CEREBRAL SYSTEMS IN THE PATHOGENESIS OF ENDOGENOUS PSYCHOSES

ANÍBAL SILVEIRA *

We believe that the psychiatrist, by the same reason as the specialist in projective techniques, cannot achieve progress without following a theory of personality. The psychoanalytical one, which is in favor almost everywhere in the Western Hemisphere, may explain the abnormal dynamisms in the neuroses and other conditions alike. However, it does not apply to the psychoses, at least to the great majority of them, and leaves aside, as we feel it, many psychological aspects of the mind's growing processes. The same restriction seems to apply to the few other theories of personality developed more recently. If we wish a theory that may encompass all of the normal and abnormal mental conditions and take in due account their relations to brain physiology and pathology we have to proceed until as far back as 1850. Such theory was founded by one of the foremost thinkers of all times, the French philosopher Auguste Comte, who expounded it in 1851 [4]. It was later on elaborated remarkably by the philosopher and physician Georges Audiffrent in two large volumes, "Du cerveau et de l'innervation", 1869 [1] and "Maladies du Cerveau", 1874 [2]. We cannot enter here, of course, into details on such conception of the human mind. Suffice it to say that it was grounded "on sociological appreciation of Man, on comparative anatomy of the nervous system, on the laws of biology, especially physiology, and verified through animal behavior and pathological anatomy of the brain" (Audiffrent [2]). In addition this doctrine described minutely, for the first time, in 1850, the sleep as a biological function of selfpreservation drive, which every scientist now admits, and on the other hand gave the theory of dream in the same precise manner as it was rediscovered some fourty years later by Freud. Just a quotation. Stating that vegetative stimuli and instinctual drives prevail in the mind during sleep, hence the dream meaning, Comte says: "Such is the principle by force of which the science of Man (the Moral) *will be able to render systematic the subjective interpretation of dreams* in order to *regulate their course* through convenient impressions, cerebral or bodily" (vol. 4, 240. Parenthesis and italics are ours)[4]. That was in 1854.

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* Lecturer in Psychiatry at the Faculty of Medicine and Professor of Psychopathology at the Faculty of Philosophy, Sciences and Letters, University of São Paulo, Brazil.

According to that theory, human mind consists of three interdependent spheres — Affectivity, Activity and Intelligence — what is now a truism but at the time was not accepted generally. While working together so closely that we cannot separate one from each other in the normal state, they maintain a hierarchy, so that the former is basic and the last named the most dependent; in addition, the affective one influences the other two directly and is "fired" back by the intellectual, but not by the active or conative; activity mediates the affective stimuli towards the intelligence and also receives the regulation from it. On the other hand, each sphere divides itself in several functions — 18 individual ones altogether. Comte named them by the current terminology, avoiding to coin new terms and limiting himself deliberately to redefine the old denominations as to adapt to the new concepts. In the affective sphere there are two different levels, the one directed towards the personal needs, or instinctual drives properly, and the other aiming at social adaptation; from the former impulsions, a group of three provide the preservation 1) of the self — *nutritive,* and 2) of the species: *sexual,* and *maternal* or of possession; two other groups of two drives each are related to 1) the improvement of the individual, namely, the *destructive* and the *constructive,* and 2) the ambition — of domination, or *pride* and of approval, or *vanity.* The social feelings, or altruism, were called *attachment, veneration* and *kindness,* terms which are selfdescriptive. Three individual functions, *firmness, courage* and *prudence,* compose the activity — a general term that corresponds exactly to that of conation, coined by McDougall [18]; such conative dispositions reflect themselves on the explicit action as well as on the working out of the intelligence. This last dominion corresponds to three different levels of contact with the outer — or also with the inner — world: contemplation or observation — be it *concrete* or *abstract,* resulting in notions; meditation, *deductive* or *inductive,* performing the active thinking proper; and the *communication,* providing not only the expression for the inner status but also the "signs" that render the abstract constructions possible. The connections between the three spheres of personality just mentioned are not indiscriminate. Much on the contrary, the individual functions maintain selective relationships, so that impulses from one go to only some of the others, at least in a direct manner. Thus, as pointed by Comte and especially by Audiffrent [1, 2], they result in psychic systems. A tentative scheme of these is seen on Table I, in order to shorten this digression.

One of the most important and remarkable point in Comte's theory of personality is that each individual function represents the working out of a distinct organ, so that to the several functional interrelationships underly a great many deal of paths. Guided by the subjective method, that is, proceeding from the whole to the parts — the meaning of which may only be understood after the functions to be performed — Comte located the organs of nutritive and sexual drives on the cerebellar cortex, and all the others on the brain cortex: thus, for the former two and most powerful instinctual motivations the conveying paths are the trans-hemispherical fi-

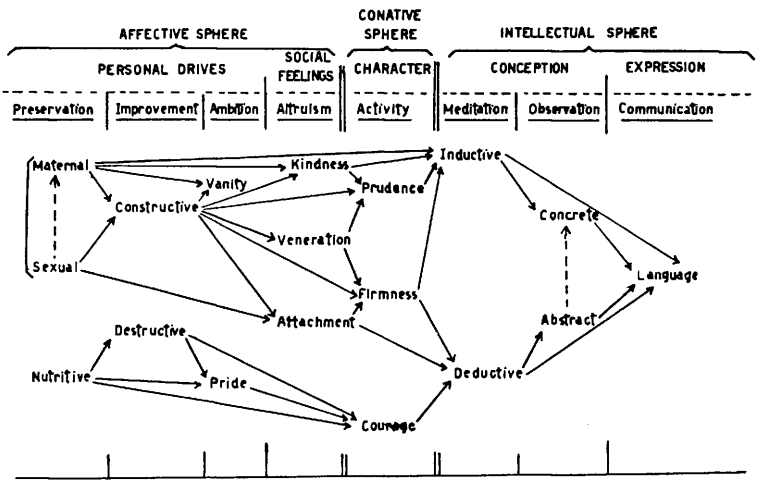

Table I — A tentative scheme of psychic systems after Comte's theory[1,5,4]. *All the functions are so arranged as to have the basic ones at the bottom and the most dependent on the top of each column; in addition, dependency and differentiation grow from left to right within the affective sphere and in the reverse direction within conception sector of the intellectual one.*

bers: paleocerebellar and paleocerebral, neocerebellar and neocerebral pathways, both of which spread all over the brain cortex passing through the undercortical relays. Comte specifically states that only the number, the relative positions, and the mutual relationships of such organs could be determined by the subjective method, the real areas and the definite configurations of them depending on objective, anatomo-clinical researches. However, the architectonic methods and, more recently, neurophysiological researches came to support the philosopher views. We must emphasize, in this connection, that all the mental — or subjective functions, after Comte, result from organs located on the cortex, but these relate themselves mutually by means of cortico-cortical, transcallosal and trans-hemispherical pathways, including in the systems, definitely, subcortical structures. As for the cortico-cortical, be it intrahemispherical or transcallosal, the great many deal of researches on neuronography — see for instance those of Dusser de Barenne school [3, 17] among many others — provide evidence of the organizational arrangement of areas; and, as shown on fig. 1, taken from Fulton [7], occipital, frontal and temporal areas are interconnected by specifical pathways. These occipito-frontal fibers represent, according to "Audiffrent's principle" as we call it [22], the cortical level involved in vision. The process of perception of visual stimuli — a particular case of perception in any sensory dominion — requires first their transmission to the subcortical nucleus, where they are developed into "sensation" (Fig. 2, *S*); then from here in two directions to the affective and the intellectual cortices

at a time; and finally the conveying of the impulse from the affective through the conative cortex towards the intellectual organ of abstract observation (*P* for perception, in fig. 2).

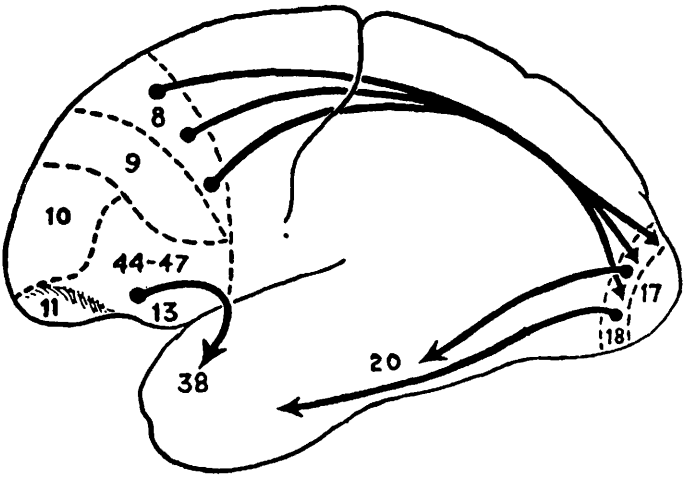

Fig. 1 — Cortico-cortical connections, particularly between areas 8 and 18. (Taken from Fulton[7], by courtesy of the author and W. W. Norton & Norton Inc., New York).

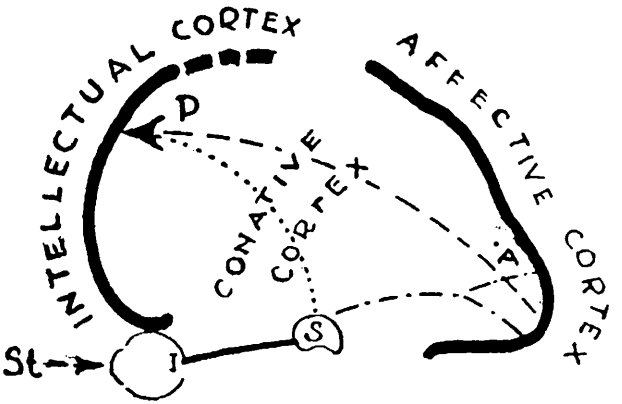

Fig. 2 — Psychological processes of perception, as exemplified by the visual sense. St, *stimulus;* I, *impression;* S, *sensation;* A, *affetive unconscious reaction to conveyed stimulus;* P, *perception;* dot-and-dash line, *path uniting sensorial nucleus and affective cortex: in this case, tapetum plus fibers to area 19;* dotted line, *connection to frontal cortex, not yet demonstrated anatomically;* broken line, *occipito-frontal paths. Intracerebral pathways substantiate what we call the "principle of Audiffrent"* [11]. *(Courtesy of Hermann & Cie., Éditeurs, Paris)*

Another beautiful demonstration of the trans-hemispherical system — predicted precisely by Comte and Audiffrent — we have in the recent researches on the reticular formation: both inhibition and facilitation, relayed at the reticular level, are depicted in the known scheme of Magoun [16] shown in fig. 3. On the other hand, the flowing of the inhibitory processes through the medial and outer cortex follows a definite path, studied by McCulloch and the group of Dusser de Barenne [3, 17], and which we tried to represent in fig. 4 [23].

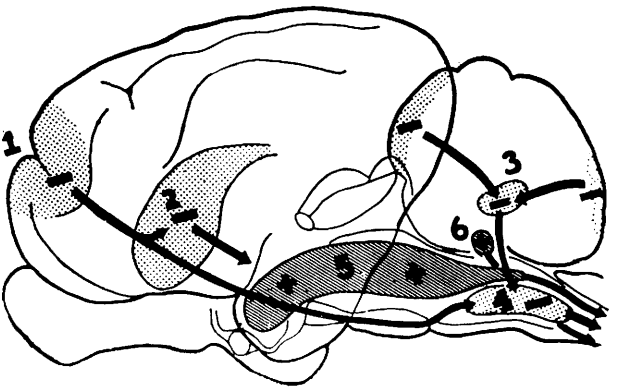

Fig. 3 — Inhibition and facilitation of cortical activity as mediated by cerebello- and cortico-reticular pathways. (Taken from Magoun [16], by courtesy of the author and Charles C. Thomas, Publisher, Springfield, Illinois).

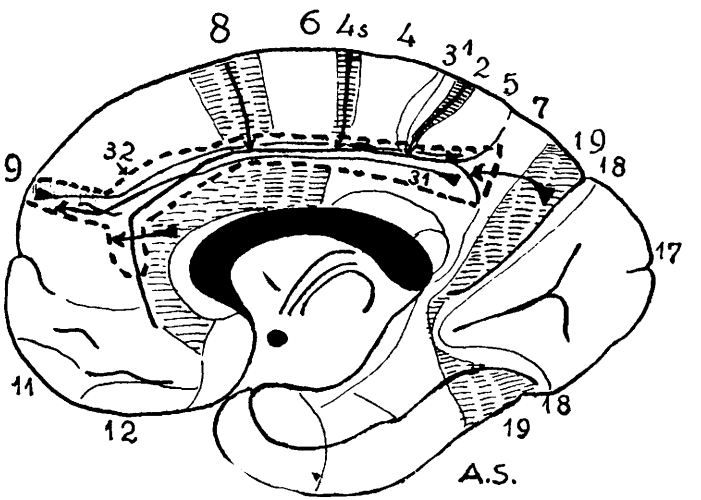

Fig. 4 — Schematic representation of medial aspect of chimpanzee's brain, showing cerebral systems in terms of inhibitory acitivity connecting convexity and cingular areas [23], on neuronography experiments. (Courtesy of Arq. Neuro-Psiquiat., São Paulo).

This interweaving of cortical and undercortical structures, imperative in any mental operation, explains the so called holistic interpretation of mental functioning, but at the same time disprove it, in our mind. The unity is only apparent, since in the normal state all the functions are intimately related one another. However, under pathological conditions the participation of each one may be evidenced in the end result of the abnormality. Indeed, this conception of brain systems as underlying psychic systems, may be useful — sometimes of utmost value as it is, for instance, the case of the deep psychopathological analysis made by Kleist [10, 12]. We must bear in mind these dynamisms, in which the most dependent functions, those of the intellectual sphere, are regulated by the ones on the conative and affective spheres. This in turn, translated into neurophysiological terms, would mean regulation of the frontal lobe from the other brain regions of the convexity. Applying this reasoning in studying the clinical patterns of patients with psychic disturbances related to brain lesions directly or indirectly some collaborators and we were able to find a number of frontal lobe symptoms as a result of distant processes. Table II, drawn on a set of 40 patients [26], afterwards enlarged to 100 [25], presents a revised version of the corresponding data in which we based selective lobotomy [21]. However, it is not on the realm of brain lesions only that such conceptions may be applied. Kleist used this way of thinking on the endogenous psychoses, showing that here the analysis of cerebral systems, or functional systems, may be brought to a refinement that leaves far back the data derived from local lesions.

REGION PRIMARILY INVOLVED	FRONTAL LOBE SYMPTOMS
Parieto-temporal	Delusion, chiefly based on hallucinations
	Confabulation, irrespective of amnesia
	Clérambault's mental automatism, auditory-verbal or motor-verbal in type
	Auditory hallucinations
	Hyperactivity, alternating with lack of initiative
Parieto-occipital	Delusions, chiefly based on morbid interpretation
	Aggressive behavior on delusional grounds
	Echolalia
Cerebellar	Paroxysmal loss of tonus in erect posture
	Gait ataxia, not attended with mental symptoms of frontal lobe
	Nystagmus
Labirinthine area	Vertigo accompanied neither by other Menière components nor by steady cerebellar signs

Table II — Frontal lobe syptoms evoked by distant foci.

Long before publishing the milestone of cerebral pathology, the Gehirnpathologie [10], he had construed the psychic systems into the leading principle for the classification of schizophrenia [8], a subject to which he turned in one of his last works [11]. This same fruitful appreciation and in the same direction, even when independently of Kleit's researches we find in Leonhard's remarkable monograph on deteriorated schizophrenics [13]. It was also this principle that have guided our own selections of chronical schizophrenics for insulin [19] or metrazol shock treatment [20].

Combining the conception of brain systems with that of cerebropathogenesis, which is closely related to it, Kleist [8, 10-12] on the one side and Leonhard on the other [13-15] have thrown a quite new light on the group of endogenous psychoses. This was not a chance happening, we believe, but the effect of using a way of reasoning and a subjective weapon that were gratifying in the hands of Wernicke but fell in discredit due to their complexity and the hard work they require as a background. Summing up, this dividing line is, as Leonhard points out, "the spirit of Wernicke and Kleist" [15]. Such a set of clinical requirements is not apt to attract the psychiatrists in general, but there is no other alternative, we think, when clinical reality and precision in diagnosis, in other words, safety for the patient and steadiness for the psychiatric orientation, are to be reached. This implies leaving out the purely descriptive or phenomenological framework so popular in psychiatry of today and move towards the pathogenic dynamisms.

It was the merit of Kleist to deepen the psychopathologic analysis in order to separate the several clinical patterns into a central group with definite course and outcome on the one hand, and many other entities apparently pertaining to it but indeed obeying to a quite different process, on the other. He was able, thus, to disentangle true catatonia, true hebephrenia and the deteriorating paranoid process, all of which led to a catastrophic outcome, from the benign clinical patterns which were forced into those groups due to an overindulgent criterion. In the same way the psychoses benign in course were divided into the principal groups of constitutional patterns and the other ones genetically related to them but deriving from the disposition maintained in latency: the latter ones characterized by him, provisionally, as "degeneration psychoses" [9].

This same line of researches allowed Leonhard to make a fundamental distinction within the group of schizophrenias: one with definite patterns and genetic background — the typical forms, later on renamed systematic — and the other multiform and genetically distinct from the former: atypical or nonsystematic [13-15]. It is important to note that Kleist called the former groups — on slightly different ground — simple or combined forms, and the second ones extensive forms: in the first case, the process being confined into one or more systems within the same sphere, in the other coming the spreading out to another sphere. Eventhough we consider the forementioned spheres and systems of personality in a way somewhat different [24],

the pathogenesis of the schizophrenias — in Kleist's as well as in Leonhard's meaning — may be seen consistently to those standpoints, as we tried to summarize in Table III.

Pathogenesis	*Clinical patterns*	*System involved*
A — SYSTEMATIC FORMS		
Paranoid: paraphrenias Intellectual sphere	Incoherent, Phantastic	Intellectual
	Phonemic, Confabulatory	Conative
	Hypochondriacal, Expansive	Affective
Catatonic Conative sphere	Speech-inactive, Speech-prompt	Intellectual
	Manneristic, Parakinetic	Conative
	Negativistic, Proskinetic	Affective
Hebephrenic Affective sphere	Austistic	Intellectual
	Shallow	Conative
	Silly, Eccentric	Affective
B — NONSYSTEMATIC FORMS		
Affect laden paraphrenia Intellectual and affective spheres	(Progressive signification psychosis) / (Circumscribed delusional psychosis)	Intellectual
	[Progressive influence psychosis]	Conative
	[Progressive inspiration psychosis] / (Progressive self reference psychosis)	Affective
Periodic catatonia Conative and affective spheres	(Iterative catatonia)	Conative
Schizophasia Intellectual, conative and affective spheres	[Schizophasia]	Intellectual
	[Paralogical schizophrenia]	Conative
	(Shift-like confused schizophrenia)	Affective

Table III — Assumed cerebral pathogenesis in Leonhard's schizophrenias. Within the nonsystematic group we included here Kleist's typical [] and extensive () patterns.

We cannot comment here on the pathogenesis proposed on Table III, since it would lead us too far, as regards time limitations. Some remarks are needed, however. One is that many forms assembled in the same brace under column *Clinical patterns* have the same pathogenesis, as far as personality sphere is concerned, but they come into clinical expression through

different systems within each one sphere: column at right. On the other hand, essential differences between *systematic* and *nonsystematic* forms, sensu Leonhard's, arise from the fact that in the former only one sphere is the seat of original derangements, while two or more spheres are struck at the same time in the nonsystematic. We believe that these assumptions may be supported by the very descriptions given independently by Kleist [8, 11] and Leonhard [15]. It may not be clear why we speak of a conative meaning in such intellectual patterns as the *phonemic,* the *confabulatory,* the *paralogical schizophrenias,* the *influence* psychosis, as well as in the *shallow* hebephrenia. In brief, phonemic or verbal-hallucinatory (Kleist) processes, much as the intrapsychical spelling of thoughts, would depend on the indispensable stimulation mediated by the conation — in the meaning of Comte [4], Audiffrent [2] and McDougall [16] as well; the other disturbances reflect pathologically the same intervening of conative forces to elicit thinking processes: as global shifting in confabulation, as the sensation of being mastered or mastering others, in influence psychosis, as a straying of the stream of thoughts in the paralogical deviation; shallow hebephrenia, on the other hand, shows a marked lack of initiative, as Leonhard points out [15].

Pathogenic level	PERSONALITY SPHERE ORIGINALLY INVOLVED		
	Affective	*Conative*	*Intellectual*
Upper	Anxiety neurosis	Compulsion neurosis	Obsession neurosis
Lower	Anxiety hysteria	Conversion hysteria	Hysterical character

Table IV — Assumed main pathogenesis of neuroses.

We believe that this same way of thinking may apply to other abnormal conditions more remotely related to the main group of endogenous conditions: we have in mind the neuroses and the psychopathic personalities. In the first group we think that the processes disorganizing the personality give rise to different patterns as they center on the affective, the conative or the intellectual sphere primarily. Here also it ought to be considered, for the same sphere, the period of personality development in which the disturbing forces came into action: thus the difference of organizational level would account for the appearance of anxiety hysteria or of anxiety neurosis — in the affective sphere — or either the development of the hysterical character or simply an obsession neurosis, within the intellectual sphere. At the same time — Table IV — the peculiar functions of each one sphere might explain the main resemblance between the hysteria and the corresponding neuroses. The psychopathic inferiority, as we understand it, means a general deviation bearing on the affective or in the conative sphere of personality. Thus, on this pathogenetic basis we restrict the

psychopathic personalities to only five groups, all of which belong to the classifications generally accepted — Table V. Prevailing level of disorganization, deep or instinctual, upper or related to social feelings, should count for the one to be anti-social, the other accepted, within the affective sphere of personality; in the same way, the diverse interplaying of the conative forces would take account of the explosiveness, the instability or the asthenic behavior, within the conative frame of reference.

Sphere	*Level of disturbance*	*Personality type*
Conative	Prudence	Asthenic
	Firmness	Unstable
	Courage	Explosive
Affective	Social feelings	Hyperthymic (with mythomanic variant)
	Instinctual drives	Pervert (with mythomanic variant)

Table V — Psychopathic personalities from the standpoint of brain dynamics.

PHASIC COURSE		SHIFT-LIKE COURSE
Simple, monopolar patterns	Multiform, bipolar patterns	Episodic patterns
	Affective pathogenesis predominant	
Hypochondriacal agitation Hypochondriacal depression Anxious reference psychosis Perplexed strangeness psychosis	Acute, anxious-ecstatic hallucinosis	Episodical hypnic states
	Conative pathogenesis predominant	
Expansive confabulosis	Akinetic-hyperkinetic motility psichosis	Periodical morbid impulsions
	Intellectual pathogenesis predominant	
Ecstatic inspiration psychosis	Stuporous-agitated confusion Acute, perplexed, interpretation psychosis	Episodical twilight states

Table VI — Distribution of phasic and episodic degeneration psychoses (Kleist) as for assumed brain pathogenesis.

As for the degeneration psychoses described by Kleist, we may see the likeness of the ones related to the same personality sphere pathogenetically, even when they belong to different groups genetically speaking: so, some are multiform in pattern, that is, more tainted as for heredologic background, other monopolar or pure in clinical pattern, what bespeaks of a less charged background — see Table VI. All of Kleist's patterns here considered — which were conceived in a somewhat different way in the classification on Leonhard [15] — have in common the nature of their outcome: they show a benign course, some tending to relapse but leaving no permanent trace.

Distinctive trait of schizophrenia, in Kleist's as well as in Leonhard's system, is the tendency to a progressive course and towards entering — sometimes belated — into the deteriorating phase. Kleist used a complex system for the classification of the schizophrenias that he formerly described as independent entities — the hebephrenias, the catatonias, the paranoid deteriorations later on split into paranoid schizophrenias, confused schizophrenias and the paraphrenias. Some were pure forms, combined or simple, some were extensive: these are shown in Table VII, the latter in parentheses, the most typical among the former in italics. Leonhard considers the nonsystematic forms as genetically diverse from the systematic ones and, in addition, simplified the list of individual forms [5, 6, 15]. However, since both these authors take as leading principle the pathogenesis and the conception of brain systems, their classification coincide in many points and there is no special contradiction between them, as we may see in Table VII.

Here it is to be noted that Leonhard does not relate Kleist's paralogical schizophrenia to his own schizophasia, explicitly. However, he ascribes to the derangement in thinking — including those paralogical dynamisms — the main features of schizophasia. Introducing this pattern says Leonhard [15]: "I could not foster the views that in schizophasia speech is troubled independently of thinking processes, as Kraepelin intended it and also Kleist admited. It is always possible to demonstrate a disturbance in thinking, still more marked" (page 219).

Finally we would like to stress the fact that both large groups of endogenous psychoses — the schizophrenias and the degeneration psychoses — use to have many features in common: this is due, in our mind, to the fact that the same personality sphere — or the same system within each one — is involved in the morbid process. Thus, genetically they differentiate but pathogenetically they happen to remain alike when analysed in a superficial way.

Perhaps the nonsystematic forms of schizophrenia, in the meaning of Leonhard, may stand as an intermediate between both groups. This is in accordance with the painstaking genetical researches carried out by Leonhard, which authorized him to state: "The affinity towards the cycloid psychoses comes more markedly to light from the fact that to each one of these

latter curable forms corresponds one non-systematic schizophrenia. From the anxiety-bliss-psychosis (Angst-Glücks-Psychose) comes the connection to affect-laden paraphrenia; from the motility psychosis, to periodic catatonia; from the confused psychosis the one to schizophasia" (page 184)[15].

Kleist's System	*Leonhard's System*
HEBEPHRENIAS:	HEBEPHRENIC FORMS:
Silly hebephrenia	Silly hebephrenia
Depressive hebephrenia	Eccentric hebephrenia
Apathetic hebephrenia	Shallow hebephrenia
Autistic hebephrenia	Autistic hebephrenia
CATATONIAS:	CATATONIC FORMS:
Negativistic catatonia	Negativistic catatonia
Proskinetic catatonia	Proskinetic catatonia
Akinetic catatonia, Stereotyped catatonia	Manneristic catatonia
Parakinetic catatonia	Parakinetic catatonia
(Iterative catatonia)	[Periodic catatonia]
Speech-inactive catatonia	Speech-inactive catatonia
Speech-prompt catatonia	Speech-prompt catatonia
PARANOID SCHIZOPHRENIAS:	PARANOID FORMS:
Progressive somatopsychosis	Hypochondriacal paraphrenia
Progressive autopsychosis	Expansive paraphrenia
Progressive hallucinosis	Phonemic paraphrenia
Progressive confabulosis	Confabulatory paraphrenia
Phantasiophrenia	Phantastic paraphrenia
Progressive influence psychosis Progressive inspiration psychosis PARAPHRENIAS: (Circumscribed delusional psychosis) (Progressive signification psychosis) (Progressive self reference psychosis)	[Affect laden paraphrenia]
CONFUSED SCHIZOPHRENIAS:	
Incoherent schizophrenia	Incoherent paraphrenia
Paralogical schizophrenia Schizophasia (Shift-like confused schizophrenia)	[Schizophasias]

Table VII — Leonhard's systematic and nonsystematic schizophrenias, as compared to the forms described by Kleist. This translation is taken from Fish (1958)[5,6] in separate lists. Brackets, braces and italics are ours. ( ) = Kleist's atypical, extensive forms; [ ] = Leonhard's nonsystematic schizophrenias. Italics mean Kleit's most characteristic forms.

	KLEIST's DEGENERATION PSYCHOSES (Course either phasic or episodic)				SCHIZOPHRENIA AFTER KLEIST (Course rather progressive, seldom shift-like)			
	Cerebral systems that may give rise to the fundamental symptoms							
	Affective	*Active*	*Intellectual*	SPHERE OF PERSONALITY:	*Affective*	*Active*	*Intellectual*	
Cycloid	Psychoses of the Self: Hypochondriacal depression Hypochondriacal agitation	Motility Psychoses: Akinectic Hyperkinetic	Confusion: Stuporous Agitated	AFFECTIVE	*Depressive* *Silly*	Apathetic	Autistic	*Hebephrenia*
Epileptoid	Episodical hypnic states	Periodical morbid impulsions (Dypsomania)	Episodical twilight states	ACTIVE (CONATIVE)	Negativistic Proskinetic	*Akinetic* Stereotyped Parakinetic (Iterative)	Speech-inactive Speech-prompt	*Catatonia*
Paranoid	Acute hallucinosis (anxious-ecstatic) Confabulosis	Acute inspiration psychosis (ecstatic) Acute interpretation psychosis (perplexed)	Acute reference psychosis (anxious) Acute strangeness psychosis (perplexed)	INTELLECTUAL	Progressive somatopsychosis Progressive autopsychosis Progressive hallucinosis Progressive confabulosis	Progressive influence psychosis Progressive inspiration psychosis	*Phantasiophrenia* (Circumscribed delusion) (Progressive signification psychosis) (Progressive self reference psychosis) *Incoherent schizophrenia* Paralogical schizophrenia (Shift-like confused schizophrenia) Schizophasia	*Paranoid schizophrenia*

Table VIII — Comparison between degeneration psychoses and schizophrenia: within the latter we gave in italics the most characteristic forms and in parentheses the extensive, atypical ones.

Taking now the whole group of endogenous, benign, degeneration psychoses and on the other hand the total group of schizophrenias as described by Kleist and Leonhard, we find the same likeness in the main features of the diverse patterns, as confronted group by group.

In order to render this comparison easier we assembled such conditions on Table VIII, where they are arranged according to the clinical groups and the pathogenic dynamisms supposed to be at work.

As may be seen on the Table, similarity in the prevailing symptoms that each one degeneration psychosis (Kleist) may share with the corresponding form of schizophrenia does not imply similarity of the clinical conditions. Quite on the contrary, if the psychiatrist does not content himself with this superficial and naïve attitude of describing the pattern on phenomenological grounds only, they appear as perfectly separate and distinguishable clinical entities. In addition it is not in the least a question of irrelevant details for the construction of the diagnostic summing up. The prognosis for the outcome of the pattern itself and for the genetical implications varies from one extreme to the other as regards the degeneration psychoses and the schizophrenias. Hence, the care that the psychiatrist must devote to the differential diagnosis, which is imperative for the proper handling of the patient as a moment within the genetical stream.

SUMMARY

Mental processes imply a harmonious functioning of psychic systems, assembled into larger units, psychic spheres (Table I). Their neurophysiological representatives are brain systems of areas and pathways (Fig. 1-4). Under functional and/or organic disturbances these systems originate the leading mental symptoms (Table II) characterizing the diverse endogenous psychoses: hence, the latter's distinctive patterns.

Accordingly, understanding and classification of psychoses should rest on the pathogenic dynamisms, not on clinical description. This is why Kleist's and Leonhard's conceptions of the endogenous psychoses surpass any other to exist. Kleist stands among the founders of psychiatry, by describing the "degeneration psychoses" and many single psychoses, as well as redefining, isolating and clarifying the progressive ones, later on renamed as schizophrenias (Table III). Such pathogenic criterion may also be useful to define mental conditions other than psychoses, as hysteria, neuroses and psychopathic inferiority (Tables IV and V). One should consider here, besides the psychic systems and spheres involved, the way they were caught and the corresponding developmental phase.

In Kleist's "degeneration psychoses" — cyclic or episodic (Table VI) — the systems and spheres are disturbed by functional transient processes due to latent dispositions, while his and Leonhard's schizophrenias (Table VII)

show a rather progressive, deteriorating course. The nature of the disorder is itself genetically determined, as is either its confinement to one sphere or its spreading out. The spread out pattern, while exceptional in schizophrenia, represents a rule for the "degeneration psychoses", in discussant's mind. Both groups may have symptoms alike by involvement of the same sphere (Table VIII), but proper diagnosis is reached by taking pathogenesis into consideration.

RESUMO

Sistemas cerebrais na patogênese das psicoses endógenas.

Os processos mentais implicam em funcionamento harmônico de sistemas psíquicos, os quais se reúnem em unidades mais amplas, as esferas psíquicas (quadro I). A êles correspondem, no plano neurofisiológico, sistemas cerebrais formados por áreas e fibras que as interligam (figs. 1-4). Em condições patológicas, orgânicas ou funcionais, tais sistemas originam os sintomas principais (quadro II) que caracterizam as diversas psicoses endógenas: daí o quadro clínico que as distingue entre si.

Nessas condições, a compreensão e a classificação das psicoses deveriam basear-se no dinamismo patogênico e não na descrição clínica. E é por isto que as concepções de Kleist e de Leonhard sôbre as psicoses endógenas ultrapassam o valor de quaisquer outras. Kleist figura entre os fundadores da psiquiatria ao criar o grupo das "psicoses degenerativas" e várias psicoses isoladas, bem como ao redefinir, isolar e esclarecer o conjunto das psicoses progressivas que mais tarde redenominou esquizofrenias (quadro III). Tal critério patogenético pode também ser útil para a definição de quadros clínicos mentais que não são psicoses, tais a histeria, as neuroses em geral, as personalidades psicopáticas (quadros IV e V). Neste domínio, haveria a considerar, na patogênese, tanto as esferas e os sistemas mentais, quanto o modo pelo qual foram desorganizados e a fase de desenvolvimento em que se encontravam.

Nas "psicoses degenerativas" de Kleist — sejam cíclicas, sejam episódicas (quadro VI) — as esferas e os sistemas são alterados por processos funcionais transitórios devidos a disposições genéticas latentes, ao passo que as esquizofrenias dêle e de Leonhard (quadro VII) decorrem em geral de modo progressivo e levam à decadência mental. A própria desordem é de natureza genética, como também o fato de se limitar a determinada esfera psíquica ou de se propagar a mais de uma. Os quadros clínicos em que ocorre esta propagação são excepcionais na esquizofrenia ao passo que constituem a regra nas "psicoses degenerativas", na nossa opinião. Ambos êstes grupos mórbidos podem ter sintomas clínicos em comum pelo fato de estar atingido o mesmo sistema cerebral (quadro VIII), mas o diagnóstico clínico poderá ser estabelecido corretamente se a patogênese fôr levada em conta.

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Rua Marconi, 53, 8º andar — São Paulo (SP) — Brasil.