you see from the inside (being children) the things that surround you? You see yourselves from the outside. In that sense, where is the “I?” Is the “I” perceiving things from inside the system of structuring that the consciousness carries out, or is the “I” outside?

On the one hand, one has the impression that in some cases it is inside and in other cases it is outside. And on the other hand, observing the same operations of consciousness, one sees that the observer is separate from these operations. In all cases, the “I” appears as separate—be it inside or outside. What we know is that it is not included in the operations.

How is it that I identify this “I” with the consciousness, if all the registers that I have are of separation between “I” and consciousness? If I observe all the registers that I have of the “I,” I will see that all these registers are of separation between what I call “consciousness and operations of the consciousness” and what I call “I.”

How is this “I” constituted? Why does this “I” arise and why do I make the mistake of identifying the “I” with the consciousness? First off, we do not consider conscious any phenomenon that is not registered; nor any operation of the psychism in which no tasks of coordination participate. When we speak of “register,” we are speaking of registering at different levels. This is because we do not identify consciousness with vigil. Consciousness is something broader. Consciousness is usually linked to vigilic activity, and everything else is left outside of the consciousness.

We understand as fundamental mechanisms of consciousness the mechanisms of reversibility. These faculties of the consciousness allow it to direct itself through attention to its sources of information. If it is directed towards a sensory source, we speak of “apperception.” If directed towards the memory, we speak of “evocation.” There can also be “apperception in evocation” when one apperceives data that was recorded at the threshold of register. This is the case of subliminal recording, where one does not realize when it takes place; nevertheless, it can be evoked later.

I call the simple register of the sensory data, “perception.” Here we are together, there’s a noise; I perceive the noise. My interest can then direct itself to the source of the noise, but the fact is the data imposed itself on my register. I call this perception. Of course, it is extremely complex; there has been structuring and all that. On the other hand, I call the search for the sensory data, “apperception.” Thus, I perceive when the data imposes itself; I apperceive when I look for the data.

"Remembrance” is what I call the activity that does not originate from the senses but reaches consciousness from the memory. "Evocation" is what I call the activity of consciousness that is directed to searching for data in the memory. But there are also other cases that complicate things a bit, for example, "apperception in evocation," in which the acts of the two apparatuses seem to mix. In this case, the data has been recorded at the sensory threshold and at that moment I don’t have vigilic awareness of what has happened with that data, but the data has been registered in memory. Then, later on, during a work of evocation, the data emerges.

Let’s take an example. I see many people on the street, I scan them automatically and later, recalling what happened, I say, “Hey, a friend of mine walked by me and I didn’t say hello!” In this case, I am working with apperception in the evocation. That is, I am focusing on what happened in my memory, I am evoking, and as I evoke, something appears that was recorded but without me being fully aware of it at the time of the recording. So, out of all the sensations of register that I now have in the act of evoking, I select one of them and go to it.

The performance of the mechanisms of reversibility is directly related to the level of work of the consciousness. And we say that, as the level of consciousness descends, the work of these mechanisms decreases, and vice versa. This will be of great practical importance for us in subsequent works. In the measure that the level of work of the consciousness lowers, the mechanisms of reversibility get blocked and its activities decrease. And as we raise the level of work of the consciousness, the work of reversibility (i.e., the directing of consciousness over its own mechanisms) increases.

All mechanisms of consciousness function on the basis of the same minimal act-object structure. Acts and objects function in the consciousness in the same way stimuli and registers do, linked together by the mechanism of structurality of the consciousness, this intentional mechanism of the consciousness. Acts are always referred to objects, whether the objects are tangible, intangible, or merely psychic.

In the same way that the senses and memory are always working, the consciousness is continually launching acts, directing itself toward objects. This bond between an act and an object is not permanent, since there are acts that are launched in search of their object, and it is precisely this situation that gives consciousness its dynamic.

Some psychologists thought it was a fundamental characteristic of the consciousness that an act of consciousness had to be linked to an object; that there could be no act without an object and no object without an act. Of course, they did not rule out that the object to which the consciousness was referred could change. If this were not the case, the consciousness would find itself with serious difficulties in moving from one object to another, because at the moment of switching, the act would find itself without an object. It is thanks to the fact that an act can work in search of objects that the consciousness can shift from some objects to others.

Strictly speaking, those psychologists discovered a great truth, which is that an act of consciousness is always referred to an object and that, even if the object changes, consciousness directs itself “toward” something. Consciousness, therefore, is intentional and behaves like an act-object structure. And so, objects of consciousness—whether they are perceptions that arrive to the consciousness, representations, abstractions, etc.—all appear as objects of the acts of consciousness. So now, I can look for a specific memory: that is an object. I can search for a specific perception: that is an object. I can perform an abstraction: that is an object. But the operations that I carry out are all different; there are different types of acts.

This intentionality of the consciousness (this directing of the acts of consciousness toward particular objects) is always launched toward the future, toward things that will appear. This activity of futurization of the act of consciousness is very important. Intentionality is always launched toward the future, and this is registered as tension in the search.

If I am going to remember what happened half an hour ago, I am preparing to launch my act of consciousness toward the future. At this point, I have “not yet” discovered what happened ten minutes ago, but I am searching for it; in the future, I will surely find what I am looking for; now, at last, I have found what I was searching for. Inevitably, the consciousness moves in the future and works in this way, going over past events.

Inevitably, futurization is the time of consciousness. Consciousness goes toward what will happen to it, even in the case of remembrance.

So, the dynamic of consciousness continues to act even in people who go toward the past and remain stuck there, fixed on the past, and in whom it seems as though the dynamic of their consciousness has become crystallized. In every case, I am creating registers of things that have passed, but the direction of my consciousness is always searching, always advancing, even if it is trying to bring back events that already happened a long time ago.

The structuring of the times of consciousness differs according to the variations in the level of work of the consciousness. A sequence of data is stored in a particular way, and I can later evoke that sequence. But this is not how it works in other levels of work of the consciousness. The sequence of time's flow is modified depending on the level of consciousness. Things that happened earlier can appear as having occurred later, later things as earlier, in that way producing the particular mixture that occurs in dreams.

There are two important characteristics of the structuring done by the consciousness, according to what level of work is operating: on one hand, the ordering of time, and on the other, the variation in reversibility.

The efficacy of the mechanisms of reversibility and the way that objects are ordered in the times of consciousness are characteristics proper to vigil. We can speak of another kind of mechanism, or another type of function of the consciousness, such as attention, which is an aptitude of the consciousness that allows for the observation of internal and external phenomena. When a stimulus exceeds the threshold, it awakens the interest of the consciousness and occupies a central field toward which the attention is directed. In other words, attention works according to interests, according to something that, in some way, makes an impression on the consciousness.

A stimulus arises that passes the threshold, and then, with nothing else to deal with, my attention is directed toward the stimulus that attracts it. That is, attention is always guided by interests, which are registers. The object may remain in the central field, in which case I am totally focused on it. If I am totally focused on it, I lose interest in the objects that surround it, in the sense that my attention encompasses the object and, secondarily, expands its field to others. But my attention is directed toward an object.

That is what we call the field of presence: everything that appears paramount in my attention. And everything that does not appear strictly linked to that object becomes diluted in my attention. It is as if I lost interest in the things surrounding the object. I

consider this gradual disinterest in other objects as entering the field of copresence, but that copresence is also acting and accompanies the presence of the central object. Therefore, we should not confuse the fields of presence and copresence with the old representation of the “attentional focus,” that supposedly highlighted the object of attention and gradually blurred the other objects, leaving them inactive.

These fields of copresence, though they appear to be phenomena proper to the mechanisms of consciousness, also have to do with the memory. At a first moment, I am observing an object. This object is surrounded by others. The object I attend to is the most important one, but there are also others. These operations have to do with attention and they have to do with perception. If I evoke the central object that I previously observed, it will then enter my field of presence; but I can now also evoke, and place in my field of presence, the objects that were secondary at the moment of perception. So, in evocation I can displace my field of presence to the co-presences. What was secondary can be converted, in evocation, into the primary. I can do all this because, in any case, there has been a register of the present object and also of those copresent.

And these copresences in memory fulfill very important functions because they allow me to link several objects that are not present at one moment of recording but that have been recorded before. This enables me to say: “Ah, this looks like something else that I saw before!” “Ah, this is similar to that other thing!” “Ah, this is different from that one!” “Ah, this is related to that.” It is because memory is also at work as I perceive, and copresently, numerous data are also covering what I see. Even if the new data arrives by way of perception, it is this work of presences and copresences that allows them to be structured.

So, we say very simply that, when the attention works, there are objects that appear as central and objects that appear in the periphery, objects that appear copresently. This attentional presence and copresence happens with external objects as well as internal objects.

When I attend to an object an evident aspect becomes present, and what is not evident operates in a copresent way. This object that I’m seeing is present only in terms of what I am able to perceive of it; the rest of it is “concealed.” But the part that is concealed acts in a copresent way. I do not imagine that what is in front of me is just a line, or merely a plane, or two planes that I simply perceive. I realize that it is a body. All of this is working copresently, and all of this is more than the perception that I have.

Every time I perceive, I perceive the object plus that which accompanies it. The consciousness does this to the perception. And I am always perceiving and always structuring more than what I perceive. Sometimes this goes well, and sometimes not so

well. It is characteristic of the consciousness to infer more than what is perceived of an object. The consciousness works with more than what it needs to attend to, it goes beyond the observed object.

The same thing is experienced in the different levels of consciousness. For example, in vigil there is copresence of reverie, and in dreams there may be copresence of vigil. Who has not had the sensation while sleeping that they were awake? Who has not had the sensation of knowing, while they slept, that they were dreaming? Who has not had the sensation in vigil of being more-or-less asleep, when they became aware of the force of a sequence of reveries? The levels are working copresently and sometimes one registers this fact.

Sometimes contents from other levels appear in vigil, and it is then that I become aware of the pressure exerted by those contents. My vigil is invaded by a state; my vigilic level of consciousness is invaded by a state that does not correspond to the world of perception; by objects that have nothing to do with the objects I perceive in daily life. The states that arise in my vigil make me aware that other levels are operating simultaneously with the level of vigil. This is also the copresence of the work of the other levels, simultaneously with the work of a specific level.

In this singular consciousness there are also abstractive and associative mechanisms. The abstractive capacity of the consciousness also increases in the level of vigil. We say in general that reversibility increases in vigil, as well as the management of attention, the ordering of events in time, and also the abstractive work of the consciousness. In semisleep and sleep, all the mechanisms previously described drop in their level of work, and the capacity for abstraction decreases as well.

As the level falls, the capacity for abstraction diminishes; one is less able to abstract. Fewer mathematical operations can be done when one is sleepy, and few mathematical operations are done when one is asleep. However, as the level of consciousness lowers, the associative capacity increases.

Association is also at the base of vigil, but vigil specializes in the abstractive mechanisms. Speaking of the imagination, we say that its work is manifested by activation of the associative mechanisms. We verify that there is a spontaneous imagination, so to speak, a simply associative imagination, and a directed imagination.

There is a big difference between associating things in a disorderly way or establishing relations between different events the way, for example, a novelist can. They write, “Chapter 1,” “Chapter 2,” and give order to the imagination. Spontaneous, disorderly, and

associative imagination is quite different from the imagination that puts order in everything associative that has been taking place. This is often called “directed imagination.” Art works a great deal with this type of imagination.

There are important distinctions between the abstractive operations and the imaginative operations. The abstractive ones have greater logic; they give order to the world of data; whereas the imagination is not concerned with giving order but with working with images that function based on associations and that go from like to like, or from similar to similar. That is one pathway, which we call “similitude.”

Similitude is, for example, this association: “red-blood.” Through *contiguity* or proximity, one can make the association: “bridge-river.” And by *contrast*, “white-black,” “high-low,” and so forth. Divagational imagination is characterized by free association, without a guide, in which the images are let loose and impose themselves on the consciousness, above all in dreams and reveries.

In directed imagination, on the other hand, the consciousness in its vigilic level has a certain degree of operational freedom which allows direction around a creative plan in which the interest is to give shape to something that does not yet exist.

Depending on whether the impulses that arrive at the consciousness work through one or another of the mentioned mechanisms, i.e., by the mechanisms of abstraction or by the mechanisms of association, different translations will be obtained which will be formalized in different representations. Normally, abstract works have little to do with the image. On the other hand, when the associative mechanisms are activated, the image is the basis of the work. The subject of the image leads us to questions of vital importance.

Space of Representation[6]

Some psychologists understood the image as a bad “copy” of perception, and, in short, an error of the consciousness. For us, the image fulfills many functions, and one of the most important is to carry impulses to the apparatus of response. So, when an image appears, a response tends to be mobilized. When an abstraction arises, a response is not necessarily mobilized. When it comes to the “things I imagine,” impulses are going from the representation to the apparatus of response. We can see this through the example of “muscular tonicity.” If I imagine an object to the right of my body, gradually my body will tend in that direction. If I imagine it to the left, the same thing happens in the other direction. The hand moves more easily in the direction of the object being thought

of, and with more difficulty in the opposite direction. The image is predisposing the work of the motor center in one direction or another.

Let's expand on this. A person is at home and feels hungry and immediately goes to the refrigerator. Typically, one would say that there is a response to the stimulus. Just like that! But how is it that the response, "go to the refrigerator" corresponds to the stimulus, "hunger?" Why is it, for example, that when a person feels hungry, they don't go to the bathroom? What do they do so that the refrigerator appears and not the bathroom? Surely, something happened very quickly that acted even if the person was unable to visualize it. It is of utmost importance to understand the function fulfilled by the image because it is the image that sets up the tone of the body and that in the end moves the body in a given direction.

In saying, "the image carries psychic charges to physical levels," we are a long way from what those psychologists thought when they supposed that the image was a degraded perception. Let's compare the work of images to that of red blood cells. Red blood cells reach the lungs and fill up with oxygen. From there, they travel through the bloodstream and release the oxygen in different parts of the body. While they do this, they fill up with stale gases and then return to the lungs to release those loads there. In the same way, these connectives of psychic work (images) take up charges from one place, carry them to another, release them, pick up charges again, and so on, performing transfers of psychophysical energy. The image transfers impulses, which sometimes are tensions, sometimes irritations, sometimes perceptual data, and sometimes data from the memory.

These impulses are translated into images which, when manifested, are launched toward the centers of response. Then the centers move, either defending the body or provoking flight, or moving it towards pleasurable things. And it is thanks to these images that the registers of what is pleasurable and what is painful can be converted into bodily activity. But this also occurs with pleasure and pain in mental activity. Some images serve the economy of the psychism by evoking pleasurable objects or situations in order to fulfill the function of discharging tensions in the representations.

These images always tend to make their way, and as they do, they encounter resistances. To be precise, there are certain images that impose themselves obsessively because they are unable to break through. Certainly, there are procedures for allowing the image to break through and move toward the center in question. And this makes clear the cathartic function of the image. The image is, for example, later converted into words, and through these words some of the tensions are discharged, or they continue to transform as they move toward the centers. In addition, we will discover in the image not only its

“cathartic” function (the releasing of the image’s charge), but also its “transferential” function, as it becomes detached from the field of impulses that motivated it.

Let us ask: How is it possible that, in the level of sleep, images that are so powerful do not move the body? They should, by tonicity, move the body more than in vigil. If there are more images as the level drops, then during sleep the body should move more. However, normally, during sleep images don’t move the body. A blocking mechanism is operating here that can be traced physiologically; a mechanism that, when the level of consciousness drops, operates by cutting off the connection to the work of the motor center. So, the images appear and the discharge that mobilizes the body is blocked.

When we speak of images, we are speaking not only of visual images. Every sense produces its own type of image and thanks to this, one can have representations of olfactory phenomena, gustatory and auditory phenomena, etc. Normally, and above all in this kind of culture and with this type of education, images are associated with the visual. But you can verify in yourself that you can also represent odors, or that you can recall voices without necessarily depending on visual representation. What you remember in relation to smell or sound is given in “some part” of the representation.

Naturally, with respect to the location of the phenomena of auditory representation, you can distinguish between a sound that arrives from outside and a sound that you represent or imagine. The latter is not just “inside” (and this already delimits a space of representation), but that “inside” is located in some “place.” This place is not necessarily seen, but it is experienced, and it is sensed.

You’re now at a concert; you have the orchestra in front of you. You close your eyes; you’re very attentive to what is going on with the instruments. You hear an instrument to the left. Then, you hear an instrument to the right. If you pay attention to your eyes, you will see that when you listen to something on the left, your eyes move to the left, and when you listen to the instrument on the right, your eyes move to the right. In this way, you are following with your eye movements as well, not the music exactly, but the sources producing the sounds.

From this you can infer (in yet another case of tonicity), that wherever the attention to the phenomenon goes, even if it is not visual, the eyes will also follow that source. In such a way that, although the eye has nothing to do with music and nothing to do with sound, the eye follows in space the stimuli that are arriving to the ear. Moreover, a sound is said to be “high” or “low,” because if you observe what happens with the representation of these sounds and observe the register of the eye’s movements, you will notice that, as

the sounds become higher pitched, the eye also tends to move upward. As the sounds become lower, the eye tends to move downward.

Apparently, the eye and the ear are not connected. But since all senses produce their representations, and these representations are given in a mental space, this space sets an ambit in which the representations coming from different perceptual sources are placed. This space is nothing other than the totality of internal representations of one's own cenesthetic system.

This mental space is then a sort of screen that reproduces the impulses of one's cenesthesia. In this way, every phenomenon of perception that arrives at the apparatus of coordination is placed at some point of the screen of representation. Whether it is a sound, a smell, or an object that enters visually, in every case it is placed at some point of the space of representation. This space not only allows gradation in two planes, but it also has depth, it has volume and approximately reproduces one's own body. It is a "body" of representation, or—if you prefer—a "spatial referential background."

If you remember the orchestra in our example, perhaps you may also remember the music and the "spatial" placement of the different instruments and sounds. It's also possible to verify that, in acts of remembering, the eye moves in search of the source producing a "sound," locating the "places" from where that "sound" came. When remembering sounds that are "distant and to the front," they are located at a different depth of the space from that of the memory of sounds located "near and to the front," and this gradation of internal distances is accompanied by the adjustment of the eye, as though it were perceiving phenomena from the external world.

The positions "near" and "far," combined with "front" and "back," "to the right and left," "up" and "down," clearly demonstrate the volumetrics of the space of representation. If this space has at least three dimensions, then all phenomena (even tactile, gustatory, or olfactory) will have possibilities of being located in height, breadth, and depth. This depth of the space of representation is what permits the location of phenomena, whether from the internal or external world.

Here it is necessary to specify that *the "barrier" separating the "internal" and the "external" worlds is touch*, correspondingly divided into internal and external touch. One important location of the "tactile barrier" is in the face, which is precisely where within a small space most of the external senses are concentrated.

Therefore, in the space of representation there is a system of gradation that allows phenomena to be located based on their source. To some extent it also allows a

distinction to be made between the world of cenesthesia and the world of the external senses. Thanks to the existence of the space of representation, a system of impulses reaches the consciousness and is translated into an image. This image is again translated, triggering activity at a center, and the center is activated in the direction of a certain range and depth of this space. Moreover, there is also perception of the work of the center, generating the corresponding image and, with this feedback circuit, the general activity is adjusted.

If the internal representations are located at the level of the cenesthetic phenomena, then these images, converted into responses, will mobilize phenomena at cenesthetic levels. If the representations are triggered in the gradations proper to external activities, they will then mobilize centers in an external direction. Of course, there can be numerous errors in the location of an image at a level of representation, and therefore it would be of interest to have access to procedures that could allow displacement of the image (which is the basis of the response) toward the appropriate internal point of the space of representation.

The space of representation takes on different characteristics according to whether one level of consciousness or another is acting. When, in vigil, a phenomenon appears in the space of representation it is different from how it appears in the level of sleep. When you see yourselves in a dream, you place yourselves at a different point of the space of representation than when you remember a phenomenon.

In the first case, you see yourself included as an image inside that space; but you observe from an external point of view (i.e., you see yourself from “outside”). In the second case, you recognize the phenomenon inside the space of representation, and you observe it from yourself (that is, your point of view is “outside,” as in the previous case, but you do not see yourselves from an external point of view; rather you see the object from yourself as though looking through your eyes, recognizing the object included in the space of representation). If you have the point of view “outside,” then the internal space appears as a container and the image of oneself appears contained within that space. In this case, the consequences of the translation of image into movement will be different than if you are “outside” as a point of view and as an image (since you look from yourself and, therefore, you are the container, and the observed object is a content).

That first case is what occurs in dreams. You see yourself within the space of representation. What is mobilized in that case? What is mobilized is the image of yourself. But this is very different from the case where you don’t see yourself but rather you see the phenomenon included within that space. And so, although there are physiological explanations for the disconnection of motricity that is produced as the levels of

consciousness lower, there are of course also psychological registers that enable us to comprehend that it is precisely in dreams that the mobilization of images toward the world is paralyzed. This is because the register that the subject has of themselves is observed from an external point and, therefore, ends up included in the internal space.

We must again emphasize that the registers we are mentioning regarding one's own image and the point of observation should not necessarily be considered as visual images. In the congenitally blind, and according to what they relate, no visual representations appear; and yet there is no doubt that they remember auditory, gustatory, and other types of phenomena very well. They have no need of visual images yet, in any case, the representations of a blind person's other senses appear spatially located.

This is a good time to make a few observations on the space of representation, on the structuring carried out by the consciousness, and on various errors that can occur in that work. According to whether the impulses that arrive to the consciousness are subject to one or another of the mechanisms of abstraction, classification, divagation, or directed imagination, different translations will be obtained, forming multiple representations.

As for errors in the work of the consciousness, we can consider them as different from the errors that occur in the relationship between consciousness, senses, and memory, which we generically call, "dysfunctions." A hallucination, for example, is not a dysfunction but an error of the coordinator. A hallucination is produced when representations appear that are "projected" and perceived "outside" of the consciousness, and they are experienced as real objects or situations located in the external world, with the characteristics proper to the phenomena that are perceived with the senses. In this sense, all phenomena produced in the levels of sleep and active semisleep are hallucinatory phenomena, because of the powerfully suggestive register of reality they present to the observer, whose point of observation is "outside" the scene, as it is in vigil.

In vigil, hallucinations are configurations created by the consciousness on the basis of memory. They usually appear in situations of acute exhaustion, from lack of stimuli, in certain illnesses, and in situations where there is a mortal danger. They are frequent in cases of physical weakness and in cases of emotional consciousness (which we will discuss later), in which the coordinator loses its capacity for movement in time and space.

In terms of dysfunctions between the consciousness and the senses, we should note the inability to coherently relate data when data from one pathway are attributed to another.

There are numerous possible dysfunctions in the relation between the consciousness and the memory, and these occur in the various levels of consciousness. We can state that

the various levels have the function of compensating the mass of information, occasionally giving structuring responses or, rather, compensatory responses. This leads us to think that if a phenomenon falls within the field of one level of consciousness, it immediately tends to be structured and related with others. From this level, a compensatory response is also immediately generated. These levels are subject to successive imbalances due to the irruption of new phenomena.

In the level of deep sleep, the work of the external senses is minimal. The only information from the external senses is what gets past the threshold imposed by sleep itself. The work of the cenesthetic sense predominates, contributing impulses that are translated and transformed by the work of associative mechanisms, giving rise to oneiric images, the images of sleep. Characteristic of images at this level is their great power of suggestion, their great hypnotic capacity. Psychological time and space are modified with respect to vigil. The act-object structure frequently appears without any correspondence between its elements. A specific object is searched for, and another arises that completes the search in an extraordinary way. Likewise, climates and situations tend to become independent of each other, in such a way that the acts of consciousness in different levels do not coincide with the objects of consciousness in the same way as in vigil. Aside from this, the charge that accompanies representations in the level of deep sleep becomes independent from the object, while in vigil they would maintain a closer connection. The disappearance of criticism and self-criticism is typical in sleep, but as the level of consciousness rises, these mechanisms increase their work.

The inertia of the levels and the ambit in which the phenomena are located cause the transition from one level to another to occur slowly and gradually, providing a certain continuity. In this way, leaving and entering sleep takes place through semisleep, and direct passage from vigil to sleep—without minimal registers of the passage through the intermediary levels—are quite extraordinary cases. When a subject comes straight out of the level of sleep and wakes up altered, the inertia of the previous stage of semisleep will be operating in vigil, dragging contents from the previous moment.

In the level of semisleep preceding vigil, the external senses begin to send information to the consciousness—information that is not altogether structured because there is also interference from reveries and the presence of strong cenesthetic registers. Due to a sort of semi-vigilic perception that begins to provide new parameters and new references, the contents of dreams lose their suggestive power, even when they continue to appear. Suggestibility continues to operate, especially in cases of certain very vivid images that we call, “hypnogogic.” Moreover, the system of intermittent reveries reappears. It is in this level where the reverie nucleus and the secondary reveries can be most easily registered, at least in so far as their climates and basic tensions.

Semisleep has different characteristics, depending on whether it is acting in pre-sleep (dragging contents from vigil), or in post-sleep (dragging oneiric contents). One can also observe the case of an altered state of consciousness that occurs only under certain conditions. The mode of reverie typical of this level (we are still talking about semisleep) is usually transferred through inertia to vigil, providing the raw material for divagation, although elements of vigilic perception also appear. Surely, the space of representation and the placement of oneself in that space is modified in the transition from one level to another. In this ambit, the coordinator can already carry out some coherent operations. Let us also mention that this level is highly unstable and therefore easily destabilized and altered.

We also find states of passive and active semisleep. Passive semisleep offers an easy route into sleep, as though one were to let oneself simply “fall,” and a corresponding system of progressive relaxation follows. On the other hand, we speak of active semisleep when semisleep is preparing to move into vigil. This state can become “altered” when one moves into a “false vigil” because the system of relations connects with the external world but without letting go of the system of ideation of semisleep.

In vigil, the external senses contribute a greater flow of information, regulating the internal senses through inhibition and making it possible for the coordinator to orient itself toward the world in the compensatory work of the psychism. The mechanisms of abstraction, of criticism and self-criticism operate here, manifesting and intervening to a high degree in the tasks of coordination and register. The mechanisms of reversibility, which were minimally present in the preceding levels, can work fully here. The suggestive power of infra-vigilic contents diminishes with the expansion of the system of references based on external data. There is a tone of active vigil that can be attentive, with maximum management of apperception, and there is also a tone of altered vigil. Passive vigil can also be attentive or altered. In the latter case, silent divagation appears, as well as more or less fixed reveries.

There are numerous relationships between levels that produce reciprocal alterations. One level cannot act over another, nor can a transfer of charge take place from one level to another, without that level being affected. That is, any level that acts over another ends up also being affected. At least four factors can be cited that affect the relationship between levels. We call them inertia, noise, rebound, and dragging. Let us talk a little about inertia. Each level of consciousness tries to maintain its own level of work and sustains its activity until its cycle ends. We have already mentioned that, in general, all of this is subject to cycles. Of course, vigil tries to maintain itself for a cycle, for a more or less appropriate amount of time. It’s during this time that people carry out their daily

activities. When fatigue increases (not just muscular but deep fatigue), vigil's cycle is already declining. But in the meantime, while in full vigil, this state tries to maintain itself.

The following cases described here are a consequence of the structural inertia of each level which tends to maintain and extend its characteristic type of articulation. "Noise" can be observed when the previous level's inertia appears as a background that perturbs the work of the higher level. The inertia of semisleep appears as a perturbing background in the state of vigil on waking. Emotional climates, tensions, and contents that do not correspond to the coordinator's work at that moment are considered noise.

The "rebound effect" arises as the response of a level into which contents from another level have been introduced, after overcoming or upon reaching the defenses of inertia. Thus, there can be a content that is displaced and on reaching a certain level faces strong resistance, encountering the "defenses" of that level. We say then that the content "rebounds" —it returns to its original field. On occasion, contents, climates, and tones that are proper to one level move into and remain in another level through "dragging." It's not the previous level of consciousness that persists, but something visualized in the earlier level persists as a content dragged along when the level changes. People who wake up altered by a dream are now in full vigil, but they maintain the images of the dream or the dream's associated climate; they can maintain it as a dragging into vigil for quite some time.

There are notable cases of fixed climates, tensions, or contents in the psychism that are dragged for a long time and that appear in different levels. These are cases of dragging, not from one level into another, but rather of a fixed content that appears in different levels of consciousness and that can appear with different images but always with the same characteristic climate. We are talking of dragging in a very generic sense.

We must make some distinctions between tones, climates, tensions, and contents. "Tones" should be understood in terms of energetic intensity. Operations in each level may be carried out with more or less intensity, with more or less tone. Occasionally, a tone can become a factor of noise. Too much volume in an activity makes it disproportionate in relation to the context of other activities.

In the language we are using here, "climates" are what are often referred to as "moods." Because of their variability, climates appear intermittently and can envelop the consciousness for a given time, coloring all its activities. We must differentiate these moods, which have a strong emotional charge, from the emotional operations that accompany the entire functioning of the psychism. If the mood, the emotional background, is one of general annoyance, any object that falls into that field will take on annoying

characteristics. Climates can become fixed in the psychism and perturb the entire structure, inhibiting the dynamic and the movement toward other favorable climates. These fixed climates circulate through the different levels, and can pass from vigil to sleep, stay there, return to vigil, and so on, for a long time. All of this is different from the situational climates that appear in specific situations.

"Tensions" have a more physical, corporal root. Of course, everything is corporal, but these tensions have a more "corporal" root in terms of their actual register since we perceive them directly in our musculature. Climates, on the other hand, are registered diffusely. The connection of these tensions to the psychism is not always direct since muscular relaxation is not always accompanied by mental relaxation. That is, the body has managed to relax but the consciousness can continue being tense and altered. This is of some importance when we consider the systems that discharge tensions. It is often believed that a physical, muscular discharge is always associated with a mental relaxation. This is not always the case. At times, a strange contradiction is produced in a subject who physically experiences a discharge of tensions but nonetheless continues to register undefined tensions.

We should keep in mind how this circuit of senses, memory, coordinator, levels, and centers is integrated. The connectives between the senses, memory, consciousness, and centers reveal important aspects of the psychism's functioning. These connective circuits work in an inter-regulated way. They regulate and adjust one another in continual dynamics, bringing in this way the entire psychism into a complex self-regulation. When the coordinator, for example, performs apperception of a perception, evocation is inhibited. The coordinator is now paying attention to an object of perception, and whilst it pays attention to that object the data supplied mechanically by memory become blocked. It will be said that, in any case, memory supplies information so that the datum coming from perception may be recognized. However, evidence of the memory's operations disappears, hence the door is opened for the perception and the attention directs itself toward it. Conversely, apperception of the memory inhibits perception. Observe even more a subject's gaze when he is evoking—he tends to shut his eyelids, he tends to lessen the activity of external senses. Observe instead what happens in disturbed minds when processes that ought to be inter-regulated and compensated are mixed together. The opposite happens—the subject is immersed in an evocative world and their gaze becomes fixed, glazed, and vacant, suggesting that some kind of hallucinatory activity is taking place in which what is happening in their evocation is transferred to the world of objects, covering it, as if receiving external information.

When the external senses are operating, the entry of internal stimuli is hindered, and vice versa. The greatest inter-regulation appears in the changes of level of work, when, as we

fall into sleep, the mechanisms of reversibility become blocked. As our level of consciousness goes down, the reversibility mechanisms become progressively blocked and associative mechanisms are then strongly released.

There is also automatic inter-regulation between the senses. When sight expands its average threshold, touch, smell, and hearing diminish, and the same happens among the other senses. The eyes close so that one can hear better, etc.

Very interesting phenomena occur in that space of representation, where images coming from different senses are given. As one descends in level of consciousness, the dimensions of the space of representation expand and it becomes "volumetric." This happens because as one descends in level, the register of the external senses diminishes and the internal cenesthetic register increases. As one descends in level, along with the increased register of the signals from the entire intrabody, there is also an increased translation of the configuration of the volume of the mental space which acquires dimensions and amplitude. As one ascends in level of consciousness, the cenesthetic signals fade, diminish, and confrontations with data from mental operations and the external senses begin. Therefore, *the rise of the level of consciousness signifies the "flattening of the space of representation" and lack of register of other configurations that are carried out in deeper levels.*

The space of representation is certainly operating in full vigil, but instead of acquiring volume this space is "flattened," demarcating the differences in the representation of internal and external phenomena. Just the same, it also has its depth. When in full vigil I represent a phenomenon that is behind me, I represent it in a sort of mental space which, in this case, includes the area behind my head, even though I have no eyes there. Since the eyes and the other external senses are located in the external and anterior surface of the body, when a type of representation such as we have mentioned occurs (i.e., seeing what is behind me), I have references so as to mark the differences between the phenomena of external perception and those of internal representation. The same thing does not happen when we descend in level. Because (in that case) the cenesthetic registers come from all directions, the phenomenon can be observed in whatever direction. Then I can see myself, as in dreams, from the outside, as if I perceived myself from the registers I have in different parts of the space of representation. Upon observing the representations in a space different from that of vigil (i.e., in the level of sleep), such contents appear as if they were outside the observer, since the observer is (as a point of view) situated on the periphery of the space of representation, acting as a "container" of the represented objects.

But it happens that “oneself” (as representation) can be placed within that space, being observed from the limits of the container. Of course, that “oneself” can be represented in different ways: as a visual image, or as a sum of non-visual registers. In the vigilic level, the external world is observed as if it were not included in the space of representation, and “oneself” is identified with the point of observation that appears at the other extreme of the relationship. It is excluded from the world whence the perceptions come, except in cases of hallucinations while in vigil. Here the space of representation is modified, and internal contents are “projected” into the external world, being consequently taken for perceptions coming from the external senses. If this happens it is because the reversibility mechanisms, on their part, have become blocked, altering the level of consciousness.

In the waking state, one observes the external world as not included in the space of representation, and the “self” is identified with the viewpoint that appears at the other end of the relationship, being excluded from the world from which the perceptions arise, except in cases of hallucinatory experiences in waking state where the space of representation is modified and the internal contents are “projected” onto the external world, consequently taken as perceptions coming from external senses. And if this happens, it is also because the mechanisms of reversibility have been blocked, altering the level of consciousness.

Impulses: Translation and Transformation

Morphology of the Impulses: Signs, Symbols and Allegories

Impulses from the senses and memory that arrive to the coordinator are transformed into representations, into images. The consciousness processes these structures of perception and reminiscence in order to create effective responses in its work of balancing the external and internal environments. While a reverie is an image-response toward the internal environment of the consciousness, a motor action is a movement-response toward the psychism’s external environment, and that movement is also directed by images. In the case of intellectual ideation taken to signic levels, we have another type of image-response, which fulfills communicative functions. This is the case of language. However, we also know that there are certain signs and pure, abstract ideas that feed back to the interior of the psychism.

In addition, any representation arising in the coordinator’s field of presence generates associative chains between the presented object and its copresence. And so, while the object is captured in precise detail in the field of presence, relationships appear in the

field of copresence with objects that, although not present, are linked to it. Memory plays a fundamental role in all of this.

The theme of impulses is important because of the coordinator's particular way of working with representations. It does this through two pathways, operating (for example) through the *abstractive pathway* by reducing phenomenal multiplicity down to its essential characteristics. Regardless of whether the phenomena belong to the external or internal world, abstractive and *associative activities* take place. In association, representations are structured on the basis of similarity, contiguity, contrast and other lesser forms with an order that differs according to the level in which they are working.

The consciousness organizes images within a space of representation on the basis of these two pathways of abstraction and association. These images are the nexus between the consciousness that forms them and the phenomena of the objectal world (internal or external) to which they are referred. There would be no communication between the objectal world and the consciousness without the existence of these phenomena which started as impulses from certain pathways which produce images, which are positioned at the appropriate level in the space of representation and then trigger signals in the corresponding centers so that this transformed signal can manifest in the external or internal world.

Impulses become significantly translated and transformed before reaching the consciousness, before reaching the abstractive and associative apparatuses, according to the previous sensory conditions, and later, according to the work of the levels of consciousness. We are saying that the impulses that originate from the sensory apparatus and arrive to the consciousness, where they open the abstractive or associative pathways—these impulses may be transformed or translated even before arriving to the consciousness. Transformed or translated, they open up the different pathways with information that does not correspond exactly to the datum that arrived to the sense. This also occurs with data that, coming from the memory, open the associative or abstractive pathways but undergo translations and transformations before reaching the consciousness.

Let us point out once more that impulses arising from each sense are later translated into corresponding images, although such images are not necessarily visual (except, of course, those of sight). Each of the senses triggers their sensory impulses, which will be translated into images that correspond to that sense: auditory images, tactile images, cenesthetic images, etc. In this way, cenesthetic impulses will produce images, but the phenomena of translation and transformation may complicate things to such an extent that images which correspond to one sense will appear even though they have originated

from the impulses proper to another sense. So, for example, an internal cenesthetic datum arrives to consciousness and opens an associative or abstractive pathway, but when this datum arrives to the consciousness it appears or is configured as a visual image, when in reality its original source was cenesthetic. Cenesthesia does not provide visual data but nonetheless there has been a translation of the impulse that has reached the consciousness. The data was originally cenesthetic but now manifests as a visual, auditory, or other type of representation. It is very difficult to follow the impulse in question, precisely because of the transformations that occur along the way. This has prevented people concerned with these matters from understanding how the psychic apparatus functions, how impulses move, how they become transformed and translated, and how their final expression ends up so far from the conditions that originally generated it.

The problem of pain is seen differently when it is understood that what produces pain in one point can be illusorily transformed and translated and undergo new deformations when evoked. Regarding suffering—and no longer referring to pain—the same considerations apply, since when the impulses are transformed into images that do not correspond, they will also mobilize responses that do not correspond to the initial impulses of suffering. And so, the problem of pain and suffering, when considered simply as sensations, has its mechanics. But since the impulses arrive deformed and transformed into representations, it is necessary to appeal to the work of the imagination in order to comprehend them in their totality. Consequently, it is not sufficient to explain pain simply as a sensation. It is necessary to comprehend that this sensation of pain or suffering is transformed and translated by the imagination as well as by data coming from the memory. Pain and suffering end up heavily deformed, translated, and transformed in general by the imagination. In this way, many sufferings exist nowhere but in the images translated and transformed by the mind.

Let us now focus on the impulses that are characteristically produced in consciousness after taking particular pathways that we call the abstractive and associative. These impulses could open up other channels in the consciousness, but we will be concerned with just these two.

Impulses that reach the consciousness are structured in a characteristic way that depends on, among other things, the level of work of the consciousness at that moment. The images that will subsequently be produced are structured in a specific manner. This structuring of impulses is generally referred to as “form.” If forms are thought of as entities that exist separately from the psychological process, they might even be regarded as having an existence in themselves, leading one to believe that representations are meant to fill those forms. Formerly, there were those who thought so—believing that such forms existed, and so internal processes arose to fill those forms. In reality, forms are mental

ambits of internal register that allow us to structure different phenomena. When we speak of the “form” of an internal phenomenon of consciousness, we are talking about the particular structure of that phenomenon. We do not speak of independent “forms” but rather of how these phenomena are structured. Everyday language refers to this in a simple way. For example, people say things like: “That was true to form” or, “she was in fine form.” This is what we refer to when we speak of form. And we can identify forms with images once these images have left the associative or abstractive pathways.

We can, for example, speak of forms as structures of perception. Each sense has its form of structuring data. The consciousness will later structure that data with the characteristic forms that correspond to the different pathways. The same object, for example, can have different forms depending on the sensory channels used, the perspective from which the object is observed, and the type of structuring performed by the consciousness. All those forms pertaining to the same object can cause the object to appear to us as if it were different from itself, as if we were dealing with different objects, according to whether that object is perceived by the ear, for example, or by the eye. These objects are apparently different because data from the object is being structured in different ways.

A certain problem arises in the process of learning because, in order to obtain a complete image, different perceptual forms of the object have to be fit together. For instance, I might be surprised to hear the sound of an object that does not coincide with the (auditory) image I feel it should have. I have held this object in my hands, I have taken note of its weight, I have observed it visually, but when the object falls to the ground it makes a sound that I never would have imagined. What is it I do then, to reconcile these differently structured sensory inputs—auditory, tactile, olfactory and so on—within my structure of consciousness?

This is possible because this entire system of diverse perceptions is structured within a form of perception that is linked to internal registers. When I recognize an object, I understand that it can use different signals, different signs that are codified registers. When I have a codified register of an object and the object appears before my perception, I can consider it complete even if I only have a part of its totality. Signs awaken codified registers in me. However, linguistic signs are not just signs. For example, I hear a word and, conceptually, I understand it as an expression with a meaning. But, from the perspective of the structure of consciousness, that word is an impulse whose register is codified within me. In this way, a word sets in motion various mental activities because it activates a corresponding register; another word activates a different register, and so on. And it happens that these expressions that reach me are structured in a particular form. Many words combine to form phrases, sentences, larger groupings which may also function as codified signs. So, it is no longer just about considering the word “house”

alone as a sign because it is codified as a register within me. Now, it is about entire sets of words being codified in a structured fashion. In this way, these structures, these forms of organizing language, also appear as codified within me.

The different levels of consciousness each establish their own formal ambit. This means that each level of consciousness structures the data that arrive to it in a different way, a different form. Each level proceeds as the most general structuring ambit and each level is linked to characteristic forms. The forms that emerge in the consciousness will depend to a great extent on that level providing its structuring ambit. The stimulus becomes converted into form—that is, the stimulus will be converted into an image when the consciousness structures it from its level of work. Thus, the same stimulus will be translated into different forms, into different images. And these images can be displaced within consciousness.

I recognize the sign codified in me as it reappears in my space of representation with its characteristic form. My consciousness is perfectly capable of translating an image that has come from one sense into images that correspond to other senses, since, for the purpose of recognition, a single characteristic or band of perception may be enough to structure the whole object. In this way, a datum coming from the eye could be internally transferred into a datum coming from the ear. In other words, the consciousness could translate a perceptual datum, as though that datum had come from another sense. So, although that sign may give rise to different images, they correspond to each other in terms of their location in the space of representation and the function they will later fulfill as images when they trigger the corresponding center. For example, I hear the crackle of fire nearby and I see the fire very close by, I smell the fire very close by—in all these cases, the perceptions that reach me through different channels are structured in a characteristic global representation and all these perceptions are interchangeable; they are able to take each other's place. They are replaceable and therefore translatable. They are positioned at the same level of representation, ready to trigger the same type of warning. So, whether I hear, smell, or see the fire, these initial perceptions may be translated. The displacement of the external perceptual data sets my internal register in motion. If I observe a line in space and my eye follows it in a certain direction, I will also have the internal register of this movement. In this way, what is happening in the eye is also happening in my internal space of representation. Therefore, the type of images that appear outside will not be irrelevant, since the corresponding image will follow specific movements, it will be positioned at different points and depths in my inner space. In this way, all I would have to do in order to comprehend what is going on internally in my system of register would be to study what my eye does as it follows certain phenomena of perception.

Signs

There exist what is conventionally called *“symbol”* and *“allegory,”* even though neither of these representations has been very precisely defined. Internally, *a symbol is an image that arises from the abstractive channel, and an allegory is an image that arises from the associative channel.* The two differ in terms of the way they are structured and their general form. Images originating in the abstractive pathway are reductive, they are stripped of secondary characteristics, they synthesize a number of characteristics, or they abstract the most essential of all the characteristics present. On the other hand, images that correspond to the associative pathway are multiplicative.

There are also representations that perform the function of codifying registers. We call these, “signs.” In this sense, words, for example, are signs that have been codified, that summon up a type of register within me and that also awaken a range of phenomena and processes. If someone hears the word “fire,” they might initially perceive only the word itself, but because that register is codified it activates a complex internal system of reactions. Each spoken word, each sign, evokes that codification and the codifications closely related to it.

Of course, signs arise from various pathways. For example, I can establish a system of signic relations with another person by moving my arms, gesturing in a certain way. By my gesturing in a particular way, they receive that datum which has been encoded internally. And what happens with that datum’s internal codification? It activates in that person the same process that gave rise to the image in the person who launched the sign. In this way, a phenomenon of duplication is produced, in which we end up arriving at the same register. Communication between people would not be possible if it were not for this ability to arrive at the same register. So, if someone indicates something to me with a gesture, I must have the same internal register of that gesture as they do; otherwise, I would be unable to comprehend the meaning it has for them. It is thanks to codified registers that relationships between people can be established. Whether it is a matter of words, gestures, looks or general body postures, in every case we are talking about signs that establish communication because they share the same codification of registers. A single gesture is all it takes to trigger a complex system of codified registers. With a single gesture, for example, it is possible to deeply upset another person.

We can speak of and study signics in the realm of human communication. Expression and meaning form a structure and are inseparable. When the meaning of an expression is unknown, it loses its functionality. Expressions that admit different meanings are understood by context. A sign can be the expression of a meaning, or it may signal through its associative character. Signaling codes are composed of signs that indicate objects, phenomena, or activities. It is clear that both symbol and allegory can perform

signic functions. In the first case, a roadside sign of an inverted triangle could signal the activity of a road maintenance crew. In the second, the illustration of a lightning bolt on a sign attached to a fence could indicate, “Danger: Electricity.”

Our interest is focused on the internal signs, or on those signs in terms of how they trigger codified registers in oneself. Just as a gesture is launched outwards as a sign that is interpreted by someone else, numerous signs, symbols and allegories can also be placed in the external world and interpreted by others.

Symbols

A point in external space will function in the same way as a point in the space of internal representation. We observe that the perception of a point without references causes the eye to move in all directions, since the eye searches for perceptual parameters with which to frame it. The same occurs with a point that is represented. In the presence of an imagined point, parameters, references, will be sought, even if they are the borders of the space of representation. The point will go up, down, to one side or the other; an effort can be made to maintain that point, but it will become apparent that it is as if the “internal eye” were searching for references within the mental space. And so, a point without references causes the eyes to move in all directions.

A horizontal line leads the eye in that direction, in the horizontal direction, without much effort. However, a vertical line provokes a certain type of tension. In the space of representation, moving an image through “heights” and “depths” presents greater difficulty than moving it horizontally. Internally, one could follow a constant “horizontal” movement that eventually returns to the original position, whereas it would be more difficult to “ascend” and circle back to the point of origin from “below.” Similarly, the eye can move more easily in a horizontal direction.

Two intersecting lines lead the eye toward the center and keep it framed there.

A curve leads the eye to include space. It induces the sensation of a limit between what lies inside and what lies outside of it, displacing the eye toward the area included inside the arc.

An intersection between curves fixes the eye and makes a point arise again.

An intersection of a curve and a straight line fixes the central point and breaks the isolation between the spaces included in and excluded from the arc.
Broken straight lines interrupt the inertia of the eye’s movement and require increased tension in looking. The same occurs with discontinuous arcs. If a horizontal line is

observed in the space of representation and this horizontal line is broken and pointed downwards, the inertia that this phenomenon had is broken, is halted, producing an increase in tension. If the same thing is done with a horizontal line but this time it is broken upwards instead of downwards, another type of phenomenon will be produced. But in any case, the inertia will be broken.

The repetition of equal segments of discontinuous straight or curved lines once again puts the movement of the eye in a system of inertia. Therefore, tension in the act of looking diminishes and relaxation is produced; that is, it produces pleasure from the rhythm registered in the repeating curves or in the repeating straight-line segments, something that has been so important for decorative purposes. In the case of the ear as well, the effect of rhythm can easily be verified.

When straight lines and curves end up connecting in a circuit, the symbol of the frame and the field arises. In the space of representation, the greatest frame is given by the limits of this internal space which is, of course, variable. In any case, its limits are the greatest frame. What takes place inside that frame takes place within the field of representation. Taking, for example, a square and placing a point within its field, a different system of tensions can be observed depending on whether the point is close to a discontinuous straight line (an angle of the square), or whether it is equidistant to all the angles. In the second case, a kind of equilibrium can be observed. If that point is removed from the square and placed outside of it, there is a tendency on the part of the eye to include it within the field of the square. Surely, the same thing occurs in internal representation.

When straight lines and curves separate from the circuit, a symbol of expansion emerges (if their direction is toward opening), or a symbol of contraction (if their direction is toward closing).

An elementary geometric figure acts as a reference for manifest centers. There is a difference between a manifest center (where lines cross) and a tacit center (where the eye directs itself without any direction provided by lines). With a square, the tacit center arises where the diagonals cross (even if the lines are not drawn), but it becomes manifest when a point is placed there. Manifest centers appear, therefore, when curves or straight lines intersect and one’s vision becomes fixed. Tacit centers are those that appear as though they were present, operating as if they were there. The phenomenon is not there; rather, there is the register of the eye’s fixation.

In the circle, there are no manifest centers. There is only a tacit center which induces the eye to move toward the center.

The point is the manifest center par excellence. Since there is neither frame nor tacit center, this center displaces itself in any direction.

The void is the tacit center par excellence. Since there is neither frame nor manifest center, this center provokes a general movement toward itself.

When a symbol includes another symbol in its field, the latter is the manifest center. Manifest centers attract the eye. A manifest center placed in the space of representation attracts all the psychism's tensions toward itself.

Two centers of tension provoke a void in the tacit center, shifting one's vision toward both poles, and then toward the center of the void, creating intermittent tensions.

Within the field of a frame given by a symbol, all the symbols are interrelated, and placing one of the symbols outside the frame establishes a tension between it and the group within the frame. This same thing happens with the space of representation as the main encompassing frame. All the images tend to be present in that space, and even copresent images will tend to express themselves there. The same thing occurs among levels in relation to images. And in the space of representation there could also be a certain image (an obsessive image, for example) that prevents other representations from approaching. In fact, this also happens when the attention is actively trained on a content, preventing others from interfering. However, a great void could also exist that would allow deep contents arriving to its field to manifest easily.

Symbols external to the frame are related among themselves only by their reference to the frame.

Signs, allegories, and symbols can serve each other as frames, or as links between frames.

Curves concentrate vision toward the center, and points carry the attention outside of the field.

Color does not modify the symbol's essence, though it influences it as a psychological phenomenon.

The action of the symbol's form can be verified to the extent that the symbol is registered. That is, for someone in a room who cannot tell whether the room has a cubical, spherical, or pyramid shape, the action of the form is not observed. But if someone knows or

believes (for example, in a test, with their eyes blindfolded) that they are in a pyramid-shaped room, they will experience very different registers than if they believe they are in a spherical room.

The phenomenon of the “action of the form” takes place not because of the form itself, but because of the representation that corresponds to the form. These symbols that operate as containers will produce numerous tensions in other contents. They will give energy to some, they will include some and exclude others, etc. In summary, a specific system of relations will be established among the contents, according to the type of symbolic containers that are configured.

Allegories

Allegories are composites of diverse contents in a single representation. Due to the origins of each component, allegories are usually understood as representations of “imaginary” or fabulous beings—for instance, a sphinx. These images, though fixed in one representation, fulfill a “narrative” function. If you mention “Justice” to someone, they may have no register for that word, or they might have several meanings for it that could be presented in an associative chain. In this case, “Justice” could be represented for that person as a scene where different people perform judicial activities, or perhaps as a blindfolded woman with a pair of scales in one hand and a sword in the other. This allegory synthesizes the diverse elements and presents a kind of narrative in a single image.

Within the space of representation, allegories have a curious ability to move, to change, and to transform. While symbols are fixed images, allegories are images that go transforming, that carry out a sequence of operations. An image of this kind has only to be released for it to take on a life of its own and start performing operations in a meandering way. While on the other hand, a symbol located in the space of representation goes against the dynamic of the current of consciousness, and an effort is required to try to sustain it without divagations that would transform it and cause it to lose its properties.

An allegory can be taken from within and placed outside; for example, as a statue in a public square. Allegories are transformed narratives in which the diverse is fixed, or multiplied by allusion; but also, where the abstract is made concrete. The multiplicative character of the allegory is clearly linked to associative processes.

To understand allegory, it would be helpful to review the characteristics of how ideas are associated. It is said that *similarity* guides the mind when it searches for what is similar to a given object; *contiguity,* when it searches for what pertains to it, or for what is, has been,

or will be in contact with it; *contrast,* when the search is for what is in opposition to or in a dialectical relationship with a given object.

We observe that allegories are strongly situational. They are dynamic and express situations referred to the individual mind, as in dreams, some personal divagations, in pathologies and in mysticism. However, this also happens with the collective psychism, as can be seen in stories, art, folklore, myths, and religion.

Allegories fulfill different functions. They relate situations, compensating for difficulties in grasping the whole. When a phenomenon appears and is not adequately understood, it is allegorized and, in lieu of a precise description, it is turned into a story. If thunder is not well understood, it might be explained through a story of someone running through the heavens. If how the psychism functions is not well understood, then stories and myths may appear in order to explain what is happening in relation to oneself.

By apprehending situations allegorically, it is possible to operate over real situations in an indirect way, or, at least, so the allegorizer believes.

In allegories, the emotional factor does not depend on the representation. In dreams, allegories arise which, if they corresponded exactly with daily life, would trigger characteristic emotions. However, in dreams, emotions are triggered that have nothing to do with the representations that are acting. For example: the dreamer sees themselves tied down to railroad tracks. The roaring train rushes toward them but instead of feeling desperation, the dreamer starts laughing so hard that they even wake up in surprise.

Also, an internal state can be allegorized. A person might say, for example: “It’s like I’m falling down an empty shaft.” The internal sensation that is experienced and registered is a kind of desperation, an emptiness, etc., but it can be allegorized as “falling down an empty shaft.”

To understand a system of allegories, it is necessary to consider the climate that accompanies it, because this is what reveals the meaning. And when there is a lack of agreement between an image and a climate, we must, in order to understand the profound meanings, guide ourselves by the climate not the image. When the climate is perfectly intertwined with the corresponding image, there is no problem with following the image, which is easier to do. But if there is any discrepancy between the two, we always favor the climate.

Allegorical images tend to carry energy toward the centers so as to produce a response. Of course, there is a system of tensions and a system to discharge these tensions, and

the allegory plays a connective role like “red blood cells,” which carry charges along the bloodstream—in this case, through the circuit of the consciousness. When there is a transfer of charge from the allegory acting on a center, an energetic manifestation is produced. These energetic manifestations can be clearly recognized in expressions such as laughter, crying, the sexual act, aggressive confrontation, etc. These are the most suitable means to relieve internal tensions and when allegories arise, they normally tend to fulfill this function of discharge.

When considering the composition of an *allegory*, a kind of inventory can be made of the resources with which it is working. And so, we can speak of “containers,” for example. Containers guard, protect, or enclose what is inside them. “Contents,” on the other hand, are the elements included within an ambit. “Connectives” are entities that facilitate or hinder the connection between contents, between ambits, or between ambits and contents. “Attributes” can be explicit or implicit (when they are concealed) and refer to the properties of the allegorical elements or to the allegory as a whole. We also note “levels,” “textures,” “elements,” and “moments of process.” Moments of process are allegorized as ages, for example. Finally, we should mention “transformations” and “inversions.”

When we become interested in an allegory and try to understand it, we try to establish certain *rules of interpretation* that can help us comprehend the meaning of the allegory and what function it is fulfilling in the economy of the psychism.

1. When we want to carry out an allegorical interpretation, we reduce the allegory to a symbol in order to comprehend the system of tensions in which the allegory is situated. The container of an allegory is the symbol. So, if in an allegorical system, there are several people who are arguing in a town square (square or oval shaped, for example), that square is the main container (with its specific system of tensions, according to its symbolic configuration), and the people arguing are within it (they are the contents of that symbol). The symbolic reduction considers the town square as a container that imposes its system of tensions (for example, bifocal tension if the town square is oval shaped), on the situation in which conflictive contents are developing (people arguing).

2. We try to understand the allegorical raw material. That is, through which channels did the primary impulse originate? Did it come from the senses (and from which sense or senses) or from the memory? Did it come from a mixture of senses and memory? Or did it come from a characteristic state of the consciousness that tends to produce these specific articulations?

3. We try to interpret according to associative laws, based on commonly accepted forms. So, when we interpret these associations, we must first ask ourselves what the allegory

means, what it means for us. And if we want to interpret an allegory placed in the external world, such as a picture for example, we should ask its creator what those allegories mean to them. But many hundreds of years may separate us from that allegorizer, and with our epochal and cultural meanings, it would be difficult for us to interpret what it meant for the economy of their psychism. However, we could come to intuit or gain information about the meanings of that time. And so, we say that it is always good to interpret according to associative laws and on the basis of commonly accepted standards. So, if we are studying a social allegory, we must investigate its meaning by consulting those persons who are or have been representatives of that allegorical system. They will be the ones who will clarify its significance, not us since we are not or have not been representatives of that allegorical system. Our personal or cultural contents would "infiltrate" and distort the meanings.

For example, someone tells me about a picture of an old woman. If I ask the person about the meaning of the old woman in the painting and they reply that she signifies "kindness," I will have to accept that, and it would not be legitimate for me to allow my own contents and systems of tension to infiltrate, producing a different interpretation. If I ask someone to tell me about the allegory of the kind old lady, I will have to abide by what they tell me; otherwise, I would be ignoring the other person's interpretation in a dictatorial and illegitimate way, preferring to explain everything according to what happens to me. Therefore, if the allegorizer speaks to me of "kindness," there is no reason for me to interpret that "kindness" as a repressed and deformed sexual content. My interlocutor is not living in a sexually repressed society like nineteenth-century Vienna; they do not participate in the neoclassical atmosphere of the *Culteranistos* who read the tragedies of Sophocles. They are living in the 20th century in Rio de Janeiro, and, in any case, they participate in a neo-pagan cultural atmosphere. Therefore, the best solution will be for me to stick with the interpretation given to me by the allegorizing person who lives and breathes the cultural climate of the city of Rio de Janeiro. We know very well where the interpretations of certain psychological and anthropological currents ended up when they substituted the researcher's particular preferences for the narratives and interpretations of the people who were directly involved.

4. We try to understand the plot. We distinguish between plot and themes. The plot is the story, but within the story there are specific themes. Sometimes, the themes remain and the plot varies, and sometimes the themes vary but the plot stays the same. This occurs, for example, in a dream or in a series of dreams.

5. When the climate and image coincide, one follows the image.

6. When climate and image do not coincide, the guiding thread is the climate.

7. We consider the reverie nucleus, which appears allegorized as an image or as a constant (fixed) climate, through different allegorizations and the passage of time.

8. Whatever fulfills a function is that function and not something else. If in a dream, a word kills, then that word is a weapon. If someone is revived or healed by a word, that word is an instrument for resuscitation or for healing—not something else.

9. We try to interpret color, recognizing that in allegorical representations the space of representation goes from dark to light, in such a way that as the representations ascend, the space itself grows lighter; and as they go down, the space darkens. Different colors with different gradations may appear in all strata of the space of representation.

10. A level of interpretation can be considered resolved when one comprehends the composition of the different elements that configure that allegorical system; when one understands the relationship between the components; and when one can make a synthesis on the function fulfilled by the elements and their relationships. Of course, one could go deeper into new levels of interpretation, if necessary.

11. To understand an allegorical system's process and development, several interpretative syntheses must be carried out over time. That is, a complete interpretation at a given moment may not be sufficient if one is unable to glimpse where the process or the tendencies of the allegorical system in question could lead. It may be necessary to make several interpretations over time.

Operative

This mental space, which corresponds exactly to my body, can be registered by me as the sum of cenesthetic sensations.

This "second body" is a body of sensation, of memory, and of imagination. It has no existence in itself, though on occasion some have sought to give it an existence separate from the body. It is a "body" formed from the sum of sensations of the physical body but depending on whether the energy of the representation goes to one point or another, it mobilizes one part of the body or another. In this way, if an image is concentrated in a level of the space of representation—more internal or more external, at one height or at another—the relevant centers are activated, mobilizing energy toward the corresponding part of the body.

The images that arise do so, for example, because of a specific corporal tension, and so we will look for that tension in the body, in the corresponding point.

But what happens when there is no such tension in the body, and yet a phenomenon of allegorization appears on the screen of representation? It may be that no such tension is to be found in the body. But it could be that a signal coming from the memory and acting over the consciousness causes an image to flash there, revealing that the impulse from memory had an influence over some part of the body. A contraction was produced at that moment which launched the impulse and when the consciousness registered it, it appeared on the screen as an allegory. This allows us to understand that the phenomenon is launching its impulse from a point in the body. These phenomena belong to the past, they are not present, there is no permanent tension acting but nevertheless, this tension (which is not a tension per se, but rather an impulse recorded in memory) sets in motion a tension with the corresponding cenesthetic register that later will end up appearing as an image. Depending on how a specific "bit," a specific signal in the system of register is evoked, and how this signal is released toward the mechanism of consciousness, concomitant phenomena of bodily contractions or bodily irritations could appear.

I am investigating phenomena that do not exist in the present. Phenomena that I can register in my own body to the extent that they are evoked, but that do not exist constantly in the body; rather, they exist in the memory and are expressed in the body when evoked. And so, this space of representation is like an intermediary between some mechanisms and others, because it consists of the sum of cenesthetic sensations. Transformed phenomena of external or internal sensations manifest within it, as do phenomena produced a long time ago that are in the memory. Phenomena that do not exist in the body at that moment also appear within it, but as these are products of the imaginative work of the coordinator, they end up acting over the body.

This is a good time to carry out a review of activities that are oriented toward the modification of certain behaviors of the psychism.

The set of techniques that we call "operative" enables us to operate over and modify phenomena. Operative encompasses several techniques that we call: *catharsis*, *transference,* as well as various forms of *self-transference.*

In recent times the word "catharsis" has once again come back into use. Once again, someone sits with another person who presents their psychological problems. And just as they did thousands of years previously, they say: "Now then, my friend, loosen your

tongue and explain your problem. And as they open up and explain their problems, a kind of inner cleansing (or internal “vomiting”) takes place. They call this technique “catharsis.”

Another operative technique is called, “transference.” The person who has already produced their catharsis and relieved their tensions can now undertake a somewhat more complex work. That work consists of making the person “pass” through different internal states. Upon transiting through these states, the person, no longer suffering from significant tensions, can move through their internal landscape and displace or “transfer” problems or difficulties. The subject can then imaginatively transfer oppressive contents toward other images that have neither emotional charge nor any kind of biographical connection.

Earlier, we spoke about the registers of tension in the simple act of paying attention. This is something you can easily recognize. You can pay attention with tension or without it—there is a difference. You can sometimes let go of the tension and attend. Normally, you believe that when you let go of your tensions while paying attention, you lose interest in the subject. But this is not what happens. Rather, for a very long time you have associated a certain amount of muscular tension with the act of paying attention, and now you believe that you are attending when you are tense. But this has nothing to do with attention.

And what about tensions in general—not just with the tensions of attention? We find tensions in general in various parts of the body, especially in the muscles. We are talking about external, muscular tensions. I voluntarily tense a muscle, and I have a register of that tension. I voluntarily tense my facial muscles; I have a register of that tension. I tense different muscles of my body, and I have a register of that tension. I go on familiarizing myself with this technique of artificial tension. I have a great interest in obtaining as many registers as possible, tensing the different muscles of my body. And I am also interested in dissociating the tensions I had previously produced. I have observed that when one point tenses up, other points also tense up. Later, I try to relax that point, but sometimes the other muscles that accompany the tension do not relax. If you work with certain parts of the body, you can verify that when you want to make one point tense, that point tenses up and others do, too. And later when you relax that point, it relaxes but the others do not.

This happens not just with these types of voluntary exercises but in daily life as well. Faced with a confrontation in daily life, a system of muscles tenses. When the confrontation ends, the muscles involved relax, but not the others that accompanied them at the initial moment of tension. After a little time passes, everything ends up relaxing. Except sometimes a lot of time passes and the other points do not relax. Who does not recognize muscular tensions that are more or less permanent? Some people register

such tensions, at times in the neck, at times in other parts of the body. If you observe right now, you can discover unnecessary tensions operating in various parts of your body. You can register this. And as you can see, what you are registering in these different parts of your body is not fulfilling any function at all.

That said, we distinguish between situational external muscular tensions and continuous external muscular tensions. In the case of *situational tensions,* the individual tenses certain parts of their body, and when the difficulty disappears (in our example, the confrontation), so does the tension. These situational tensions surely fulfill very important functions, and clearly it is not our intention to get rid of them. Then, there are these other tensions, the continuous, non-situational ones. These continuous tensions have the annoying characteristic that, given such a confrontation, they increase. Later, they decrease once more, but a level of continuous tension is maintained.

I can, with certain procedures, relax continuous tensions, but this does not guarantee that other systems of tension will not remain. I can work on my entire external musculature, I can do all the exercises I like, but nevertheless, internally, the tensions will continue acting. What is the nature of these internal tensions? Sometimes, they are of a *deep muscular* type. At other times, I register these tensions as *deep irritations*, as visceral irritations that send out impulses and go about configuring a system of tensions.

When we refer to these deep tensions, we are talking about tensions that are not very different from external ones, except that they have a significant emotional component. We could consider these two phenomena as being degrees of the same kind of activity.

Turning now to these *emotionally tinted internal tensions which we define as climates and which are not very different from tensions in general, except for their strong emotional component.* What happens with tensions and those phenomena like depression? A person feels bored (boredom and depression are related); one thing is the same as the other, they feel no special preferences—we might say that they have no tensions. Perhaps their register of themselves is that they are lacking vitality, but it is quite possible that there is a strong emotional component behind this. In that situation, we note that there are strong, negative emotional currents, and we think that if these emotional currents appear it is because, even if there are no external muscular tensions, there are internal tensions which could be internal muscular tensions or, on other occasions, phenomena of internal irritation. Sometimes it’s not that there is a continuous system of tensions or continuous irritation that is acting but, because of a given situation, mnemonic phenomena, phenomena of memory are released and trigger their activity internally, and then that register of a lack of vitality or boredom arises, or internal oppression, or the sensation of being trapped, etc.

Normally, we can manage external muscular tensions voluntarily. On the other hand, we cannot manage climates voluntarily because they have a different characteristic: they stick with the subject even when this person is no longer in the situation that triggered the climate. You will remember the phenomena of dragging; these things that persist for the person even once the situation ends. These climates follow the subject to such an extent that even though their entire situation has changed, even if they have gone through different situations over many years, still this climate haunts them. These internal tensions are translated in a diffuse and totalizing way. This point also reveals the characteristics of emotion in general, which works by encompassing, by synthesizing. It does not work by referring to a specific point of bodily tension, nor does it refer to a painful point in the intrabody, which could be precisely localized. Rather, it refers to a state where the consciousness is invaded. Clearly, we are dealing with non-localized cenesthetic impulses.

When the mechanism of translation of impulses provides images that correspond to that diffuse climate, we speak of a correspondence between *climate and theme* (there is a theme that corresponds to that climate). In those cases, it is very likely that a person who experiences a certain climate might say, for example, that they “feel trapped.” This thing of being “trapped” is a visual representation that coincides with the emotional register. There are also those who in a more extravagant way do not just talk about being “trapped” in general, but who explain that they feel locked inside a particular kind of box with specific characteristics. This is not very clear to them in vigil, but as soon as their level of consciousness drops a little, that box they are in appears. Of course, when the mechanisms of translation operate strongly, when the cenesthetic registers are more intense and when the allegorical pathway is activated, it is easier to trace these phenomena.

Sometimes images appear that *do not correspond to the climates.* And finally, there are cases in which a *climate without images* is registered. In reality, in every case there is a cenesthetic image. The positioning of this general, diffuse image in the space of representation disturbs the activity of all the centers because it is from that space of representation that images trigger their activity toward the centers.

The force of a climate may be lowered through cathartic discharges, through motor abreactions, which are manifestations of that energy toward the outside of the body. But although on these occasions there is a reduction in the tension, that does not mean the climate has been displaced or eliminated.

The techniques aimed at transforming and displacing climates are transferential techniques. Their objective is not to decrease the charge of an internal tension, but rather to transfer the charge from one image to another.

It is only partly correct to say that climates are generated solely by the translation of signals of deep, involuntary contractions, and that these contractions, captured by cenesthesia, are transformed into diffuse images that occupy the space of representation. This statement is incomplete, first of all, since the register, as in the case of violent emotions, may not be specific but general. And these states correspond to discharges that circulate throughout the whole body, not to a point of tension.

As for the origin of these phenomena, they may be found in the internal senses, the memory, or the consciousness. When the impulse corresponds to a purely corporal phenomenon, cenesthesia takes this datum and sends the corresponding signal which appears as a diffuse image—that is, one that cannot be visualized (i.e., it appears as a cenesthetic image not as a visual one). So, cenesthesia sends the corresponding signal, and a diffuse image appears, which in any case is given in the space of representation.

There are those who say that when they get angry, they “see red,” or that their space of representation is modified, and they see the object that has provoked their anger as “smaller.” Others say that it seems “more prominent,” and so on. We are not talking about the localized impulse, but about the diffused emotional state, which in any case started from the cenesthetic register and has been translated into a cenesthetic image that cannot be visualized. Sometimes it also has translations that can be visualized, but this is not the case here. The positioning of this image that cannot be visualized is given in the space of representation and basically mobilizes the instinctive centers. And all of this is recorded in the memory. If, instead, the initial impulse comes from external senses and at the end of this circuit of impulses the instinctive centers are also mobilized, all this is recorded in memory associated with the external situation. This results in a recording in which the external impulse—that impulse that came from outside—is now linked to an internal corporal state.

Returning to the first case, where, for example, an internal impulse was triggered by a vegetative disorder. Also, in this case there is an associated situational recording, if the external senses are for their part working. But if this took place while the external senses were not working or were working minimally (as in the level of sleep), the situational recording could only refer to data from memory, since it would be updated at that moment. Consequently, at the end of the circuit, there remains in memory a strange association between phenomena of Time 2 (i.e., the cenesthetic register) and phenomena from Time 1 (i.e., the datum from memory).

We have seen cases where the impulse starts from the intrabody and is associated with situations of external perception. And we've seen cases of the same impulse but associated with *memory*, because the external senses are not working at that moment. We have also seen the case of an impulse *that starts from an external sense and ends up mobilizing internal cenesthetic registers*, making it possible from that moment on for the external situation and the internal register to be recorded in memory.

Memory, for its part, can supply impulses, and when it mobilizes registers it can trigger associative chains of images (not only visual ones, but also those from any other sense, including cenesthesia), which in turn provoke a new stream of data, configuring a climatic emotional state. But now, this state is associated with a new situation that is being perceived by the external senses.

Finally, *consciousness* itself, in its elaboration of images, can set in motion all the above and also add its own activity and, in the end, leave in memory external situations associated with imaginary elements. In any case, the enchainment of senses-memory-consciousness is unbreakable, non-linear and, of course, structural.

In this way, if the initial trigger is physical pain, the final configuration could be one of moral suffering, with real cenesthetic registers that are strongly recorded in memory but associated simply to the imagination. Physical pain often ends up in moral suffering that is articulated with elements that, while illusory, can nonetheless be registered. This fact teaches us that the illusory, though it may have no "real" existence, can be registered through various concomitances that possess unquestionable psychic reality. Not much is explained by saying that a phenomenon is "illusory;" nor is much more explained by saying that illusions are registered in the same way as so-called "non-illusory" perceptions. Illusory suffering has a register that is real for the consciousness. It is there, in the field of illusory suffering, that the work of transference finds its most fertile ground. This differs from what occurs with basic painful impulses, whether translated or transformed. These can be divested of other illusory components without eliminating the physical pain. But this falls outside the scope of transference as such.

It is possible to break the automatic enchainment of suffering. This is the primary objective of transference. We see transference as one of Operative's many tools aimed basically at disarticulating suffering, liberating the consciousness of oppressive contents. Just as catharsis frees up charges and produces temporary though at times necessary relief, transference aims at the permanent transfer of those charges, at least in reference to a particular given problem.

Let us now look at some aspects of the compensatory functioning of the apparatuses of the psychism. The thresholds of the different senses vary in structure and the thresholds of the internal senses vary in a compensatory way with respect to the thresholds of the external senses. When the impulses from the external senses diminish, phenomena at the cenesthetic threshold become perceptible and begin emitting their signals. That is, when the external impulses diminish, other internal phenomena that were operating at the level of the threshold and that we were not registering become possible to register. Therefore, when the level of consciousness lowers, phenomena from the intrabody that were not apparent in vigil emerge and become perceptible. These manifest as the noise from the external senses diminishes. As the level decreases, internal impulses appear that, by way of the associative channels, send their signals the consciousness. When the associative pathway awakens, the phenomena of translation work very strongly

Let us return now to the problems of the phenomena of translation and transformation of impulses. When I perceive an object visually, I recognize that there are other non-visual characteristics that I can perceive, depending on the situation. These various perceptions of the same object have been associated in my memory throughout my life. I have a register articulated from these perceptions. In other words, we are now considering something beyond the structuring of perception carried out by a single sense. We are considering, in the perception of an object, the structuring that is done to all the data received by the different senses which, over time, have been incorporated into memory. I rely on the articulation of different characteristics for each object, in such a way that when one of them is considered, the other characteristics associated with it also appear. This is in fact the basic mechanism of the translation of impulses. And what is being translated? Let us consider an example. An auditory impulse awakens mnemonic registers— registers in which the visual impulses of that time were associated with auditory impulses. Now, only the external auditory impulse arrives, but a visual register appears in my space of representation. This is common in vigil, and it is thanks to this mechanism of association of senses, thanks to the structuring of the senses, that we can configure significant aspects of the external world.

Just as the space of representation becomes formed from early infancy onwards, so too does the world of objects. In this stage of learning, children do not seem to coherently put together the different registers that they have of one same object. As we have commented elsewhere, children do not distinguish clearly between their own body and that of their mother. Besides this, they do not clearly relate the type of stimulus reaching a sense with the function that the object performs. They also confuse the apparatus of register, to the point that we often see children putting something they want to eat up to their ear, and we can observe them making all kinds of such substitutions; they are unable to piece together this whole system of perception, they are unable to put it together more-or-less

coherently. Neither is their space of representation coherently articulated. A building that is far away is of course perceived as being smaller than when it is close, but they reach out to it with their hands to grab a chimney, or perhaps a window, and eat it. There are children who do this with the moon which, as you know is, or at least was, beyond reach… Stereoscopic vision, which gives us depth of field and allows the articulation of different distances in space, is configured gradually in infants. The internal space of representation also acquires volume progressively. It is clear that children are not born with objects articulated as they are for adults but rather, over time, data supplied by the senses will, thanks to the memory, allow the psychic apparatus to carry out its work.

We are studying these first phenomena of *translation of impulses*. For example, a phenomenon that stimulates one sense triggers a chain of events in which images appear that correspond to other senses, but in relation to the same object. What happens in those strange cases of association where one object's characteristics are placed in another object? Here we have a much more interesting case of translation. A person hears the sound of a bell, for example, but instead of that evoking the image of the bell what is evoked is the image of a relative. Now, the object heard is not being related to a previously seen object or to an object smelled at that time. Rather, the object that was originally heard is now being associated to other phenomena, to other images that accompanied the recording at that moment which don't have to do with the object in question, but rather with another type of object. Any given object is primarily associated with its various perceptual characteristics. But we are talking about something else—about an object not only associated with all its different characteristics, but with all the phenomena related to it. And these phenomena involve other objects; they involve other people and complete situations. We are speaking then of phenomenon of translation of impulses, which refers not just to the characteristics of a given object, but to those of other objects and situational structures that were associated to it. It seems, therefore, that *the structuring is carried out by relating different perceptions of one same object, and according to situational contexts.*

In addition, if there is an internal impulse, and if it has enough potential as a signal to reach the threshold of register, then when the person perceives the sound of the bell, they experience a curious emotion. Now, they are no longer translating impulses or associating impulses among the different characteristics of that object and others that accompany it, or between complete structures of perception, but rather, something else. They are translating between complete structures of perception and structures of the register that accompanied them at that moment.

If we see that an impulse that corresponds to one sense can be translated and transferred to another, why should we not also be able to translate impulses that are registered by external senses and that, through contiguity, evoke impulses that have been recorded

from the internal senses? This poses no great difficulty. It happens that the phenomenon as such is rather astonishing and even takes on unusual characteristics as the level of consciousness lowers. But the mechanism itself is not that strange.

Let us remember that memory—studied in such layers as ancient memory, mediate memory, and recent memory—is in motion. The raw material that is closest is today's—that is where we have the newest data. But there are numerous associated phenomena that refer to ancient memory and these cause us problems, since the register of an object associated to recent phenomena can be accompanied by phenomena translated from ancient memory. This is quite extraordinary and happens particularly with a certain sense. Because of its structure, the olfactory sense is the richest in this type of production. The sense of smell usually awakens great associative chains of a situational type, and many of them very old. You know the example: you perceive a smell with a certain quality, and it triggers complete images from infancy. And how are those images triggered? Are you reminded of simply that same smell, from twenty years ago? No, you remember a whole situation from long ago that has been triggered by the perception of that smell in the present.

The translation of impulses, which at first appears simple and easy to investigate, ends up becoming complex. Diverse layers of memory, apparently incoherent structuring of perception, internal registers that are associated to externally perceived phenomena; imaginary productions that are associated to, and interfere with, the external register; operations of memory that, as they are translated, flood the associative pathways in a particular level of consciousness—all of these make it difficult to comprehend the general scheme.

So far, we have seen impulses forming associations and translating into one another. But there are other very curious phenomena of transformation. Soon after being structured in one way, an image might begin to acquire other configurations. This is a process that occurs in the associative pathways where the impulses that arise in the space of representation make associations and take on a life of their own: deforming, transforming, and demonstrating an incredible dynamic quality. And with these problems we find ourselves in the techniques of transference. We need to freeze all this. We must be able to rely on general laws of some kind that will enable us to operate in this shifting chaos. We need some operational laws, something that always responds—given the same conditions—with the same results. And we have this because, fortunately, the body possesses a certain permanence. It is thanks to this permanence that we will be able to operate. If this were to happen exclusively in the psychic world, there would be no way of operating—there would be no references.

The objectal reference of the body is what will enable us to say that even if pain in one area of the body is translated in different ways, evoking different contiguous images, and creating mixtures of memories and times—that phenomenon will be detected in a specific zone of the space of representation. And we will be able to comprehend many functions and other curious phenomena thanks to the fixed quality of the body. This body is an old friend, a good companion that provides references that allow us to move around in the psychism. We have no other way to do that.

Let's see what happens with the space of representation and the phenomena that are triggered from it.

I imagine a horizontal line in front of my eyes. I shut my eyes. Where do I imagine it? Well, I imagine it ahead and outside of me. Now I imagine my stomach. Where do I imagine it? Down below and inside. I now try to imagine that line where my stomach is, but I have problems locating it there. Now I imagine my stomach in front of and outside of me and this, too, creates a problem of location. When I imagine my stomach down below and inside, I don't just imagine my stomach, but I also have a cenesthetic register of it, and this is a second component of the representation. I can imagine the stomach in front, above and outside, but I don't have the same cenesthetic register. And so, when the image is positioned in the correct place, it has the component of the cenesthetic register, which provides us with an important reference. With a little effort, you will also be able to imagine your stomach above and outside. But how will you imagine it? Perhaps like a drawing, like what you've seen in books. But if you imagine it down below and inside, how do you imagine it? Like a drawing? Not at all. Do you have a visual image of it? Not at all. You could have a visual image associated with it through the phenomenon of translation, but what is going on when you imagine it in the space of representation, down below and inside? You are working with another type of image—with a cenesthetic image.

So, according to whether the image is positioned in one point or another and at one depth or another of the space of representation, not only is there a register of that image, but there is also the cenesthetic representation that corresponds to that space and depth. When objects positioned in the space of representation are observed "from the back" of that space, we say that we are working with a vigilic articulation. That is, we see phenomena that are external to us as outside our heads (i.e., the so-called "external" phenomena).

I can now imagine distant objects that are outside my head. From where do I register those images? From inside my head—that is the sensation I have. Nevertheless, I would not say that those objects are inside my head. If I take the object that I imagined outside

and now I imagine it inside my head, I will have a cenesthetic register, apart from the image that I have positioned in the interior of my head.

Depending on the level of depth in the space of representation, we have a type of internal register, or a type of cenesthetic register. This is of considerable importance for comprehending later transferential phenomena.

I can imagine, from the back of this kind of screen, phenomena that are outside my head, and when I imagine phenomena that are inside my head, I have a position within that mental space. With a little more effort, I can imagine that object within my head as if I were seeing it from different places all at the same time. It is possible to see the object from different points, as if “the one who is representing” was surrounding the object. Normally, one represents the object from a certain “background.”

There are quite a few difficulties with a mental space positioned from the head and towards the back, but not from the head forwards. Almost all the external senses are located in the front part of the head, and this is how the world is perceived and how the mental space that corresponds to it is articulated. But from the ears back, perception and representation become more difficult.

The curtains of this room are behind you, and you can imagine them without seeing them. But when you observe the curtains behind you in your space of representation, you might ask: “Where do I see the curtains from?” You see them from that same screen—except that a kind of inversion has taken place. You do not place yourself behind the curtains, you place yourself in the same internal location. And now it seems to you that the curtains are outside of you, but behind you. This creates problems for us; but in any case, we remain located in the back of the space of representation.

The space of representation creates a few “topographical” problems. I now imagine phenomena that are outside of this room and far away. I cannot pretend that my consciousness extends outside this room. But nonetheless, I include those objects within my space of representation. Those objects are positioned within my space of representation. Where, then, is the space of representation, if it refers to objects that are outside? This illusory phenomenon is extremely interesting, given that the representation of objects can be extended beyond the immediate perceptual space of my senses, but never outside of my space of representation. And it turns out that my space of representation is precisely internal and not external.

If one examines this incorrectly, one believes that the space of representation extends from the body toward the outside. In reality, the space of representation extends toward

the interior of the body. This “screen” is configured thanks to the sum of cenesthetic impulses that provide continuous references. This screen is internal, and it is not that phenomena I imagine outside flash onto this screen. What happens is that I am imagining them inside, but at different depths of that internal screen.

When we say that the images that appear in different points of the space of representation act over the centers, it’s clear that they could not act over the centers if the screen were positioned towards the outside. Images act over the centers because the impulses go inward, even when the subject believes that those phenomena are located outside. And here it is good to clarify that I am not denying the existence of external phenomena; rather, I am questioning their configuration, since these phenomena are presented to me in front of my perceptual filters and are articulated on my screen of representation.

As the level of consciousness drops, the structuring of the space of representation is modified, and phenomena that were previously seen from inside and believed to be outside, with the lowering of the level of consciousness, are seen outside and believed to be inside; or else, they are seen inside and believed to be outside. The back of the screen where I was positioned when I referred to imagined external phenomena—where is it in my dreams now that “I” see myself placed outside of “that” which sees? And I see myself from above, from below, from a distance, close-up, etc. It turns out that now the space of representation truly takes on internal characteristics at its boundaries. The space of representation becomes internal as the level of consciousness lowers because stimuli from external senses have disappeared and the work of the internal senses has increased. As cenesthetic impulses increase, the internal space of representation reaches maximum extension, and now we have these phenomena occurring in the “interior” of the space of representation as such. Images appear in which the space of representation takes on heightened characteristics, according to the scanning carried out by the cenesthetic impulses. In dreams, the space of representation appears with limits that are like walls, or like containers of all types, and on occasion it appears as one’s own head, inside of which the other oneiric phenomena are given. In the lowering of the level of consciousness, the largest container is, precisely, the limit of the space of representation.

With the fall in the level of consciousness, the instinctive centers (vegetative and sexual) are strongly activated, and while there are some emotional and intellectual concomitances, there are almost no motor ones. When phenomena are positioned in the space of representation in the way that corresponds to a low level of consciousness, they launch most of their images to the vegetative and sexual centers. These are the most internal centers and the ones that work with the registers of cenesthetic sensations. The other centers tend to be closely linked to impulses from the external senses. Moreover,

images that in daily life do not mobilize significant charges or discharges in the vegetative or sexual centers can turn out to be quite powerful when the level of consciousness falls. In turn, strong internal images are configured from the work of these two centers since the work of the centers involves perceptions that are converted into images. This phenomenon is reversible, and just as the space of representation is configured by the cenesthetic impulses so, too, any image positioned at a particular level within the inner layers of the space of representation acts over the corporal level that corresponds to it.

Let us now reconsider what has been said regarding the association of objects and the different senses; the translations of impulses with respect to one same object; the associations between objects and situations; and the translation of the impulses of one object with respect to the other objects around it. Objectal associations that refer to external and to internal situations (i.e., to cenesthetic impulses), are complex registers that are recorded in memory. These recordings always exist as a background of each phenomenon of representation (i.e., of an image) and they are linked to precise zones and depths of the space of representation.

We already have a few elements at hand to help us understand what happens to the movement of images in the space of representation in the levels of sleep and semisleep. We already understand the first steps of what we will call “transferential techniques.” These techniques will be effective and will fulfill their objectives if in fact these phenomena that appear on the screen of representation in the lower levels of consciousness (when they are transformed) mobilize different tensions and parts of the body, or displace mnemonic phenomena that produce tensions expressed in corresponding images. When we act over these images, we modify the system of associations that motivated those tensions.

In these transferential techniques, our problem will lie in associating or dissociating the climates from the images. In other words, separating the climates from the themes.

At times, situations will arise in which we have to associate an image to a climate, because without this image we would only have cenesthetic images that cannot be visualized, and because they cannot be visualized, we would not be able to move them to different heights and levels of the space of representation. So, in dealing with certain climates, we will have to associate them to certain images in order to later mobilize these images in the space of representation, in this way “dragging” the climates along with them. Otherwise, the diffuse climate will be spread throughout the space of representation in such a way that we will be unable to work with it.

And at times, owing to another peculiar functioning of the phenomena in the levels of sleep, we will encounter visual images that carry charges that do not exactly correspond to them, and so we will try to *dissociate these charges and transfer to these images other charges that do correspond.*

And so, we will have to resolve numerous problems in the transference of charges, in the transference of images, the displacement of images, and transformation of images.

[4] This refers to the explanations given in Corfu in 1975 which have been published as “Psychology I.”

[5] See the Appendix on the physiological basis of the psychism in “Psychology I.”

[6] On the space of representation, see “Psychology of the Image” in, Silo, *Contributions to Thought, Collected Works, Volume 1.* Latitude Press, 2003.

Psychology III

This text is a summary prepared by participants in Silo's presentations,
Las Palmas, Canary Islands, early August 1978.

Catharsis, Transference and Self-Transference: Action in the world as a form of transference

We must consider two circuits of impulses that end in the production of an internal register. One of these circuits corresponds to perception, representation, then a second "take" of that representation, and that internal sensation. And the other circuit shows us how from every action that I launch towards the world, I also have an internal sensation. That input of feedback allows us to learn as we do things. If I did not receive feedback from my movements, I would never be able to perfect them. I learn to type on my keyboard through repetition. That is, I record actions by trial and error. But I can record actions only if I carry them out.

I have registers of my activities. A great bias exists that at times has invaded the field of pedagogy. This prejudice says things are learned simply by thinking about them. Of course, something is learned because one also receives data from thinking. However, because of the way the centers work, we know that they are mobilized when images reach them, and this mobilization results from an overcharge that triggers their activity toward the world. The activity that is unleashed produces an input of feedback that goes to the memory on one hand, and to the consciousness on the other. This feedback is what allows us to say, for example, "I hit the wrong key." In this way, I register the sensations of accuracy and error: thus, I go perfecting the register of accuracy, and from there, the correct action of typing grows more fluid and automatic. We are talking about a second circuit that provides me with the register of the actions I am carrying out.

On another occasion, [7] we examined the differences between "cathartic" and "transferential" acts. The first refers, basically, to discharges of tensions. The second allows the transfer of internal charges, the integration of contents, and the broadening of the developmental possibilities of the psychic energy. It is well known that there are mental contents which cause problems because they are like "islands" that do not communicate with each other. If, for example, you think in one direction, feel in another and act in a third, there is a register of "things not fitting together," a register of something missing. It seems that only when we build bridges between internal contents that psychic functioning becomes integrated, and we can advance a few more steps.

Among the techniques of Operative, we recognize the transferential works. By mobilizing certain images and moving them to the points of resistance, those resistances can be overcome. When we overcome them, we produce a lessening of tensions and transfer the charge to new contents. These transferred charges (worked on in post-transferential elaborations), enable a subject to integrate some regions of their internal landscape, of their internal world. We are familiar with these transferential techniques and with others,

such as those self-transferential ones that do not require an external guide. In these, one guides oneself internally thanks to previously codified images.

We know that action and not just the work of images that we have been mentioning can bring about transferential phenomena and self-transferential phenomena. One type of action is not the same as another. There are actions that allow the integration of internal contents, and there are tremendously disintegrative actions. Certain actions produce such a burden of grief, such regret and internal division, such profound anxiety, that one wishes to never repeat them ever again. And yet such actions are already there, stuck firmly to the past. Even if one were never to repeat such an action in the future, it continues to pressure from the past without getting resolved, without allowing the consciousness to move, transfer, or integrate its contents and without affording the subject that sensation of internal growth that is so stimulating and liberating.

It is clear that it is not indifferent what actions one carries out in the world. There are actions that give one a register of internal unity, and actions that give a register of disintegration. If one studies this question of acting in the world in light of what we know about cathartic and transferential procedures, many things regarding the integration and development of the contents of consciousness will be made considerably clearer. We will return to this after taking a quick look at the general scheme of our Psychology.

Scheme of the Integrated Work of the Psychism

We *present the human psychism as a kind of integrated circuit of apparatuses and impulses* in which some apparatuses, called “external senses,” are the receptors of impulses from the external world. There are also apparatuses that receive impulses from the internal world, from the intrabody, which we call “internal senses.” These very numerous internal senses are of great importance for us, and we should emphasize that they have been very much ignored by naive psychology. We also observe that there are other apparatuses, such as those of memory, that capture every signal, whether it arrives from outside or inside the subject. There are still other apparatuses that regulate the levels of consciousness, and, lastly, there are apparatuses of response. The work of all these apparatuses is at times directed by a central system we call “consciousness.”

Consciousness relates and coordinates the functioning of the apparatuses, and it can do so thanks to a system of impulses. The impulses come and go from one apparatus to another. Impulses that travel through the circuit at tremendous speeds; impulses that are translated, deformed, transformed, and in each case produce highly differentiated phenomena of consciousness.

The senses, which are continually sampling what is happening in the external and internal environment, are always active. There is no sense that it is standing still. Even when a person sleeps and their eyelids are closed, the eyes are sampling that dark curtain, the ears are receiving impulses from the external world, and so on, for the classic five senses known to every schoolchild. But besides these, internal senses are taking samples of what is going on in the intrabody. Senses that gather data on the pH of the blood, alkalinity, salinity, acidity; senses that take readings of arterial pressure, that take readings of blood sugar, that take temperature readings. Thermoreceptors, baroreceptors and others continually receive information on what is happening inside the body, while the external senses simultaneously capture information on what is happening outside of the body.

Every signal that is received by the interoceptors passes on to memory and to consciousness. That is, these intrabody signals double and everything sampled arrives simultaneously to memory and to consciousness (in its different levels of work that are regulated according to the quality and intensity of these impulses). There are impulses that are very weak, subliminal, at the limit of perception. On the other hand, there are impulses that become intolerable, precisely because they reach the threshold of tolerance. Beyond that threshold, these impulses lose the quality of being the simple perceptions of a given sense, and become a homogeneous perception, producing a painful perception regardless of the sense they come from.

There are other impulses that ought to reach the memory, and the consciousness, and yet they don't arrive because of an interruption in an external or internal sense. There are other impulses that do not reach the consciousness, not because of any fault in the receptor, but because, unfortunately, some phenomenon has produced a blockage at some point in the circuit. This is illustrated by those cases of blindness known as "somatizations." The eyes are checked, the optic nerve examined, the occipital lobe, and so on. All the circuitry is working well and yet the subject is blind, and their blindness is not due to an organic problem but rather they are dealing with a psychic problem. Another subject is struck dumb or deaf, and yet everything in the circuitry, as far as its connections and localizations, is working well … but something has blocked the path of the impulses.

The same thing happens with the impulses that come from the intrabody. While this phenomenon is not well recognized it is nonetheless of utmost importance, because there exist numerous "anesthesias"—to give them a name—of impulses from the intrabody. The most frequent is anesthesia that corresponds to impulses from the sex. There are many people who, because of some type of psychic problem, do not adequately detect the signals that originate from that point**.** When a blockage has been produced and these

signals are not detected, what should normally arrive to the consciousness (whether in the more familiar attentional field or at subliminal levels) undergoes serious distortions, or does not arrive.

When an impulse from the external or internal senses does not reach the consciousness, it works as though it were trying to reassemble what is missing by “borrowing” impulses from memory, compensating for the lack of the stimulus it needs for its work of elaboration. When, because of an external or internal sensory failure, or simply due to a blockage, an impulse does not arrive from the external or internal world, then memory launches a sequence of impulses in an attempt to compensate the situation. If this doesn’t happen, the consciousness responds by registering itself. This is a strange work that the consciousness does which is like what happens when a video camera is pointed at a mirror and one sees on the screen a mirror reflecting a mirror, and so on. It’s a process of multiplying images in which the consciousness re-elaborates its own contents and torments itself trying to capture impulses where there are none.

Just as the consciousness compensates by taking impulses from some other point, when the impulses from the exterior or from the intrabody are too strong, the consciousness defends itself by disconnecting the sense, as if the consciousness had its own safety valves. We also know that the senses are in continual movement. When one sleeps, for example, the senses that track external noise contract their thresholds. In this way, when the threshold closes, many things that would be perceptible in vigil no longer enter, but nonetheless signals are being captured. Normally, the senses contract and expand their thresholds according to the background noise that surrounds us at that moment. Of course, this is the normal work of the senses, but when the signals are irritating and the senses cannot eliminate the impulse no matter how contracted the threshold, the consciousness tends to disconnect the sense completely.

Let’s imagine the case of a person subjected to sustained external sensory irritation. If the noise of the city increases, if visual stimulation increases, if that entire barrage of news from the external world increases, then a kind of reaction can be produced in the person. The subject tends to disconnect his external senses and “fall inwards.” They begin to be at the mercy of the impulses of their intrabody and to disconnect their external world in a process of rarefaction of the consciousness.

But the case at hand isn’t so dramatic—it is about an entering into oneself when trying to avoid the external noise. In this case, the subject who wanted to reduce sensory noise finds instead an amplification of the intrabody impulses. And this is so because, just as there is a regulation of limits in each of the external and internal senses, the system of internal senses compensates that of the external senses in the same way. We can say

that, in general, when the level of consciousness drops (towards sleep), the external senses lower their thresholds, increasing the perceptual thresholds of the internal senses. Conversely, when the level of consciousness rises (towards waking), the subject begins to lower the perceptual thresholds of the internal senses and the threshold of external perception opens. But as in the previous example, it can happen that even in vigil the thresholds of the external senses can contract, and the subject can enter a situation of "flight" in the face of the irritation produced by the world.

Continuing with the description of the apparatuses en bloc, we can observe the work of the memory when it receives impulses. Data is always being captured by the memory, in this way forming a substratum from early infancy. On the basis of this substratum, all of the progressively accumulated data of memory will be organized. It seems that the first moments of life are the ones that determine, to a great extent, the subsequent processes. But the ancient memory becomes increasingly distanced and inaccessible to vigilic consciousness.

The most recent data accumulates over this substrate until reaching today's immediate data. Imagine the difficulties in recovering very old memory contents that are at the base of the consciousness. It is difficult to get there. One must send out "probes." To top it off, these probes are sometimes rejected because of resistances. As a result, fairly complex techniques have to be employed so that these probes can collect their samples from memory, with the intention of rearranging the contents that, in some unfortunate cases, were poorly fitted together.

There are other apparatuses, such as the centers, that carry out a task that is considerably simpler. The centers work with images. The images are impulses, originating from consciousness, that are launched at the corresponding centers and these centers move the body in the direction of the world. You are familiar with the functioning of the intellectual, emotional, motor, sexual and vegetative centers, and you know that to mobilize any of them, the appropriate images need to be triggered. One thing that could happen is that the charge or intensity of what is triggered may be insufficient. In this case, the center in question would not be greatly affected. It could also happen that the charge is excessive and then a disproportionate movement would be provoked in the center.

Moreover, when these centers—which are also in continuous movement and working in structure with the rest—mobilize charges toward the world, they take energy from the contiguous centers. A person could have some problems that are reflected in the motor part of the intellect, but their problems are in fact of an emotional nature. And so, the images that are proper to the motricity of the intellect contribute to the reorganization of contents, but the emotional problem doesn't get resolved by that re-elaboration of

unbridled images, or by brooding over fantasy images. If, instead of abandoning themselves to their reveries, they were to get up and start moving their body and working their motricity, this would suction the negative charges of the emotional center and the situation would change.

But normally people try to manage all the centers from the intellectual center, and this brings about numerous problems because, as we have previously studied, the centers are managed from “below” (where there is more energy and speed) and not from “above” (where psychic energy is invested in intellectual tasks). In short, all the centers work in structure, and every center, when it launches its energy toward the world, draws energy from the others. Sometimes, one center is overcharged and when its potential overflows it also energizes the other centers. These spillovers are not always negative, because even though in one type of overflow a person might become enraged and act out reprehensibly, in another type of overflow, one could become enthused and joyful, and this energetic overcharge of the emotional center can end up being distributed in a very positive way throughout all the other centers.

On the other hand, sometimes a great deficiency is produced, a great emptiness, a great suctioning from the emotional center. The subject begins to work negatively with the emotional center. To illustrate, it is as though a “black hole” had been produced in the emotional center that concentrates matter, contracts space and absorbs everything towards it. Our subject becomes depressed; their ideas become darkened, their motor potential and even their vegetative potential decreases. Exaggerating a little, we can say that even their vegetative defenses decrease, and now a number of responses normally generated by their organism become diminished; their body is now more prone to illness.

All the apparatuses work with greater or lesser intensity, according to the level of consciousness. If our subject is awake, in vigil, very different things happen than if he is asleep. Of course, there are many intermediate states and levels. There is an intermediate level of semisleep that is the result of a mix of vigil and sleep. There are also different levels within sleep itself. Paradoxical sleep, sleep with images, is not the same as deep, vegetative sleep. In deep, vegetative sleep, the consciousness does not take in data—at least, not within its central field. This type of sleep can last a long time, and that seems similar to death. If one wakes up without having passed through paradoxical sleep, one has the sensation that time has contracted. It is as though time had not passed, because the time of consciousness is relative to the existence of phenomena within it, and so, if there are no phenomena for the consciousness, there is no time for it either. In this sleep where there are no images, things happen too quickly. But it is not completely like this, because when one sleeps for a few hours, what actually happens is that there are many moments of cycles. One passes through paradoxical sleep, then through deep sleep,

then paradoxical, then deep, and so on. If we wake the subject when they are in deep sleep without images (which we can verify from the outside thanks to EEG or REM), they may not remember anything from the stream of images that appeared in the stage of paradoxical sleep (where, from the outside, one can observe rapid eye movement beneath the sleeper's eyelids); whereas, if we wake them at the moment they are dreaming with images, it is possible that they will remember their dream. On the other hand, for the person who woke up, time will appear to have contracted because they don't remember everything that occurred in the different cycles of deep sleep.

It is in the low levels of consciousness, such as those of paradoxical sleep, where the impulses of the intrabody work most freely. It is also here that memory works most actively. When we sleep, the circuit restores itself—it takes the opportunity not only to eliminate toxins, but also to transfer charges, charges of contents of consciousness, of things that were not properly assimilated during the day. The work of sleep is intense. The body is still, but the consciousness is working intensely. Contents are reordered, the film is rewound and played once more, and the day's perceptual data is classified and ordered in a different way. During the day, a great mess of perceptions accumulates because the stimuli are varied and discordant. In contrast, in sleep an extraordinary re-ordering occurs, and things are classified in a way that is very correct.

Of course, we have the impression that it is the other way around, that what we perceive during the day is very ordered and that in sleep there is great disorder. In reality, things may be very well ordered, but the perceptions that we have of those things are incredibly fortuitous and very random, whereas the mechanics of sleep go about re-elaborating and placing the data in their "files." Sleep does not only perform this extraordinary task, but it also tries to reassemble psychic situations that have not been resolved. Sleep tries to move charges from one place to another and produce cathartic discharges because there are excessive tensions. In sleep, many problems of charge are resolved, producing profound relaxations.

But transferential phenomena are also produced in sleep. Charges are dispersed from some contents to others, and from these to still others, in a clear process of energetic displacement. Many times, after a beautiful dream, people experience the sensation that something has "fallen into place," as though an empirical transference had been produced, as if the dream had carried out its transference. But there are also "heavy" dreams from which one awakens with the sensation that an internal process hasn't been properly digested. The dream is trying unsuccessfully to re-elaborate contents and so the subject emerges from that level with a very bad sensation. Certainly, sleep is always at the service of restoring the psychism.

The Consciousness and the “I”

What is the consciousness doing while the various apparatuses are working relentlessly? *Consciousness has a sort of “director” of its diverse functions and activities that is known as the “I.”* Let’s look at it like this: somehow, I recognize myself, and this is thanks to the memory. My “I” is based on memory and the recognition of certain internal impulses. I have a notion of myself because I recognize some of my internal impulses that are always linked to a characteristic emotional tone. Not only do I recognize myself by my biography and the data from my memory; I recognize myself by my particular way of feeling, my particular way of understanding. And if we were to take away the senses, where would the “I” be? The “I” is not an indivisible unit but results from the sum and structuring of data from the senses and the memory.

A few hundred years ago, a thinker observed that he could think about his own thinking. Then, he discovered an interesting activity of the “I.” It didn’t have to do with remembering things, nor was it about the senses providing information. Moreover, the gentleman who noticed that problem very carefully tried to separate the data of the senses from the data of memory; he tried to carry out a reduction so as to be left with the thought of his thinking, and this had great consequences for the development of Philosophy.

But now we are concerned with understanding *the psychological functioning of the “I.”* We ask ourselves: “Can the ‘I’ still function then, even if we remove the data from the memory and the senses?” Let’s examine this point carefully. The totality of acts through which the consciousness thinks of itself depends on internal sensory registers; the internal senses provide information on what occurs in the activity of the consciousness. That register of the identity of the consciousness itself is given by the data from the senses and the memory, plus a peculiar configuration that grants the consciousness the illusion of identity. *That illusory configuration of identity and permanence is the “I.”*

Let’s look at some tests performed in a sensory deprivation tank. Someone enters and immerses their body in water, let’s say at a temperature of around 36°C (that is, they get into a bath in which the ambient temperature is equivalent to skin temperature). The enclosure is climate controlled to ensure that the parts of the body that are above water are kept moist and at the same temperature as the liquid. All ambient sounds, olfactory and luminous stimuli are suppressed, etc. The subject begins to float in the darkness and soon begins experiencing some extraordinary phenomena: one hand seems to grow noticeably longer, and their body has lost the sensation of its limits.

But something curious happens when we reduce slightly the ambient temperature inside the enclosure. When we lower the temperature of the external environment in relation to

that of the liquid by a couple of degrees, the subject begins to feel that they “exit” through their head and chest. At certain moments, the subject begins to experience that their “I” is not in their body, but outside of it. And this extraordinary rarefaction of the spatial location of this “I” is due, precisely, to the modification of the impulses from the skin at certain specific points (i.e., on the face and chest), while the rest of the impulses remain totally undifferentiated. But if the temperature of the liquid and the chamber are made uniform again, other phenomena begin to occur.

In the absence of external sensory data, memory begins hurling streams of data to compensate that absence, and very old memory data can start to be collected. The most remarkable thing is that at times these data coming from memory do not appear as they normally do when remembering images from one’s life—instead they appear “outside” of one’s head. It is as if the memories were “seen over there, outside oneself,” like hallucinations projected on an external screen. Of course, one doesn’t have a clear notion of where one’s body ends; therefore, neither does one have much of a sense of where the images are placed. The functions of the “I” feel strongly altered. The simple expedient of suppressing the external senses produces this alteration.

Reversibility and Altered Phenomena of Consciousness

In this scheme that we are once again describing, *the apparatus of consciousness works with mechanisms of reversibility.* In other words, just as I can perceive a sound, mechanically, involuntarily, I can also pay attention to the source of the stimulus, in which case my consciousness tends to lead the activity towards the sensory source. Perception is not the same as apperception. Apperception is attention plus perception. It is not the same to memorize as to recall. In the first case, something coming from my memory crosses my mind (where consciousness has passively received the data). In the second, my consciousness goes to the memory and works with its unique procedure of selecting and discarding.

And so, the consciousness is equipped with mechanisms of reversibility that work according to the state of lucidity of the consciousness at the moment. We know that as the level drops, it becomes increasingly more difficult to voluntarily go toward the sources of stimuli. The impulses impose themselves; the memories impose themselves, and all of this starts controlling the consciousness with great suggestive power. Now powerless, the consciousness is limited to receiving the impulses. The level of consciousness drops, critical faculties diminish, self-criticism diminishes, reversibility diminishes, and all this with the attendant consequences. This happens not only when the level of consciousness falls, but also in altered states of consciousness.

It’s clear that we must not confuse levels with states. For example, we can be in the level of vigilic consciousness but in a passive state, an attentive state, an altered state, and so on. Each level of consciousness allows for different states. In the level of paradoxical sleep, the states of tranquil sleep, altered sleep and somnambulistic sleep are all different. *Reversibility can also become reduced in an apparatus of the consciousness due, not to a drop in level, but because of an altered state.*

A person could be in vigil and yet, because of particular circumstances, they suffer from powerful hallucinations. They observe phenomena that, for them, are from the external world, when in reality they are “externally” projecting some of their internal representations. That person would be highly susceptible to those contents, those hallucinations, just as a person who is in deep sleep is very susceptible to their oneiric contents. However, our subject is awake, not asleep. As a result of a high fever, the action of drugs or alcohol, and without having lost the level of vigilic consciousness, they find themselves in an altered state, with the resulting appearance of abnormal phenomena.

Altered states are not so all-encompassing; rather, they affect certain aspects of reversibility. We can say that any individual in full vigil could have a blockage in some apparatus of reversibility. Everything works well, their daily activities are normal; they are an average person. Everything works wonderfully… except in one point. When that point is touched, the person loses all control. Their reversibility is blocked in one point. When that point is touched, their critical faculties are weakened, their self-criticism diminished, their self-control is diminished, and strange internal phenomena take control of their consciousness. But it’s not so dramatic, and it happens to us all. To a greater or lesser extent, we all have problems with some aspect of the mechanisms of reversibility. We do not control all our mechanisms quite at will. It can happen, then, that our famous orchestra conductor, the “I,” may not be such a great conductor when some aspects of reversibility are affected, as in those moments when dysfunctions occur among the different apparatuses of the psychism. The example of the sensory deprivation tank is very interesting. Through it, we understand that the issue is not the level of consciousness dropping, but rather the suppression of impulses that normally reach the consciousness—and with that, the very notion of the “I” is altered, is lost. Ranges of reversibility and of the critical faculties are also lost, and compensatory hallucinations occur.

The sensory deprivation tank illustrates what happens when external stimuli are suppressed. Phenomena of interest seldom occur within them if not all sensory references are eliminated. At times it can also happen that there is an insufficiency or absence of impulses coming from the internal senses. We give these phenomena the generic name, “anesthesia.” Due to a blockage, signals that should arrive do not. The subject

becomes altered, their "I" becomes distorted, and some aspects of their reversibility are blocked. And so, *the "I" can become altered due to an excess of stimuli or due to their absence. But in any case, if our directing "I" falls apart, the activities of reversibility disappear.* Moreover*, the "I" directs operations by using a "space," and depending on how the "I" is placed within that "space," the direction of the impulses will change. We speak of the "space of representation" (as opposed to the space of perception)*.[8] Impulses and images are continually being placed within this space of representation, which the "I" is also sampling.

According to whether an image is launched at a certain depth or level of the space of representation, differing responses go out to the world. If, in order to move my hand, I visually imagine it as though I were seeing it from the outside, moving toward an object that I want to grasp, my hand will not really move. That external visual image does not correspond to the type of image that must be launched for my hand to move. For this to happen, I must use other types of images—a cenesthetic image (based on internal sensation) and a kinesthetic image (based on the muscular register and the register of the position of my hand when it moves).

I might suddenly make a mistake involving the type of image and its placement towards the world. Perhaps I've suffered a certain "trauma" (as people liked to say in other times), and then, when I want to get up from the chair I'm sitting in, I make an error in the placement of the image in my space of representation, or I confuse the type of image. What would be happening then? I would be sending out signals, I would be seeing myself get up from the chair, but it may be that I'm not launching the correct cenesthetic and kinesthetic images, which are the ones that move my body. If I were to make a mistake with the type of image or its placement, my body might not respond and remain paralyzed.

On the other hand, this person—paralyzed ever since that famous "trauma" and unable to place their images correctly—could receive a powerful, emotional impact from a shamanic healer or from a religious image and, as a result of this phenomenon of faith (a powerful, emotional, cenesthetic register), they could reconnect with the correct placement or choose the right (cenesthetic) image. And it would be quite impressive to see someone end their paralysis and come out walking after some strange, external stimuli like that. But it could happen—if they were able to reconnect correctly with the image. And just as there are many kinds of somatizations, there can also be many kinds of de-somatizations, according to the play of images that we have been discussing. This has in fact happened many times and many diverse cases have been duly recorded.

This subject of images is not a minor issue. Our "I" is there, firing off images, and every time an image goes out, a center is mobilized, and a response goes out to the world. The

center mobilizes an activity, whether towards the external world or the intrabody. The vegetative center, for example, mobilizes activities launched towards the intrabody and not towards external motricity. But the interesting thing about this mechanism is that, once the center mobilizes an activity, the internal senses take samples of that activity, whether it was launched toward the intrabody or toward the external world. So, if I move my arm, I have some notion of what I'm doing. This notion of my movement is not given by an idea but by cenesthetic registers proper to the intrabody, and by kinesthetic registers of my body's position that are delivered by different types of interoceptors. As I move my arm, I have a register of that movement. It is thanks to this that I can correct my movements until I reach the object I am seeking. I can correct them more easily than a child can because a child doesn't yet have the memory and the motor experience to perform such controlled movements. I can correct my movements because, for each movement I make, I receive corresponding signals. Of course, all this happens very quickly, and I have a signal of each movement I produce in a circuit of continuous feedback that allows for corrections as well as for the learning of movements. And so, from every action that a center mobilizes towards the world, I have data that feeds back to the circuit. And this feedback in turn mobilizes different functions of the other apparatuses of consciousness.

We know there are forms of motor memory. For example, some people study better while walking around than they do sitting down. Another example might be, two people are walking and talking and one of them interrupts the conversation because they've forgotten what they were about to say. However, when that person returns to the place where they lost the thread of the conversation, they recall it completely. And to conclude, you know that when you have forgotten something, if you repeat the movements of your body that took place before the moment of forgetting, you can recover what you forgot. In reality, there is complex feedback from the outgoing action: samples are taken of the internal register, these are re-injected into the circuit, they go to the memory, they circulate, and are associated, transformed and translated.

For many, above all in classical psychology, everything ends when an act is carried out. But it seems that everything is just beginning when one carries out an act, because this act is re-injected, and the re-injection awakens a long chain of internal processes. This is how apparatuses work; they are interconnected by means of complex systems of impulses. These impulses are deformed, transformed, and substituted one for another. And that is how, according to the examples that have been given previously, I can quickly recognize that an ant is crawling up my arm. But an ant that crawls up my arm while I am sleeping isn't easily recognized; instead, that impulse is deformed, transformed, and sometimes translated, giving rise to numerous associative chains according to the mental line operating at that moment. To complicate things further, when my arm is in an uncomfortable position, I become aware of it and move it. But when I'm sleeping and my

arm is in an uncomfortable position, the sum of arriving impulses is taken by the consciousness and translated, deformed, and associated in a unique way. And what happens is that I imagine an army of wasps attacking my arm, and then these images carry a charge to my arm, and it ends up moving to defend itself (ending up repositioned), and I keep on sleeping. These images will be useful precisely because they allow sleep to continue. These translations and deformations of the impulses serve to maintain the level's inertia. These dream images will be serving to defend their own level.

During sleep, many internal stimuli send signals. Then, at the moment of paradoxical sleep, these impulses appear as images. For example, someone sleeping has a deep, visceral tension. What happens? The same as happened with the arm, but now inside. That deep, visceral tension sends a signal, and it is translated as an image. Let's imagine something easier: a visceral irritation sends a signal that is translated as an image. The dreamer now sees themselves in a fire, and if the signal is too intense, the "fire" will end up breaking the inertia of the level; then, the subject will wake up and take an antacid or some such thing. Otherwise, the level's inertia will be maintained and other elements which can help to temper the situation will be associated to the fire, because the same image can work by launching inwards and provoking the release of tensions. In dreams, impulses from different internal tensions are continually being received; the corresponding images are translated, and these images that mobilize centers also mobilize the vegetative center, which gives responses that relax internal tensions. In this way, deep tensions emit their signals and images rebound inward, provoking a release of tension equivalent to the tensions that were triggered.

When our subject was a child, they experienced a strong shock; they were deeply affected by something they saw. Many of their external muscles contracted. Some deeper muscular zones also contracted. And every time they remember that scene, the same type of contraction is produced. Now, it happens that the scene is associated (by similarity, contiguity, contrast, etc.) to other images that are apparently unrelated. Then, when these other images are evoked, the original image arises, and the contractions are produced. Finally, with the passing of time, the initial image that produced the tension becomes lost to ancient memory. And now, inexplicably, whether receiving an impulse or releasing an image, those contractions are produced. When they are in front of certain objects or situations or persons, powerful contractions and a strange fear are awakened that they are unable to relate to that event in their childhood. One part has been erased but the other images have remained. Every time they dream, and images are released that trigger those contractions, samples are taken and translated into images. This is an attempt by the consciousness to relax and transfer the charges that are rooted to this unresolved situation. Through the images that are launched in the dream, an attempt is being made to resolve the oppressive tensions and moreover, to displace the charge of

certain contents to other contents of lower potential, so the original painful charge can be separated or redistributed.

Keeping in mind the empirical cathartic and transferential work that is carried out during sleep, the techniques of Operative can follow that same process of taking impulses and firing images at the points of resistance. However, a few brief digressions are necessary here concerning the classification of the techniques of operative, their general procedures, and the objective of these works.

We group the different techniques of Operative[9] in the following way: (1) cathartic techniques: cathartic probe, catharsis of feedback, catharsis of climates and catharsis of images; (2) transferential techniques: guided experiences,[10] transferences and exploratory transferences; (3) self-transference techniques.

In transferences, the subject places themselves in a specific level and state of consciousness, in a level of active semisleep in which they ascend and descend in their internal landscape; they advance or retreat, expand or contract; and in doing so, they encounter resistances at certain points. For the person guiding the transference, the resistances encountered by the subject are important indicators of blockage, fixation, or contraction. The guide does what they can so that the subject's images gently approach and overcome the resistances. And we say that when a resistance is overcome, a relaxation or a transference of charge is produced. Sometimes, these resistances are very great and cannot be tackled head-on because they produce reactions or rebounds, and the subject will not feel encouraged to undertake new works if they failed while attempting to overcome their difficulties. Therefore, in cases of big resistances, the guide does not advance head-on but rather retreats and in a "roundabout way" approaches the resistances again, but by reconciling the internal contents, not through acting violently. The guide always orients themselves by the resistances and follows the flow of images. They work in semisleep on the part of the subject, so that the subject can present a set of familiar allegories to work with. Working with allegories at the level of active semisleep, the guide can mobilize images, overcome resistances, and release excessive charges.

The final objective of the works of operative is to integrate contents that are separated, so that this vital incoherence that one perceives in oneself may be overcome. These mosaics of contents that do not fit together well; these systems of ideation in which one recognizes contradictory tendencies; these desires that one doesn't want to desire; these things that have happened and that one does not want to repeat; this tremendous complication of unintegrated contents; this continuous contradiction, all of this is what we aim to gradually overcome with the support of the transferential techniques of integrating contents.

Once very familiar with the transferential techniques, it is interesting to venture into different types of self-transferential work in which one dispenses with an external guide and instead uses a codified system of images to orient one's own process. In self-transferences, unreconciled biographical contents are retrieved, and it is possible to work on imaginary fears and suffering whether located in a psychological present or future. The suffering that is introduced into consciousness through its different times and different pathways can be modified by using self-transferential images that are launched at the appropriate level and also appropriate ambit of the space of representation.

We have oriented our works in the direction of overcoming suffering. We have also said that the human being suffers because of what they believe has happened in their life, because of what they believe is happening, and because of what they believe will happen. And we know that the suffering that the human being experiences because of what they believe is real, even if what they believe is not. By working on oneself, one can access these painful beliefs and re-orient the direction of the psychic energy.

The System of Representation in Altered States of Consciousness

Moving through the space of representation, we reach its limits. As the representations descend, the space tends to darken; and inversely, as they go upwards, the brightness increases. These differences in luminosity between the "depths" and the "heights" surely have to do with the information from memory, which since earliest infancy associates recording luminosity with high spaces. One can also verify the increase in luminosity of any visual image placed at eye level, whereas its definition diminishes as its location moves further from that level. Logically, the field of vision opens with greater ease in front of and up from the eyes (towards the top of the head), compared with forward and down (towards the trunk, legs and feet). Despite the above, some painters from cold and foggy lands show us, in the lower planes of their canvasses, a particular lighting where there are often snow-covered fields, as well as a growing darkness towards the high spaces which are often covered with clouds.

In the depths or heights, objects appear that are more or less luminous; but when representing them there is no modification in the general tone of the light found at the different levels of the space of representation.

On the other hand, and only under specific conditions of altered consciousness, a curious phenomenon irrupts, illuminating the entire space of representation. This phenomenon accompanies powerful psychic commotions that deliver a very profound emotional

cenesthetic register. This light that illuminates the entire space of representation manifests in such a way that, even if the subject goes up or down in the space of representation, the space remains illuminated, independent of any particularly luminous object; rather, the entire "environment" now appears to be affected. It is as if the TV screen were set to maximum brightness. In such a case, it is not a matter of some objects being more illuminated than others, but of a generalized brightness. In some transferential processes, after registering this phenomenon, some subjects return to vigil with their perception of the external world apparently modified. Then, according to the descriptions usually given in these cases, objects appear brighter, sharper, and as having more volume. When this curious phenomenon of illumination of the space is produced, something has happened to the consciousness's system of structuring, so that it now interprets habitual external perception in a different way. It isn't that "the doors of perception have been cleansed," but that the representation that accompanies perception has been modified.

Experimentally by means of diverse mystical practices, the devotees of various religions try to make contact with a phenomenon that transcends perception and that seems to irrupt in the consciousness as "light." Through different ascetic or ritual procedures, through fasting, prayer, or repetition, they seek to make contact with a kind of source of light. In transferential and self-transferential processes, whether by accident in the first case or in a directed manner in the second, one has experiences of these curious psychic events. It is known that these can be produced when the subject has received a strong psychic shock; that is, his state approaches that of an altered state of consciousness. World religious literature is full of numerous accounts regarding these phenomena. It is also interesting to note that, on occasions, this light "communicates" and even enters into "dialogue" with the subject, as occurs today with those lights that are seen in the sky and that, reaching the fearful observers, deliver "messages from other worlds."

There are many other cases of variations in color, luminous quality, and intensity, as occurs with certain hallucinogens, but such cases are unrelated to what has been discussed above.

According to descriptions in many texts, some people who apparently died and returned to life had the experience of leaving their bodies and directing themselves towards an increasingly bright light, though they were unable to describe very well whether they were moving towards the light, or it was moving towards them. The fact is that the protagonists are having an encounter with a kind of light that has the property of being able to communicate and even of giving instructions. But in order to be able to tell these stories, one has to receive an electric shock to the heart or something of the kind, and with that

our heroes will feel that they start to return and move away from the famous light with which they were about to make such interesting contact.

There are numerous explanations given for these phenomena, explanations along the lines of anoxia, the accumulation of carbon dioxide, alterations in certain brain enzymes. But for us, as usual, it is not so much the explanations that are of interest—they can say one thing today and something else tomorrow—but rather the system of register, the affective placement that the subject experiences, and this kind of great "meaning" that seems to irrupt unexpectedly. Those who believe they have returned from death experience a great change due to having the register of "contact" with an extraordinary phenomenon that suddenly emerges and whose nature they cannot quite comprehend—i.e., whether it is a phenomenon of perception, or of representation—but which appears to be of great importance, since it can suddenly change the meaning of human life.

Furthermore, it is known that *altered states of consciousness can occur in different levels and of course, in the level of vigil*. When one is enraged, an altered state of vigil is produced. When one suddenly feels euphoria and a great joy, one is also touching on an altered state of consciousness. But generally, when people talk about an "altered state," they tend to think of something infra-vigilic. However, altered states are frequent, they manifest in varying degrees and qualities. Altered states always imply the blockage of some aspects of reversibility. There are altered states of consciousness even in vigil, such as those produced by suggestion. Everyone finds themselves more or less open to the suggestive power of advertisements or media promotions. Many people in all parts of the world believe in the benefits of products endlessly promoted through different marketing campaigns. These products can be consumer goods, values, points of view on different topics, and so on. This decrease in reversibility in altered states of consciousness is common to each one of us at every moment. In cases of greater susceptibility, we find ourselves dealing with hypnotic trance. Hypnotic trance works at the level of vigilic consciousness, even if the person who coined the word "hypnosis" thought it was a type of sleep. The hypnotized subject walks, comes, goes, moves around with their eyes open, carries out operations, and under the influence of post-hypnotic suggestion, continues to act in vigil, but obeying the commands given them during the hypnotic session. We are dealing here with a powerfully altered state of consciousness.

There are pathological altered states, in which important functions of the consciousness become dissociated. There are also non-pathological states, where it is possible to provisionally split, or divide the functions. For example, in certain Spiritist sessions, a person can be talking and at the same time, their hand begins writing automatically and starts transmitting "messages" without the subject's being aware of what is happening.

A very extensive list of altered states could be organized using the cases of divided functions and split personalities. Many altered states accompany defensive phenomena that are activated when adrenaline is triggered in the face of danger, producing serious modifications in the normal economy of the consciousness. And of course, just as there are very useful phenomena in the alteration of consciousness, there are also very negative ones.

Altered states of consciousness can be produced through chemical action (gases, drugs, and alcohol), through mechanical action (whirling, forced breathing, constriction of the arteries) and through sensory suppression. They can also be produced through ritual procedures and a "placing-in-situation" thanks to special conditions using music, dances and devotional operations.

There exist the so-called *crepuscular states of consciousness*, in which there is a blockage of overall reversibility and a subsequent register of internal disintegration. We also distinguish some states that may be occasional and could well be called "*superior states of consciousness*." These can be classified as: "ecstasy," "rapture," and "recognition." The states of ecstasy tend to be accompanied by gentle motor concomitances and by a certain generalized agitation. *States of rapture* are rather more marked by powerful and ineffable emotional registers. *States of recognition* can be characterized as intellectual phenomena, in the sense that the subject believes, in an instant, that they "comprehend everything." In one instant, they believe there is no difference between what they are and what the world is—as though their "I" had disappeared. Who hasn't suddenly experienced an enormous joy for no reason: a sudden, growing, and unusual joy? Who hasn't experienced—for no apparent reason—a realization of profound meaning in which it became evident that "this is how things are"?

It is also possible to enter a curious *altered state of consciousness through the "suspension of the 'I'*." This presents itself as a paradoxical situation, because to silence the "I," it is necessary to choose to keep watch over its activity, which requires a decisive action of reversibility that reinforces, once again, what one is trying to annul. And so, such a suspension is only achieved indirectly, by progressively displacing the "I" from its central location as the object of meditation. This "I"—the sum of sensation and memory—suddenly begins to silence itself, to de-structure. This is possible because the memory can stop delivering data and the senses (at least the external ones) can also cease supplying data. *The consciousness is then in a situation of finding itself divested of that "I" —in a kind of void. In this situation, a mental activity that is very different from the habitual one can be experienced*. Just as the consciousness nourishes itself with the impulses that arrive from the intrabody, from outside the body and from the memory, it also nourishes itself with impulses from responses that it gives to the world (external and

internal), and that feed back into the circuit. And through this secondary path, we detect phenomena that are produced when *the consciousness is capable of internalizing towards "the profound" in the space of representation.* "The profound" (also called "the self" in one current of contemporary psychology), is not exactly a content of consciousness. The consciousness can reach "the profound" through a special work of internalization. In this internalization, that which is always hidden, covered by the "noise" of the consciousness, irrupts. It is in "the profound" where the experiences of sacred spaces and times are encountered. In other words, in "the profound" one finds the root of all mysticism and all religious sentiment.

[7] See Point 8 in “Psychology II.”

[8] To expand on this point, the reader may refer to the conference entitled, “On the Riddle of Perception,” *Silo Speaks, Collected Works, Volume 1.* Latitude Press, 2003.

[9] See Ammann, L. *Self Liberation*. “Second Part. Operative.” Samuel Weiser,1981.

[10] To understand and explore this technique, see the book *Guided Experiences*, especially the introduction to that book given in the book presentation that can be found in *Silo Speaks, Collected Works, Volume 1.* Latitude Press, 2003.

Psychology IV

A Conference given by Silo at La Reja Park of Study and Reflection,
Buenos Aires, mid-May 2006

Impulses and the Diversification of Impulses

In Psychology III,[11] it was stated that the work of an impulse, in any circuit, ends up producing an internal register in the subject. One circuit deals with perception, representation, a new sampling of the representation, and with internal sensation in general. Another circuit traces out the route of the impulses that end up in actions launched towards the external world—of which the subject also has internal sensation. This sampling of feedback is what allows one to learn through one's own actions, whether by improving on a previous action or by ruling out an error that has been committed. All of this was made clear with the example of learning to use a keyboard.[12]

Furthermore, every impulse, whether it ends up in the intrabody or the exterior of the body, produces registers of different placements in the space of representation. This makes it possible to show that the impulses of the intrabody are located at the cenesthetic-tactile limit, towards the "inside" of the body, and that impulses that terminate in actions in the external world are registered at the kinesthetic-tactile limit, towards the "outside." Whatever the direction of the impulse (which necessarily has a correlate of information or internal sensation), it will always modify the general state of the circuit. As regards the impulses' capacity for transformation, we can consider two types: 1) those we call "cathartic," and which are capable of releasing tension or discharging psychophysical energy and, 2) those we call "transferential," which permit the transferring of internal charges, the integrating of contents, and the expanding of possibilities for the development of the psychophysical energy. Every impulse, then, independently of its direction, has a predominantly cathartic or transferential capacity. Moreover, within every impulse there is a share of gratification or discomfort, of pleasure or displeasure, that allows the subject to select among their acts of consciousness or corporal actions.

The impulses unfold through various systems of feedback, like those that permit comparisons of the registers of perceptions with the registers of representations, and which are necessarily accompanied by the "retentions" or memories that correspond to them.

There are other diversifications that more or less voluntarily "focus" on perceptions and representations. These diversifications have been termed "apperceptions," that is to say, the selectivity and directedness of the consciousness towards the sources of perception, and "evocations," that is to say, the selectivity and directedness of the consciousness towards the sources of retention. The voluntary and involuntary directedness and selectivity of the consciousness towards its different sources constitutes the function that has generically been referred to as "attention."

Consciousness, Attention, and the “I”

Consciousness is what we call the apparatus that coordinates and structures the sensations, images, and memories of the human psychism. On the other hand, consciousness cannot be found in a precise location in the central nervous system or at a specific point or depth in the cortex or subcortex. Nor is it a matter of confusing specialized points of work, such as the “centers,” with the functional structures that can be verified throughout the entire nervous system.

For greater clarity, we designate as “conscious phenomena” everything that occurs in the various levels and states of vigil, semisleep and sleep, including those subliminal phenomena (i.e., those which occur at the limit of registerable perception, representation, or remembrance). Of course, when speaking of the “subliminal,” we are not referring to some supposed “subconscious” or “unconscious.”

Consciousness is often confused with the “I,” when in reality the latter doesn’t have a corporal base, as does that which can be identified as the “apparatus” of register and coordination of the human psychism. We previously stated: “That register of the identity of the consciousness itself is given by the data from the senses and the memory, plus a peculiar configuration that grants the consciousness the illusion of identity and permanence, despite the continuous changes that take place in it. That illusory configuration of identity and permanence is the “I.”[13] In altered states of consciousness, it can be frequently observed that, though the consciousness remains in vigil, specific impulses that should be registered are blocked, and the notion of the “I” undergoes an alteration or estrangement; reversibility and critical faculties are lost, and at times decontextualized images take on a hallucinatory external “reality.” In these situations, the “I” is registered as if it were located in the zone where the space of representation has its external limits, and at a certain “distance” from the habitual “I.” The subject then experiences themselves through the register and sensing of phenomena coming from the external world, although, rigorously speaking, these are not phenomena of perception but rather representation. We refer to these phenomena—where perceptions are replaced by representations and therefore located in an “external space” the limits of which the “I” moves towards—as “projections.”

Spatiality and Temporality of the Phenomena of Consciousness[14]

In active vigil, the “I” locates itself in the more external zones of the space of representation, “lost” in the limits of external sense of touch, but if I have an apperception of something that I see, the register of the “I” shifts. In this moment I could say to myself:

“From where I am, I see an external object and I register myself within my body.” Even though I am connected with the external world through the senses, a division between spaces exists, and it is within the internal space that I locate the “I.” If I subsequently have an apperception of my breathing, I might say to myself: “I experience within me the movement of my lungs. I am inside my body, but I am not inside my lungs.” It is clear that I register a distance between the “I” and the lungs, not only because I register the “I” in the head which is far from the thoracic cage but because in all cases of internal perception (as with a toothache or headache), these registers will always be at a “distance” from me as observer. However, here we are not interested in this “distance” between the observer and the observed but rather, the “distance” from the “I” towards the external world and from the “I” towards the internal world.

Certainly, we could point out very subtle nuances in the variability of the “spatial” positions of the “I,” but here we are highlighting the distinct locations of the “I” in each of the cases mentioned. In this description, we can also say that the “I” can be located in the interior of the space of representation but in the kinesthetic-tactile limits that give the notion of the external world and inversely, in the cenesthetic-tactile limits that give the notion of the internal world.[15] In any case, for the limit between worlds we can use the image of a biconcave film that dilates or contracts, and in this way, focuses or blurs the register of external or internal objects. In vigil, the attention is directed, more or less intentionally, towards the registers of the external or internal senses. This management of its direction is lost in semisleep, sleep or even in altered states of vigil since in all these levels and states reversibility is affected by phenomena and registers that are imposed on the consciousness. *It is very evident that not only are memory, perception and representation involved in the constitution of the “I,” but so is the position of the attention in the space of representation. Consequently, we are not speaking about a substantial “I” but rather an epiphenomenon of the activity of the consciousness*.

This “I-attention” seems to fulfill the function of coordinating the activities of the consciousness with the body itself and with the world in general. The registers of the position and elapsing *of mental phenomena are interwoven in, and become independent of, this mental coordination.* In this way, the metaphor of the “I” ends up acquiring identity and “substantiality,” becoming independent of the structure of the functions of the consciousness.

On the other hand, the repeated registers and recognition of the action of attention are configured in the human being from very early on in the measure that the child more or less voluntarily directs itself towards the external world and the intrabody. Gradually, along with the management of the body and certain internal functions, this particular presence is strengthened, as is a copresence in which the register of one’s own “I” is

constituted as that which focuses and is the background of all mental activity. We are in the presence of that great illusion of the consciousness which we call, “I.”

We must now consider the location of the “I” in the different levels of consciousness. In vigil, the “I” occupies a central position, due to the availability of the attention and reversibility. This varies considerably in semisleep, when the impulses that come from the external senses tend to weaken or fluctuate between the external world and a generalized cenesthesia. During sleep with images, the “I” becomes internalized and, lastly, in vegetative sleep the register of the “I” disappears.[16]

In vigilic reveries, the transformation of impulses appears in sequences of free associations, with numerous allegorical, symbolic and signic translations that conform to the special language of cenesthetic images. Of course, we are referring to uncontrolled sequences of images typical of the associative pathways and not to the imaginative constructions that follow a more or less premeditated path.[17] Nor are we referring to the translation of impulses channeled through the abstractive pathways which manifest as symbolic and signic images. Impulses, transforming themselves in different levels, also cause the register of the “I” to vary in its depth in the space of representation. To illustrate this, we could point out that psychic phenomena are always registered not only between the “spatial” coordinates *x* and *y*, but also in respect to *z*; “z” being the depth of the register in the space of representation. Of course, the register of any phenomenon is experienced in the three-dimensionality of the space of representation (the impulses’ depth, vertical height, and horizontal position laterally determine its greater externality or interiority). This can be verified through apperception or by representing the impulses originating from the external world, the intrabody, or the memory.

Avoiding the complications of the descriptions proper to Phenomenology, we must now consider some topics which it has studied exhaustively.[18] We say that, in vigil, *the fields of presence and copresence* allow us to locate phenomena within a temporal succession, establishing the relation of events from the present moment where I am located, with previous moments from which the *flow* of my consciousness comes, as well as subsequent moments to which this flow is directed. In any case the present moment is the barrier of temporality and, although I cannot explain it because when I think about it, I only find the retention of what has happened in the dynamic of my consciousness, it is this apparent “fixity” that permits me to go “back” to the phenomena that are no longer, or “forward” toward the phenomena that are not “yet.” All events are recorded within the *temporal horizon* of the consciousness. And in the restricted horizon which fixes the presence of acts and objects, a field of copresence will always be acting in which everything will be connected.

As opposed to what occurs in the elapsing of the physical world, events of consciousness do not respect chronological succession; rather, they return, persist, are updated, modified and futurized, altering the present moment. The “present moment” is structured by the intercrossing of the retention and the protention. For example: a painful event imagined in the future can act over the subject’s present, diverting the tendency that moved their body towards a previously desired object. In this way, the laws that serve in the spatio-temporality of the physical world deviate considerably when it comes to mental objects and acts. This independence of the psychism through these “deviations” from physical laws brings to mind the idea of “*clinamen”* which Epicurus presented in order to introduce freedom into a world dominated by mechanism.[19]

Understanding that the consciousness works structurally in relation between “apparatuses” and the different pathways through which an impulse circulates, we can consider the impulse, in its various transformations, as the basic “atom” of psychic activity. However, this “atom” does not present itself in isolation but rather in “streams of impulses,” in configurations that give rise to perception, memory, and representation. In this way, the insertion of the psychic in external spatiality starts with impulses that are converted into protentions of kinesthetic images and move towards the exterior of the three-dimensionality of the space of representation, moving the body. It is clear that in all phenomena that involve selecting and regulating motor direction, cenesthetic images and those corresponding to external senses act in an auxiliary way (as “compound signals”). Certainly, it is in this flow of impulses relative to the time and space of the consciousness that the first events occur that end up modifying the world.

At this point, it would not be out of place to reflect generally about the events in which the psychism acts from, and toward, its externality. To begin with, we observe that material objects are presented as spatiality to the “tactile” capturing done by the external senses, which can differentiate among the corpuscle, the wave, the molecule, pressure, temperature, etc. And we conclude by saying that these “impressions,” or impulses external to the psychism, put into motion a system of interpretation and response that could not operate without an internal space.

We are affirming, in the broadest possible way, that through the variation of impulses between “spaces,” the psychism penetrates and is penetrated by the world. We are not speaking of closed circuits between stimulus and response but rather of an open and growing system that receives and acts through accumulation and temporal protention. On the other hand, *this “opening” between spaces does not occur through crossing the barriers of a monad*[20] *but rather because the consciousness, from its beginning, is constituted from, in, and for the world.*

Structures of Consciousness

The different ways of being a human being in the world,[21] the various positions of their experiencing and doing, correspond to complete structurings of consciousness. Thus: the "unhappy consciousness," the "anguished consciousness," the "emotional consciousness," the "disgusted consciousness," the "nauseated consciousness," the "inspired consciousness," are notable cases that have been appropriately described.[22] It is relevant to note here that such descriptions can apply to the personal, the group and the social. For example, to describe the structure of consciousness of panic, one should begin from the collective situation, as is recognized in the (legendary and historic) origins of the word "panic" that designates a special state of consciousness. With the passage of time, the word "panic" has come to be used with increasing frequency to explain an alteration of individual consciousness.[23]

The previously cited cases can be understood individually or as a group (considering the intersubjectivity that is constitutive of consciousness). Whenever variations in these global structures occur, variations in the concurrent phenomena will also occur, as in the case of the "I." Thus, in full vigil but in different states of consciousness, we register the location of the "I" in different depths of the space of representation.

To understand the foregoing, we must appeal to the differences between levels and states of consciousness. There should be no difficulty in understanding the classical levels of vigil, semisleep, deep paradoxical sleep and deep vegetative sleep. But in each one of those levels, we have the possibility of recognizing that psychic phenomena can take various positions. Taking some extreme examples, we say that when the "I" maintains sensory contact with the external world but is lost among its representations or evocations, or if it is aware of itself without significant interest in its actions in the world, we are in the presence of a *vigilic consciousness in the state of self-absorption.* The body acts externally in a sort of "irreality" that, on deepening, could lead to disconnection and immobility. The "I" "shifts" towards a constant presence of registers of evocation, representation or tactile-cenesthetic perception, thereby increasing the distance between itself and the external object.

In the opposite case, the "I," lost in the external world, moves towards tactile-kinesthetic registers with neither criticism nor reversibility towards the acts being carried out. Here, we are dealing with a case of *vigilic consciousness in a state of alteration*, as can occur with what are called "violent emotions." In this case, what is decisive in the shortening of the distance between the "I" and the perceived object is the importance the external object has.

Structures, States and Non-Habitual Cases

We call behaviors that present abnormalities with respect to the individual or group parameters under consideration “non-habitual.” It is clear that if the population of a country or a human group goes mad, we are not going to cease considering these to be cases of “non-habitual” behaviors just because it has numerous representatives. In any case, that human community should be compared with itself but when it was in a stable situation in which reversibility, the critical sense, and control of its actions had predictable characteristics.

On the other hand, there are “non-habitual” cases that are fleeting and others that seem to become more rooted or even spread as time passes. It is not our interest to typify those social behaviors from the point of view of the law, the economy, or of psychiatry. Perhaps anthropology or history could provide us with more motives for reflection on these cases...

If our interest in “non-habitual” behaviors carries us to the personal sphere, or at most to that of the immediate interpersonal, the criteria of reversibility, critical sense, and control of one’s own actions will continue being valid in relation to that personal or interpersonal history. What was mentioned earlier is still applicable regarding those fleeting “non-habitual” cases and those that seem established or even increase in their abnormality with the passing of time.

Therefore, let us take our study of “non-habitual” behaviors out of the territory of pathology to focus, within our Psychology, on two large groups of states and cases; those that we call respectively, “disturbed consciousness” and “inspired consciousness.”

“Disturbed Consciousness”

The “I” can appear in diametrically opposed positions: altered states that can range from those of everyday activity to violent emotions; to states of self-absorption that can range from reflective calm to disconnection from the external world. There are also altered states in which the representations are externalized through projection in such a way that they are fed back to the consciousness as “perceptions” originating in the external world. And there are other states of self-absorption in which the perception of the external world is internalized through introjection.

We have heard reports and read well researched accounts of individuals who suffered hallucinations while in difficult situations high in the mountains, in the solitude of the polar regions, in deserts and at sea. The physical state of fatigue, anoxia, and thirst; the mental state of abandonment within monotonous silence and solitude; the extreme thermal

environmental conditions, these are elements that can give rise to cases of hallucinatory alterations or, much more frequently, to cases of specific illusory alterations.

On the other hand, when it comes to introjective self-absorption, the external sensation arrives to the consciousness, but the corresponding representation operates disconnected from the general perceptual context, feeding back to the consciousness which interprets and registers the phenomenon as “significant” interiority, as a representation which appears “to direct itself” straight to the interior of the subject. For example: the colored lights of the traffic signals in a big city suddenly begin to “send” mysterious codes and clues to the eyes of an anguished pedestrian who, from that point on, considers themselves the only person capable of “receiving” and understanding the significance of the messages.

Projected altered states, as well as introjected states of self-absorption, correspond to transitory or permanent disturbances of vigilic consciousness, and we mention them here as examples of these diametrically opposed placements in the location of the “I.” Furthermore, we should also mention the states of alteration and self-absorption in the level of sleep with images and semisleep.

In Psychology III, we reviewed numerous cases of transitory disturbances of the consciousness.[24] We mentioned the situation of a person who projects their internal representations and is left very suggestible to them. This is similar to what occurs in deep sleep when one is open to the suggestions of oneiric images. These are hallucinations such as those that occur also with intense fever, through chemical action (gases, drugs, and alcohol); mechanical action (spinning, forced breathing, pressure on arteries); suppression of the external senses (sensory deprivation tank) and by the suppression of internal senses (astronauts in the weightlessness of space).

We should also consider accidental disturbances in daily life. These manifest in sudden changes of mood, such as fits of rage and explosions of enthusiasm which, in greater or lesser measure, permit us to experience the displacement of the “I” towards the periphery as reversibility fails and one’s state becomes increasingly altered. We can observe the contrary when, in the face of sudden danger, the subject contracts or flees, trying to put distance between themselves and the threatening object. Either way, the displacement of the “I” is inward. Along this same line, we can note certain curious infantile behaviors. In fact, children often use toy monsters to “resist” or “fight off” other monsters that are lurking or drawing close in the night. And when that technology does not work, there is always the recourse of using the sheets to hide the body in the face of these horrifying threats. It is clear in these cases that the “I” becomes absorbed and introjected.

“Inspired Consciousness”

Inspired consciousness is a global structure capable of achieving immediate intuitions of reality. On the other hand, it is well suited to organizing groupings of experience and prioritizing expressions which are usually transmitted through Philosophy, Science, Art, and Mysticism.

To assist with our development, we could ask and answer in a somewhat scholastic fashion: Is inspired consciousness a state of self-absorption or alteration? Is inspired consciousness a disturbed state, a rupture of normalcy, an extreme introjection, or an extreme projection? Without a doubt, inspired consciousness is more than a state, it is a global structure that passes through different states and that can manifest in different levels. Furthermore, inspired consciousness disturbs the operation of habitual consciousness and breaks the mechanics of the levels. Finally, it is more than an extreme introjection or an extreme projection, since it makes use of either of these depending on its purpose. This last point is made evident when the inspired consciousness responds to a present intention or, in some cases, when it responds to an intention that is not present but that acts copresently.

In philosophy, importance is given neither to inspiring dreams nor flashes of inspiration, but rather to the direct intuition that some thinkers apply in order to apprehend immediate realities of thought without the intermediation of deductive or discursive thinking. This does not refer to “intuitionist” currents in logic or mathematics but to thinkers who give priority to direct intuition, as in the case of Plato’s Ideas, of Descartes’ clear and distinct ideas (which leave aside deceptions of the senses), and of Husserl with his descriptions of noesis, and “suspension of judgment” (epoché).[25]

In the history of science, we can find examples of flashes of inspiration that allowed important advances. The best-known though dubious case is that of Newton’s famous “falling apple.”[26] If this indeed happened, we should recognize that this sudden inspiration was fueled by a slow but intense search directed toward understanding the system of the cosmos and the gravity of bodies. As another example, we could also keep in mind the case of the chemist Kekulé,[27] who one night dreamt of several intertwined snakes which inspired him to develop a new notation for organic chemistry. Undoubtedly, his constant concern with formulating how substances linked together continued working even at the level of paradoxical sleep, taking the pathway of allegorical representation.

There are in the arts many examples of inspiring dreams, as for example in the case of Mary Shelley.[28] Shelley had declared to her friends that she felt, “that blank incapability of invention which is the greatest misery of authorship,” but that night she saw in her dreams the horrible being that was to become the inspiration of her novel, “Frankenstein,

or the Modern Prometheus.” Something similar occurred with the dream of R. L. Stevenson, which set in motion his fantasy story, “The Strange Case of Doctor Jekyll and Mr. Hyde.”[29] No doubt, in the arts, the best-known cases, when it comes to writers and poets, are of vigilic inspiration. Nevertheless, we know of inspirations in other media, as in the case of painters like Kandinsky[30] who, in "Concerning the Spiritual in Art," describes the inner need that expresses itself in artistic work as inspiration. Literary and plastic artists, musicians, dancers, and actors have all sought inspiration by putting themselves in unusual mental and physical environments. The various artistic styles which respond to epochal conditions are not simply fashions or ways to generate, capture, or interpret artistic work, but rather ways of "preparing oneself" to receive and produce sensory impacts. This "disposition" is what modulates the individual or collective sensibility and is, therefore, the one pre-dialogical[31] that allows us to establish esthetic communication.

We find a vast field of inspiration in Mysticism. We must point out that when we speak of “mysticism” in general, we are considering the psychic phenomena of the "experience of the sacred” in their various depths and expressions. There is a copious literature that speaks of the dreams,[32] “visions” in semisleep,[33] and vigilic intuitions[34] of people who are references for religions, sects, and mystical groups. There are also numerous abnormal states and *extraordinary cases of experiences of the sacred that can be classified as Ecstasy, that is, mental situations in which the subjects remain suspended—absorbed, fascinated within themselves; as Rapture, uncontrollable motor and emotional agitation in which the subjects feel transported, carried out of themselves to other mental landscapes, to other times and spaces; and finally, as Recognition, in which subjects believe that they comprehend everything in a single moment.* In this point, we are considering the inspired consciousness, which varies in the way it faces the extraordinary phenomena of its experience of the sacred, although by extension these mental operations have also been attributed to the rapture of the poet or the musician, cases in which "the sacred" may not be present.

We have mentioned the structures of consciousness that we call "inspired consciousness," and we have demonstrated their presence in the vast regions of philosophy, science, art, and mysticism. But inspired consciousness is frequently at work in everyday life; in intuitions, vigilic inspirations, semisleep and paradoxical sleep. “Hunches,” falling in love, the sudden comprehension of complex situations and the instantaneous resolution of problems that troubled the subject for a long time, are all examples of inspiration in daily life. Neither the correctness, truth, nor the coincidence of the phenomenon with respect to its object is guaranteed in these cases, but the registers of "certainty" that accompany them are of great importance**.**

Accidental and Desired Phenomena

The consciousness can structure itself in different forms that vary according to the action of specific stimuli (internal or external), or through complex situations that work in an unsought, accidental way. The consciousness is "taken"[35] in situations where reversibility and self-criticism are practically annulled. In the case that concerns us, "inspiration" bursts into mechanisms and levels, sometimes acting in a less obvious way as a “background” of the consciousness.

Furthermore, anguish, nausea, disgust, and other configurations can also appear suddenly or maintain themselves as more or less prolonged mental backgrounds. For example: when I accidentally turn over a rock and discover a roiling mass of small insects that might swarm towards me or sting my hand, I experience revulsion towards this formless life that assails me. I also register a suppressed aversion when I perceive something sticky, damp, and warm advancing towards me. But this immediate reaction goes beyond the simple motor reflex response to danger since it affects me viscerally, causing a rejection that can end in the reflex of nausea, retching, excessive salivation, and in the extraordinary register that the distance between me and the object or the disgusting situation has "shortened." This shortening of space in the representation brings the object into a type of existence that allows it to “touch me” or to “get inside of me,” provoking retching as a ritual expulsion from my intrabody. This “closeness” is as irreal as the corresponding reflex retching. Consequently, the relation between the disgusting object and the retching response takes on its own characteristics which are outside of the real objects involved. They are converted into a ritual in which the object and the act form a particular structure, the structure of disgust. This accidental configuration of consciousness also occurs when facing a morally or aesthetically repugnant object, as in the case of a novel plagued by contrived cleverness, puns, a tepid, saccharine sentimentality, and infused with diffuse vitality. All of this ends up provoking a visceral defense that averts a profound “invasion” of my body. These structures of consciousness compromise my unity, affecting not only ideas, emotions, and motor reactions, but my somatic totality.

I believe that it would be opportune to make a small digression at this point. It is possible to consider advanced configurations of consciousness in which all types of violence provoke repugnance with the corresponding somatic correlates. The establishment in society of such a structuring of non-violent consciousness would be a profound cultural achievement. This would go beyond ideas or emotions which in present societies are only weakly manifested, to begin forming part of the psychosomatic and psychosocial framework of the human being.

Returning to our theme: We have recognized structures of consciousness that are configured accidentally. But we also observe configurations that correspond to the desires or plans of the person who “puts” themselves in a particular mental situation in order to allow the phenomenon to arrive. Of course, as with the desire for artistic inspiration or the desire to fall in love, this sometimes works and sometimes does not. The inspired consciousness, or better still, the consciousness prepared to achieve inspiration, appears with various and suggestive examples in philosophy, science, art, and in everyday life. Nevertheless, it is especially in mysticism that the search for inspiration has given rise to psychological practices and systems that have had, and continue to have, an unequalled level of development.

We recognize the techniques of “trance”[36] as belonging to the archeology of mystical inspiration. And indeed, we find trance in the most ancient forms of magic and religion. To produce it, people have relied on more or less toxic plant-based potions[37] as well as the inhalation of fumes and vapors.[38] Other techniques that are more elaborate, in the sense that they allow the subject to control and progress in their mystical experience, have been refined over a long period of time. Ritual dances, repetitive and exhausting ceremonies, fasts, prayers, exercises of concentration and meditation have all undergone considerable evolution.

Displacement and Suspension of the I

The Sybil of Cumae, not wishing to be taken by the terrible inspiration, writhes about in desperation, shouting: “He approaches! The god approaches!” And, almost without effort, the god Apollo descends from his sacred wood to the deep cave, where he possesses the prophetess.[39] In this case, and in other cultures, entrance into trance occurs through the internalization of the “I” and through an emotional exaltation in which is copresent the image of a god, a force, or a spirit that takes and supplants the human personality. In cases of trance, the subject places themselves at the disposition of an inspiration that permits them to grasp realities and exercise powers unknown in everyday life.[40] Nevertheless, we often read how the subject resists and even fights with the spirit or god, trying to resist the rapture in convulsions reminiscent of epilepsy. But this is all part of a ritual that affirms the power of the entity that bends the normal will.[41]

In Central America, the Haitian Voodoo cult[42] allows us to understand techniques of trance realized through dances and supported by the use of potions based on fish-toxins.[43] In Brazil, Macumba[44] reveals other mystical variants of trance attained through dance and aided by the use of an alcoholic beverage and tobacco.

Not all cases of trance are as colorful as those mentioned. Some Indian techniques, such as those associated with “yantras,” allow one to reach trance through the internalization of progressively smaller triangles within a complex geometric figure which, on occasion, ends in a central point. Similarly, in the techniques that use "mantras," the subject repeats a profound sound until arriving at self-absorption. Many Western practitioners are unsuccessful with these visual and auditory contemplations because they are not prepared emotionally and limit themselves to repeating those figures or sounds without internalizing them with the emotional or devotional force required for the cenesthetic representation to accompany the narrowing of the attention. These exercises are repeated as many times as necessary until the practitioner experiences the substitution of their personality and the inspiration is complete.

The displacement of the “I” and its substitution by other entities can be observed in the cults mentioned earlier as well as in the most recent Spiritist currents. In these, the entranced “medium" is taken by a spiritual entity which substitutes for their habitual personality.

Something similar occurs in hypnotic trance when the subject deeply internalizes the suggestions of the operator, raising the representation of that voice to the “place” normally occupied by the habitual “I.” Of course, to be “taken” by the operator, the subject must put themselves in a receptive state of “faith” and follow the instructions without hesitation.[45] This point demonstrates an important characteristic of the consciousness. We are saying that while realizing an attentive, vigilic operation, reveries appear that at times go unnoticed or end up diverting the direction of the mental acts that are being carried out. The field of copresence is always acting, even though the objects present to consciousness take the attentional focus. The great number of automatic acts carried out in vigil demonstrates the capacity of the consciousness to perform different works simultaneously. Certainly, dissociation can reach pathological levels, but it also manifests strongly in almost all phenomena of inspiration. On the other hand, the displacement of the “I” may not be total in the spirit trance or hypnosis. This can be seen in what is called “automatic writing” which can be carried out effortlessly, even though the attention of the subject is focused in a conversation or other activity. We frequently find this type of dissociation in those sorts of “psychographic” phenomena in which the hand draws while the subject is deeply involved in a telephone conversation.

Advancing towards self-absorption, we could reach a point in which the automatisms are left behind and we are no longer dealing with a question of displacements or substitutions of the “I.” We have at hand the example given by the practice of the “prayer of the heart,” as carried out by the Orthodox monks of Mount Athos.[46] The recommendations given by Evagrius Ponticus[47] turn out to be most adequate in order to avoid representations (at

least those of the external senses): “Do not imagine the divinity in you when you pray, nor let your intelligence accept the impression of any form whatever; remain immaterial and you will understand.” In broad strokes, the prayer functions in this way: in silent retreat, the practitioner concentrates on the heart, takes a short phrase, and gently draws the phrase, along with the air, down to the heart, finishing the inhalation and “putting pressure” so as to reach further inward. Then, the air is exhaled very smoothly, without losing attention on the heart. The monks repeated this practice many times a day until some indicators of progress appeared, such as “illumination” (of the space of representation). For the sake of precision, we should acknowledge the passage through a state of trance at some point in the repetition of those prayers. The passage through trance is not very different than that produced in the works with yantras or mantras but, in the practice of the “prayer of the heart,” the intent is not to be “taken” by entities that replace one’s own personality; rather, the practitioner ends up going beyond the trance and “suspending” the activity of their “I.”

In this sense, one can also pass through different types and levels of trance in the practices of Yoga, but we should keep in mind what Patanjali[48] says in Book I, Sutra II: “The yogi aspires to the liberation from the disturbances of the mind.” This system of practices goes in the direction of trance, dissociation, and the surpassing of the habitual “I.” In advanced self-absorption, the “suspension of the “I,” of which we have sufficient indicators, is produced in full vigil and outside of any trance. It is evident that even from the beginning of their practice, the subject is oriented toward the disappearance of the "noise" of their consciousness, dampening the external perceptions, representations, memories, and expectations. Some yoga practices[49] allow the mind to be quieted and the “I” to be placed in a state of suspension for a brief time.

Access to the Profound Levels

Certainly, the substitution of the “I” by a force, a spirit, a god, or by the personality of a sorcerer or hypnotist, is something widely attested to throughout history. The suspension of the “I” while avoiding any substitution, as we have seen in certain types of yoga and some advanced mystical practices, is not as widely known.

Now, if someone could suspend and then cause the “I” to disappear, they would lose all structural control of the temporality and spatiality of their mental processes. They would be in a situation previous to that in which they learned to take their first baby steps. They would not be able to communicate to themselves, nor coordinate the mechanisms of consciousness; they would not be able to appeal to memory; they would not be able to relate to the world and they would not be able to advance in their learning. We would not be in the presence simply of an “I” dissociated in some aspects, as occurs in certain mental conditions; rather, we would find ourselves with someone in a state that would

seem like vegetative sleep. It follows that these futile notions of “abolishing the ‘I’” or “abolishing the ego” in everyday life are not possible. Nevertheless, it is possible to arrive at the mental situation of abolishing the “I,” not in everyday life but in determined conditions that start off from the suspension of the “I.”

Entrance to the profound states starts from the suspension of the “I”. With that suspension, significant registers of "lucid consciousness" and comprehension of one’s own mental limitations are produced, which constitutes a great advance. Regarding this transition, one should keep in mind some inescapable conditions: 1.) that the practitioner has their Purpose clear—what they desire to achieve as the final objective of this work; 2.) that they count on sufficient psychophysical energy to maintain their attention self-absorbed and concentrated on the suspension of the “I,” and 3.) that they can continue deepening the state of suspension without interruption until the temporal and spatial references disappear.

With respect to the Purpose, it should be considered as the direction of the entire process, despite it not occupying the attentional focus. We are saying that the Purpose must be "recorded" with sufficient emotional charge so that it is able to operate copresently while the attention is busy with the suspension of the “I” and in the subsequent steps. This preparation conditions all the subsequent work. As for the psychophysical energy necessary to maintain the attention in an adequate level of concentration, the main impulse stems from the interest that forms part of the Purpose. On verifying a lack of potency and permanence, one should review the preparation of the Purpose. What is required is a consciousness free of fatigue and with a minimum degree of education in the reduction of the attentional focus onto a single object. To continue deepening the suspension until achieving the register of "emptiness" means that no representations or registers of internal sensations appear. There should not and cannot be a register of this mental situation. And the return to the mental situation of suspension or to habitual vigil is produced by impulses that reveal the position and discomforts of the body.

Nothing can be said about this “void.” The recovery of inspiring signification, of deep meanings that are beyond the mechanisms and configurations of consciousness, is carried out by my “I” when it returns to its normal vigilic work. We are speaking of “translations” of deep impulses which reach my intrabody during deep sleep, or of impulses that reach my consciousness, in a type of perception different from those normally known when “returning” to vigil. We cannot speak of that world because we do not have registers during the absence of the “I;” rather, as Plato mentioned in his myths, we have only “reminiscences” of that world.

[11] See the explanations given in the Canary Islands in 1978 and which have been published as "Psychology III."

[12] Op.cit., "Catharsis, Transferences and Self-transferences. Action in the world as a form of transference."

[13] Op. cit., "Consciousness and the I."

[14] Cf: "Space of Representation" in "Psychology II."

[15] Cf: "Psychology of the Image," in Silo, *Contributions to Thought*, *Collected Works, Volume 1.* Latitude Press, 2003.

[16] In "paradoxical sleep" or sleep with images, the register of the I "moves away from" the external world and is diluted in disjointed images until disappearing in a situation that can hardly be considered under the control of the dreamer. As for profound vegetative sleep, electroencephalography shows a total absence of images as well as of REM (rapid eye movement), and this coincides with retrograde amnesia for the psychic events that occurred during this total forgetting of the "I."

[17] Cf. The 1989 conference on the Guided Experiences given in the Ateneo de Madrid in "Book Presentation, Guided Experiences." *Silo Speaks*, *Collected Works, Volume 1.* Latitude Press, 2003.

[18] Note from the editors: For a greater understanding of this section, cf. E. Husserl, *Cartesian Meditations.* "Second Meditation. 19. Actuality and Potentiality of intentional life." (The Hague: Martinus Nijhoff, 1960). Also see: M. Heidegger, *Being and Time,* "Division 2, IV, Temporality and Everydayness." As well as "Section 70, The Temporality of the Spatiality that is Characteristic of "Dasein." Harper & Row, 1962.

[19] Apparently, Epicurus defended Democritus' theory according to which atoms in motion form the physical world. However, in response to an objection raised by Aristotle, he added that the atoms suffer deviations and inclinations, which permit their interaction. The doctrine pertaining to the idea of "clinamen" doesn't seem to have been fully formulated until three hundred years after Epicurus. Cf: Lucretius, *De Rerum Natura*, II, 289- 93.

[20] Note from the editors: Since Pythagoras, the *monad* has been conceived of as the primary or fundamental unit from which numbers are derived. Over time, the idea of the monad underwent important changes until, in the Renaissance and Giordano Bruno's *On the Monad,* these constituent atoms of reality are living and animated. In the 18th century, Leibniz in his *Principles of Nature*, characterizes monads as "atoms" without beginning or end that combine without interpenetrating, and which possess their own force. Contemporaneously, Kant, in his *Physical Monadology,* describes the monad as an indivisible point, as opposed to space which is infinitely divisible.

[21] We understand "world" as the synthesis: internal-external world.

[22] In his *Phenomenology of the Spirit,* Hegel refers to "alienation" as the "unhappy consciousness" which is registered as a severing of consciousness from itself, when it is found separated from, and dispossessed of, the reality to which it belongs. In *The Concept of Dread,* Kierkegaard studied the "anguished consciousness" which manifests with regards to its object that is "nothingness." Many "philosophers of existence" draw on the phenomenological method to describe the acts and objects of consciousness' synthesis. Sartre in his *Outline of a Theory of Emotions* describes "emotional consciousness" and Kolnai in *On Disgust* describes the "consciousness of disgust."

[23] Pan was a beneficent, pre-Hellenic divinity of the shepherds, fields, and flocks. In one legend, he appears during the battle of Marathon sowing “terror and panic” among the Persians and helping the Athenians who, starting from that moment, spread his worship throughout Greece. The adjective “panic” refers to the divinity in general, but “panic” is also used to denote the collective and contagious state of consciousness that indicates an imminent danger. Current psychiatry has coined the term “panic disorder,” weakening the initial collective meaning.

[24] “Psychology III.” “The system of representation in states of altered consciousness.”

[25] Plato and Aristotle knew the difference between intuitive and discursive thought, with Plato giving priority to the former. For Plato, the Ideas of the Good and the Beautiful are given by direct contemplation and are real, while good things and beautiful things derive from these Ideas and do not possess the same immediate reality. We recognize important contributions in Descartes’ thought, which thinks about itself without intermediation, and in Husserl’s direct contact with the noesis, the acts of thinking, and with the noemas, the objects linked intentionally with the acts of thinking.

[26] Isaac Newton, Woolsthorpe, U.K, 1666.

[27] In 1865, in Bonn, Germany, Augustus Kekulé established the theory of the tetravalency of carbon and the hexagonal formula of benzene.

[28] Mary Wollstonecraft Godwin. This history is taken from the notes which Polidori wrote in his diary on June 18, 1816, in the Villa Diodati on the shore of Lake Leman, Switzerland.

[29] Robert Louis Balfour Stevenson. Samoan Islands, 1886. [*Translator’s note: This may be a transcription error as both the novel in question and Stevenson's comments on its inspiration were published before his time in the Samoan Islands.*]

[30] Wassily Kandinsky, Moscow, 1911.

[31] Silo. “On the Conditions of Dialogue” in *Silo Speaks*, *Collected Works, Volume 1*, a conference presented at the Academy of Sciences in Moscow, 1999.

[32] *Brihadaranyaka Upanishad, IV*. ¨When the human spirit returns to repose, it retains with itself the materials of the world in which is contained all things and so creates and destroys its own glory and irradiation, so that the spirit glows with its own light.”

[33] *The Bible*, *Daniel, 10:7* New Revised Standard Version: “I, Daniel, alone saw the vision; the people who were with me did not see the vision, though a great trembling fell upon them, and they fled and hid themselves.”

[34] *The Avesta. Gathas. Yasna XLV, 2-3.* "I will proclaim this first teaching to the World. This teaching that the Omniscient Ahura Mazda revealed to me. I will speak of the two first Spirits of the world, of which the kind one said thus to the wicked one: There is nothing that our thoughts, our commandments, our intelligence, our beliefs, our works, our consciousness, or our souls agree on."

[35] Understanding “taken” as being neither directed nor controlled by the subject.

[36] Trance is typically considered by psychology as “a state of dissociation of the consciousness characterized by the suspension of all voluntary movement and the existence of certain automatic activities.” B. Szekely, *Diccionario Enciclopédico de la Psique.* Ed. Claridad, 1975.

[37] Soma (as it is called in India) or Haoma (in Iran) is the most ancient of intoxicating drinks. In the Vedic Hymns 730 (2), we read: *"You are the singer, you are the poet, you are the sweet juice born of the plant. In the intoxication, you are the giver of all good."*

[38] In Delphi, the priestess of Apollo (the Pythia or Pythoness) sat on a tripod located by a fissure in a rock from where arose an intoxicating vapor and then, with incoherent words, she would start to prophesize. In the preceding days, the Pythia would fast and chew on laurel leaves.

[39] Virgil's fantastic description of the story of Cumae certainly contains more than enough information on the procedure used by sybils throughout Greek and Roman history. In any case, in Book VI of the *Aeneid,* the Sybil says: "'Behold, behold the god!' And as she spoke these words at the entrance to the cave, her countenance changed and lost color. Her hair stood on end; panting and breathless, her chest heaving, and full of sacred fury, she appeared to grow larger, and her voice no longer sounded like that of other mortals, as the approaching presence of the supernatural presence inspired her."

[40] Eliade, M. *Shamanism: Archaic Techniques of Ecstasy.* Princeton University Press, 1964. Among other matters, the author surveys the distinct forms of shamanic trance in Central and Northern Asia; in Tibet and China; among the ancient Indo-Europeans; in North and South America; in Southeast Asia and Oceania.

[41] The ancients called epilepsy the "sacred disease." In the convulsions of this illness, they believed they saw a struggle in which the subjects defended themselves from the alteration which was upon them. The gods announced their arrival through the "aura" they sent in advance to the subject. After the "attack," it was supposed that the subject would be left inspired to prophesize. Not in vain is it claimed that Alexander, Caesar and even Napoleon suffered from the "sacred disease" because, after all, they were men of combat.

[42] Originating in Togo and Benin.

[43] Toussaint, R. *De la mort a la vie: essai sur le phenomène de la zombification en Haiti*. (Toronto: Ed. Ifé. 1993)

[44] Originating from the Yoruba people of Togo, Benin, and Nigeria, but also including influences from Senegal and West Africa in general.

[45] It is clear that, from the "animal magnetism" of Mesmer and Puységur to modern hypnosis which begins with J. Braid, the development of hypnosis has been a matter of the elimination of totally unnecessary paraphernalia.

[46] The tradition of the "prayer of the heart" began in the 14th century at Mount Athos, Greece. It expanded out of the monasteries with the publication in 1782 of the *Philokalia,* by the Greek monk Nicodemus the Hagiorite. This was published in Russian a little later by Paisij Velitchkovsky.

[47] Evagrius Ponticus was a "Desert Father" and wrote his apothegms in the 4th century. He is considered one of the precursors of the practices of Mount Athos.

[48] *The Yoga Aphorisms* or *Yoga Sutra,* compiled by Patanjali in the 2nd century, is the first book of Yoga. It conserves, unabridged, 195 short and masterly sentences.

[49] Eliade, M. *Techniques du Yoga*; also, *Yoga: Immortality and Freedom*.