

# **Problems in the Philosophy of Mind**

## **Lecture I: Two poles of experience**

**Richard Jung <sup>1</sup>**

University of Alberta

**The first of four  
Tuesday Public Seminars  
at the Centre for Advanced Study in Theoretical Psychology,  
University of Alberta, Edmonton AB, Canada.  
Fall 1984.**

---

<sup>1</sup> Center for Systems Research, Kouřimská 24, CZ - 284 01 Kutná Hora, Czech Republic;  
+420 607 587 627, [Richard.Jung@post.harvard.edu](mailto:Richard.Jung@post.harvard.edu) , [www.RichardJung.cz](http://www.RichardJung.cz) or [www.univie.ac.at/aoc](http://www.univie.ac.at/aoc) .

The first of four Tuesday Public Seminars at the Centre for Advanced Study in Theoretical Psychology, University of Alberta, Edmonton AB, Canada.

Seminar 1, 9 October 1984.

## **PROBLEMS IN THE PHILOSOPHY OF MIND**

### **LECTURE I: TWO POLES OF EXPERIENCE**

#### **THE NOEMATIC POLE (THE OBJECT OF KNOWING)**

##### THE WORLD

The world is experienced differently by different **observers**.

The different experiences are caused by their different **locations** and motions (perspectives).

If one corrects for the differences in location by a theory of **relativity** (consisting of **transformation** rules), one discovers that some features of the world are the same everywhere in time and space.

These are called **absolute**, while the experiences of the different observers are called **relative**.

The absolute features of the world are (a) absolute **facts** (e.g., the velocity of light *in vacuo*, or the value **h** (difference in energy levels), and absolute **laws** (e.g., the laws of mechanics). These are the same for all possible observers.

The location of each observer defines a **local frame**.

All local frames have certain features in common. (The physical properties of local frames have been fully described by Newton's mechanics.)

Local frames can be meaningfully (as opposed to formally) defined only for **macro-physical** observers.

In local frames one can **distinguish time and space** from each other. (These are indistinguishable absolutely for the universe.) Local times and spaces are relative, *i.e.*, different for each observer.

Only in local spaces are the principles of Euclidean (Cartesian) logic and algebra valid (e.g., **a** or **-a**,  $2+2=4$ ). So are, more generally, the principles of **local reasoning** (e.g., causality, identity of indiscernibles {in macro-physics based on the principle of unique and exclusive location}). Outside of local spaces (for very large or very small space-time distances) these are invalid. This gives rise to the seeming paradoxes of Einstein's relativity theory and quantum theory.

The universe is a product of **evolution** (and is probably still evolving).

The basic mechanism of biological (Darwinian) evolutionary theory applies also to physical and social evolution. **Instability** of existing forms results in **variation**. From varied forms those are **selected** that are stable in the currently

existing **environment**. Changes in the environment increase instability of existing forms and speed up the selection process. The presence of other forms is part of the environment of any form of existence.

In a more general way, the process of evolution can be seen as a process of emergence of new forms and new laws governing their interaction. The mechanism of emergence consists of the alteration of **chance** and **necessity**. The instability of existing forms gives rise to emergence of a variety of new forms, the distribution of which is governed by chance. This produces a different environment. This environment (a set of boundary conditions) results eventually in a **trapping** phenomenon: the new forms and the interaction between them become stable, *i.e.*, give the appearance of necessity.

All forms of existence and all laws of their interaction are inherently **unstable**. This is expressed in the second law of thermodynamics, which asserts that all closed system are characterized by an irreversible process of increasing **entropy**, *i.e.*, a decrease in available energy, an increase in chaos. This can also be stated as the inevitability of the heat death of the universe (assuming that the universe is in fact a closed system).

## THE NOETIC POLE (THE KNOWING SUBJECT)

**All forms of existence can be regarded as noetic poles of experience** (knowing subjects). All "experience" other forms, in that they are deformed and strained by their presence, all "know," in that they differentially respond to other forms. All even "learn," in that they are modified by past experience and respond differently subsequently (historicity, hysteresis). All these are processes of decrease of available energy.

It is customary to restrict the use of the terms "experience" and "knowing" to **living forms**, although I am not aware of any rational reason for this.

Some wish to restrict the use of the terms only to **conscious forms**, which some further claim are only normal human beings in a certain stage of development.

In this usage, **experience = knowing that one experiences**, and **knowing = knowing that one knows**.

Phenomenology, ethnomethodology, sociology and much of relevant psychology was developed with reference to, and based on the **introspection** of conscious humans. I shall briefly review the essential differences between non-living, living and conscious forms of existence. In my view, the fundamental nature of experience and knowing is the same for all forms of existence, although new mechanisms of experiencing and knowing emerge at each level.

### LIFE

Life is a **thermodynamic process**. Living forms are energetically (and informationally) open systems.

They appear, superficially, to violate the universal law of degradation of energy, in that their development is characterized by a temporary decrease of en-

tropy (increase in available energy). However, as Szilard and others have conclusively shown, the presence of **life** in any closed system not only does not violate the second law of thermodynamics, but in fact **speeds up the heat death of the closed system.**

Living forms differ thermodynamically from the most organized known non-living forms (crystals and colloidal suspensions), in that they are **dissipative structures** (Ilya Prigogine). They absorb energy and information from their environment (thereby depleting it), accumulate them, grow to the limit of their retentive capacity, dissipate the excess, and thereby retain their essential form.

This phenomenon is often misinterpreted as a teleological, purposive striving for self-maintenance and self-reproduction, a drive to survive. More neutrally and logically it is formulated in systems theory as **autopoiesis** (self-creation), based on the property of **self-reference** (reflexivity) in the living system (to be explained later).

### **Living forms are forms of matter.**

As such, they exhibit all the properties of matter, and are subject to laws known as the theory of matter.

Relevant among these properties are **extension** in time and space, a **surface** at which a difference between the form and its environment is apparent, **composition** of its contents, an **internal structure**, a **deformation of the surface** when subjected to loads, a **distribution** inside the form of the forces acting on the surface inside the form (**strain**), and a tendency to restore the deformed surface to its original shape (**stress**). All the processes in matter follow **Newton's laws of action**, which state that all the **energy of the reaction** of a system is **derived from the energy of the action** upon it.

**Living forms** appear to violate these laws. The **amount of energy and information contained in their responses often exceeds enormously the amount of energy and/or information in the stimuli.**

Living forms exhibit **hyper-rigidity**. All matter exhibits rigidity, *i.e.*, resistance to a deformation of the surface by a load, based on the transformation of the energy of the load into heat or vibration. But living forms do seem to actively resist deformation (of external or internal surfaces) by mobilizing defenses whose energy and information content is far in excess of the energy/information contained in the load. Often, if the defenses fail, they do not shatter like non-living systems, but explode. This property gives rise to the appearance of survival-drive, autopoiesis and self-reference.

Living forms exhibit **hyper-elasticity**. In response to loads, unlike non-living forms (which at best only partially restore deformed surfaces), living forms often restore them fully or over-restore them (overcompensate). This property gives rise to the appearance of self-generated activity or radical autonomy (self-direction). Unlike non-living forms, which generally respond to repeated loads by "work-hardening" (a decrease in elasticity, an increase in rigidity), living forms often show a "training effect" (an increase in elastic modulus, *i.e.*, an increased ability to work).

Living forms exhibit **hyper-plasticity**. Unlike non-living forms, which flow under the effect of loads, but "freeze" (*i.e.*, retain the deformation caused by a load) once the load is removed, living forms often continue to flow long after the load has been removed. This gives the appearance of radical memory and learning, *i.e.*, the internalization and elaboration of external influences.

The above characteristics of **living hyper-matter** can be understood by considering the fundamental composition of living matter. Complex and unusual reactions of all matter can be explained by reference to the heterogeneity of the substances of which it is composed, and the complexity of their arrangement. Living matter is not only extremely heterogeneous and organized, but exhibits a **fundamental dichogeneity**. Two layers appear to be laminated: an information processing and an energy processing layer. Both layers are dissipative structures: open to the environment (including each other), capable of growth and retention of their essential form by the absorption, accumulation, and dissipation of — respectively — information and energy.

Each layer is thus capable of **amplifying** the activity of the other layer: the energy processing layer can amplify the activity of the information processing layer by supplying energy beyond that contained in the stimulus ("activation," "arousal"), while the information layer can amplify the information of the energy layer by supplying information beyond that contained in the stimulus and pre-wired in the architecture of the energy layer ("regulation," "control"). The laws of entropy and action are not only not violated by living *hyper-matter*, but once the composition of living forms is understood, they provide an explanation of their unusual responses to stimuli. There is no need for mysticism and "special" explanations.

Another characteristic of the composition of living matter is its **fundamental anisotropy**, *i.e.*, its tendency to propagate forces acting on it preferentially in certain directions. This is noted as the fundamental irreversibility of life processes, and probably underlies our experiences of the directionality of time, causality and purposivity.

All living forms are **macro-physical entities**.

As such, they define their **local frames**, in which the principles of local reasoning are valid. Corollaries are that living forms are adapted to their local frames and that local frames describe the general properties of biological and psychological niches and habitats.

Although only the physical properties of local frames are fully understood, it is reasonable to assume that analogous chemical, biological, psychological, and sociological local frames are defined. Thus our definition of life, in the absence of our knowledge of extra-terrestrial life, probably **mistakes local facts and regularities for absolutes**.

The best attempts so far to define biological and psychological local frames are based on the work of von Uexkuell and his concept **Lebenswelt**, *i.e.*, the world as experienced in contrast with the absolute world (**Umwelt**).

The significant units of life are not cells or organizations of cells (tissues, organs, organisms), but **genes and populations in relation to their environments**, *i.e.*, communities, ecosystems, and the biosphere.

All the preceding considerations apply to all units of life.

Biology, psychology, philosophy, and much of sociology has been developed from the perspective of "conscious" organisms, and are therefore only valid within the local frames of terrestrial organisms. For a more valid understanding of what is relative and absolute about experience, consciousness must be de-emphasized and the study of life de-individualized.

## THE BRAIN

**In organisms, the noetic pole of experience is the information processing layer.** In the phylo- and ontogenetically higher organisms, this generally differentiates into the inner and outer skin, glands, receptors, and nervous tissue. Of these, the nervous tissue, and in the highest organisms the central nervous system and particularly the brain, is the significant noetic pole of experience.

The brain is the **product of evolution of matter**, *i.e.*, chance, selection and trapping in a given niche.

The brain appears to be very **redundant**, *i.e.*, many functions can be carried out by other parts of the brain, if the original sites are damaged. This is understandable in terms of the properties of hyper-matter discussed earlier.

According to most recent estimates, the brain is extremely **inefficient**. It seems to use only 3% of its information processing capacity. Dispensing with romantic speculation about its unused potential (ESP?), the inefficiency of the brain can be understood as the result of evolutionary accretion and modification of preexisting tissue.

The brain is incredibly **compact** (densely organized in space). With all the foreseeable miniaturization of artificial information processing systems (computers), the construction of a computer of equal capacity is not feasible.

The brain is a tremendously **powerful** information processing system. The replication of the functioning of even the brain of a mouse is currently impossible. The movement of an artificial forearm from one position to another by brain-like regulation recently accomplished took the biggest computer in Europe 86 hours.

The brain, when regulating experience and action, is **synchronized** wholly or partially, *i.e.*, is very simply organized in time (functions like a clock). This helps to explain another aspect of our experience of time, *i.e.*, the ability to distinguish the past and the present, and the ability to estimate time duration in terms of discrete units. (It also lends support to Kant's revision of Descartes' distinction between matter as *res extensa* and mind as *res intensa (cogitans)*. In Kant's view, matter is essentially extended in space, while the mind is essentially extended in time.

The brain is surprisingly **slow**. The best estimate of the rate of information processing in the brain is one operation per processing unit every 300 milliseconds.

The brain's information **processing and storage capacity** is severely **limited**, in spite its power. This corresponds to observation results, and also follows from the estimates of its size (number of processing units), inefficiency, and rate of processing.

The brain, contrary to popular speculation by most philosophers, is not a logical-mathematical system (like most computers), but as most psychologists have hypothesized on the basis of fragmentary evidence, an **associative system**, reflecting in its information processing its material composition, *i.e.*, the web (plexus) of various tissues with variable connections (nexus) of physical, chemical and electrical nature.

While this is compatible with the postulate that the brain is the product of evolution and is adapted to a local frame, it is almost indefinitely **adaptable** as an information processing system, *i.e.*, can process facts and regularities outside of its local physical and biological frame. The very perplexing question remains, whether the limitations on the capacity for experience are limited by local psychological and social frames.

## THE MIND

There is no standard, generally accepted definition of the mind. Among the difficulties preventing consensus are the problem of the **localization** of the mind, the question whether the mind is a **concrete or an abstract** entity, and the **mind-body problem**. In my view, these three problems are closely related, and an ideal definition would solve all three through the same move. A number of very ingenious solutions were developed from antiquity to the present. All have some deficiencies, and one's choice depends partly on the context of inquiry. In the present context, two definitions have most merit:

There is a version of the **dual aspect** theory, which states that the brain and the mind are two aspects of the same entity. The version I prefer is the **dual description** theory, according to which the same entity when described concretely in biological terms is construed as the brain, and when described abstractly in psychological terms is construed as the mind. The brain then is the **spatial** extension of the brain/mind, while the mind is its **temporal** extension. One may then also say that the brain is the structural (architectonic) description and the mind the **functional** (program) description of the brain/mind. This version is preferable, if one chooses to think (in the Kantian mode) of the mind as the noetic pole of experience.

If, however, one chooses, as I do, to think rigorously in the Husserlian phenomenological mode, another, apparently new solution becomes possible. One can think of the **brain as the noetic (subject) pole of experience** of a high organism, and of the **mind as the SYSTEM OF RELATIONS between it and the set of all noematic poles of its experience** (its environment). Thus conceived, the mind is a **functional, abstract entity located in time, a system of experiences, intentional (*cogitans*) in its nature** (satisfying both Kant and Descartes). It is analogous to behavior as the relation between an organism and its environment, but differs from it in that it is an intentional system, thus satisfying Brentano's distinction between the "mental" and the "physical," as well as subsequent

phenomenological considerations. Psychological descriptions of the mind so defined are then necessarily mentalistic, as distinct from the necessarily behaviorist descriptions of the relation of an organism to its environment.

The mind is a **product of phylogenetic evolution**. This is the subject matter of comparative psychology.

The mind is a **product of ontogenetic development**. Its development follows the development of the organism (including the brain) and the (corresponding) changes in the habitat. If the development of the organism and the habitat are "normal" (typical), the mind develops in an orderly succession of stages of organization of emotional and cognitive experience (Freud, Piaget, Erikson). Development of the mind is the subject matter of developmental psychology and the study of socialization in sociology.

The mind is a **product of adaptation of a specific brain to specific situations**. The basic mechanisms are accommodation and assimilation (Piaget), or, in different terminology, of internalization of significant features of the organisms habitat (Freud, Mead).

Because of this and its complexity, while being adapted to certain general features of local frames, each mind is **inherently unique**, *i.e.*, develops its organization of experience in terms of a personal combination of mechanisms (complexes, neuroses, Freud) and personal constructs (Kelly). The study of the common features of all minds is the aim of "nomothetic" psychology, while the emphasis on the unique is characteristic of "idiographic" psychology (Windelband, G.W. Allport). Both these orientations are represented in the relevant branches of psychology and sociology, *i.e.*, individual, personality, ecological, and social psychology.

The mind is **predominantly unconscious** (Freud).

The unconscious "part" of the mind is characterized by the "**primary process**" governed by the principle of avoidance of discomfort ("*Unlust*," Freud). While adapted to the local frame, it is irrational or at best "a-rational," in that it does not operate on the logical and physical principles of local reasoning.

The **conscious** "part" of the mind in mature humans is said to be "just the tip of an iceberg." Nevertheless, the question of what is the nature and function of consciousness has perennially perplexed philosophers and psychologists, at least in the Indo-European tradition. To arrive at a satisfactory answer, we must unravel the bundle of characteristics of consciousness and examine one after the other.

The conscious mind is to some extent rational, *i.e.*, some of its functions are characterized by the "**secondary process**" governed by the "reality principle" (Freud). What Freud calls the secondary process is operating according to principles of local reasoning. What he calls the reality principle is being adapted to general regularities of local frames, as defined by Cartesian logic and algebra, Euclidean geometry, and Newtonian physics. It is these features of the local frames that Kant first generalized in his *Critique of Pure Reason* as the Categories of Mental Activity (Space, Time, Identity, Number, Relation, Causality), and in his following Critiques tried to further apply beyond cognition to judgment and affect.

Kant thus developed the modern theory of the conscious mind. To this theory Freud, Piaget, and most other recent theorist of consciousness and rationality knowingly or unknowingly subscribe.

The term "**rational**" in the first instance connotes objective. The theory of rational (local) reasoning was first developed in rhetoric, physics, logic, and mathematics as a method of adaptation to the local frame. From the beginning, the term "**objective**" implies independent of the specific observer (knower, noetic pole of experience), and the essence of objective rationality is the discovery of a method of guaranteeing intersubjective agreement by employing a set of rules governing mental operations presumably resulting in the necessary preservation of the truth value of assertions under permissible transformations (analyticity). Kant, Freud, Piaget, and others all first develop their theories of rational mental processes as theories of objective (epistemic, cognitive) rationality.

Objective rationality is the product of evolution, in that it seems to depend on the **evolution of the neocortex**, in particular the frontal lobes.

It is the product of development, in that it depends on the **maturation of the neocortex**.

While it thus clearly depends on certain characteristics of the noetic pole (the knowing subject), it also -- in accordance with the relational definition of the mind -- seems dependent on the emergence of a certain **special characteristic of the environment (the noematic pole)**. This is the **presence of social institutions (conventions) of unconditional intersubjective agreement, i.e., the institutionalization of rhetoric**. (Logic, mathematics, Newtonian physics etc. are clearly not inherited and do not simply mature, they must be taught/learned.) Thus (for Freud, Piaget and others) the emergence in the mind of conscious objective rationality depends on the successful adaptation of the brain to specific social artifacts\* in its environment, *i.e.*, on the successful socialization of the mind.  
\*Please do not ask YET how these artifacts got there!

As mentioned earlier, most thinkers on the subject eventually attempt to extend their theories of objective rationality to **subjective** (telic, emotional, evaluative, judgmental) **rationality**. At first, an attempt is made to apply the notion of rationality to the problem of rational subordination of means to ends, *i.e.*, to the domain of **instrumental rationality** (*techné* in Aristotle, practical reason in Kant, *Zweckrationalität* in Max Weber, teleological calculus in Engliš, praxeology in Kotarbiński, deontic calculus in von Wright, proximal reasoning in Rescher). Only later is the approach is extended to the problem of selection of goals of action, *i.e.*, to **substantive rationality** (*e.g.*, ethics in Spinoza, *Wertrationalität* in Max Weber), and to other domains of subjective rationality (*e.g.*, emotion, judgment, tradition, legal reasoning: Kant, Pareto, Max Weber). The modern theory of economic rationality (von Neumann), on which modern micro-economics, decision and game theory are founded, gives us a precise criterion of subjective rationality. While we do not have any precise criterion of value in the domain of substantive rationality (basis of individual preferences), we have now a precise theory of social value or of rational social choice (Adam Smith, Pareto, Tinbergen, Frisch, Arrow, Debreu). The successful application of game theory to the evolution of behavior also indicates that the theory applies to all living communities. The two great theoretic-

cians of mental development, Freud and Piaget, both follow this path. While in Freud considerations of objective and subjective rationality are intermixed, Piaget develops a separate theory of "moral" development, which covers the domain of subjective rationality. Their basic ideas, together with the work of Kant, Durkheim, Husserl, Mead and others, give us a clear picture of the emergence and role of subjective rationality in consciousness.

Like its objective counterpart, subjective rationality is the product of evolution, development and adaptation, and depends noetically on the evolution and maturation of the neocortex, and noematically on the presence in the environment of physical and social artifacts, *i.e.*, of tools as well as of institutions of magic, art, craft and technology, *i.e.*, on the **socialization of the brain**.

The second most salient feature of consciousness is **self-awareness**, *i.e.*, the seemingly incorrigible presence of the experience of self in any experience. This, of course, is the basis of Descartes' famous "proof" of individual existence (or the existence of the self, or of the soul, depending on interpretation): "*Ego cogito, ergo ego sum!*" The theories of emergence and development of subjective rationality mentioned above include in addition to the conditions necessary for objective rationality, yet another: **the presence in the environment of a significant SUBJECT**, *i.e.*, an individual who acts as if he had a well-defined self. The specific adaptation to such subject(s) (identification in Freud, internalization of a significant other in Mead) is the prerequisite of the development of the constructs of self in consciousness (the I and the ME in Mead, EGO and EGO IDEAL in Freud). This second significant feature of consciousness (the awareness of self) appears, like the first feature (rationality), not to be an innate property of the brain, but rather a result of its relation (adaptation) to a specific emergent feature of its environment, *i.e.*, the presence of other subjects. The **in-existence of the Self only as a category (construct) of the mind** necessary for subjective rationality is first clearly asserted in Buddha's doctrine of "*anatta*:" not only objectively, but also subjectively on deep introspection there is no permanent unitary Self, only fleeting snatches of experience.

Kant, Freud, Durkheim among others (J. Jaynes) all argue that in order for subjective rationality to develop in consciousness, a further kind of artifact in the environment is necessary, *i.e.*, the **presence of institutionalized AUTHORITY**, and/or of (cultural) **collective representations** (religious or quasi-religious). Adaptation of the brain by the mechanisms of identification and internalization presumably accounts for the presence in the conscious mind of experiences of responsibility, pride, guilt and shame (generally "conscience," God and the categorical imperative in Kant, Superego and the Ego Ideal in Freud). For Heidegger the experience of responsibility to others and for the world (Man as the Guardian of Being) is the central feature of conscious (authentically human) existence. The third essential feature of consciousness appears again to be social in origin.

Three other features of conscious experience are generally regarded as essential: the experiences of different levels of consciousness, of monitoring of other experiences, and of deliberate intervention of the Self in the operation of the mind. All three are to a considerable extent understandable in terms previously introduced in this lecture.

**Levels of consciousness** (such as sleep, waking, and various hypnotic and hypnagogic states, such as daydreaming, *déjà vu*, mystical and hallucinatory states), can be interpreted as various degrees and forms of arousal (activation) of the information processing layer (the brain) by the energy layer. Phenomenally, the essential difference is the full appearance of the secondary process (objective and subjective rationality and a well defined self) in the waking state, while the other states are characterized by the absence of some of the features of waking, and the relative dominance of the primary process.

The experience that the **Self monitors its experiences** (e.g., perception, recall, feeling, thought and decision) is adequately handled in psychology as "attention," and does not seem *prima facie* to require any further PSYCHOLOGICAL explanation than the "figure-ground" characteristic of all experience (*to be discussed in seminar 2*).

The experience that the **Self can and does intervene in the operations of the mind** is one of the central themes of philosophy and psychology since their origin, and can be understood partly as a necessary mental condition for the operation of subjective rationality (Kant), an illusion of great adaptive value. It can also be understood as the experience of the hyper-rigidity and hyper-elasticity of living matter (discussed above), and of the cybernetic characteristics of the brain (such as partial reflexivity and dynamic hierarchy, *to be discussed in seminar 2*). In this sense autonomy (the experience that the will is free) is not illusory but real. Its real (and possibly experienced) degree is a function of the complex organization (and consequent uniqueness) of individual organisms (discussed above). It is also the result of the internalization of external authority, as necessary condition for the emergence of the Self and subjective rationality (discussed above). It is precisely this experience that disappears in the hypnotic state and states of coercion, when external authority overwhelms the Self.

Although many treat the above three characteristics of conscious experience as different and essential, I have treated them together, because in my view they are neither. Although in sleep rationality and perhaps other features of consciousness are largely absent, it is nevertheless a conscious state. One can monitor one's dreams while one is dreaming, and often recall them as vividly and accurately as waking states. Although the experience of will disappears in hypnosis, one can monitor and report, and unless amnesia is induced (as can also happen in non-hypnotic states), one can recall one's experiences. Thus it appears that of the three, **not arousal or will, but attention (monitoring) is the essential defining feature of conscious experience**. It is this feature that merits further examination. The behavioral evidence we adduce for an organism paying attention is the apparent operation of a feedback loop between its responses and its perceptions, *i.e.*, the presence of a regulatory process. We know from cybernetics, that regulation always implies **communication**. The verbal evidence (available only from somewhat matured humans) is that they can communicate to us what they are experiencing as they are experiencing it. And the introspective evidence of attention (monitoring) is that we are describing (verbally, or in another, usually conventional medium) to ourselves our experiences.

All this evidence suggests that monitoring (conscious attention) implies the presence in the mind of an **"interlocutor"** (Tagiuri), to whom one communicates

one's experiences. This interlocutor is a part of the Self, and as the other parts of the Self an internalized construct **based on the experience of Others**.

The conventional nature of conscious internal communication also suggests that this feature of consciousness is the result of the adaptation of the brain (in evolutionary, maturational and learning sequences) to the presence in the environment of yet another specific artifact: language and other communicative conventions, *i.e.*, its socialization. In this view, which I hold, the **central feature of consciousness is internalized communication**. This is not to deny or to ignore three observations that could be regarded as counter-evidence: that there exist idiolects (in both internal-private and external-public communication), that there "appear in consciousness" apparently incommunicable experiences and that attention can be unconscious. (Much of the first two phenomena is related to psychopathology, the relation between the Unconscious and the Conscious in Freud's theory, inadequate socialization and the absence in language or difficulties of learning concepts for internal states, as described by Dollard and Miller. For the treatment of unconscious attention Rapaport's work on "attention cathexis" is especially relevant.) Yet the discussion of these phenomena is beyond the scope of this already overloaded seminar.

## SUMMARY

Earlier in this lecture I advocated a **de-individualized view of the mind**, in which the role of consciousness would be de-emphasized. In the lecture I presented the basic arguments for this view.

Perhaps, at this point, an analogy may best convey the view I have been advocating. Imagine brains as microprocessors functioning simultaneously as autonomous computers and as remote ambulatory terminals in a communication and computing network, whose central processing unit consists of institutions programmed by cultural patterns. They receive data from the environment as well as from the network. They are capable of limited inference from the data, but also receive commands and are programmed through the network. They are partly adapted to their environment and have limited ability to alter it. If they do not react and learn fast and well enough, they can be damaged or destroyed by the environment. They can also be shut down by the network, which develops an ever greater ability to replicate and to redesign individual microprocessors.

The analogy is an expression of the idea that **consciousness, while experienced by individuals, is a primarily social phenomenon**<sup>2</sup>, in accordance with the previously stated assertion that not organisms, but communities are the significant unit of life. It is expressed in the idea of community of communication

---

<sup>2</sup> λόγος (logoi) or **logos**; *Logos on xynos (koinós)*..

“One must follow what is common; but, even though the Logos is common, most people live as though they possessed their own private wisdom. (Fr.2) “The common is what is open to all, what can be seen and heard by all. To see is to let in with open eyes what is open to view, *i.e.* what is lit up and revealed to all.” (Fr. 26). HERACLITUS.

*(Kommunikationsgemeinschaft)*, clearly formulated by Karl-Otto Apel, and popularized in sociology by Habermas.