CORRESPONDENCE

This department is provided for the publication of informal communications which are of interest because they are informative or stimulating, and for the discussion of controversial matters.

QUESTIONS OF CLASSIFICATION; A SYMPOSIUM

Early this year a number of leprologists were sent, on a personal basis, a memorandum representing the draft of an article on classification. Comments were invited, in part for use in the present symposium. All but a few responded, some briefly and others at length; in Rio de Janeiro, the memorandum was submitted to a committee of the Associação Brasileira de Leprologia which supplied a formal comment; in Spain, two extensive commentaries have been or are to be published.

To obtain comments in a form that could readily be analyzed for the present purpose, the memorandum should have been accompanied by a questionnaire calling for yes or no replies to specific questions. As it is, systematic analysis of the responses has been difficult, and it is not entirely complete. There is no question about stated disagreements with the proposals (here called "propositions"), and frequently agreements were stated or are implicit, but otherwise they cannot be assumed. At times it has not been clear exactly what the writers meant to convey.

The memorandum was introduced by a statement of basic principles, or "desiderata," certain of which were put down more or less tentatively pending consideration of the reactions of others to them. They were in six numbered paragraphs, some of which for present purposes are restated here in different form.

Proposition 1.—The essential principles and the primary groupings of the South American classification should be retained.

Proposition 2.—The criteria of primary classification should be clinical, including the bacteriological findings. In other words, cases should be classified without obligatory resort to the histological examination or the lepromin test, although the structural nature of the lesions and the immunological characteristics of the polar types should be understood.

Proposition 3.—Application of the histological examination and the lepromin test, where they can be done, should be confined—apart from scientific investigation—to subclassification, i.e., to the determination of

subgroups of the clinically determined classes where those determinations are recognized.

Proposition 4.—Cases previously of tuberculoid or lepromatous nature with residual skin lesions should not be classified as "indeterminate" because of the histological finding of only simple round-cell infiltration at that stage.

Proposition 5.—Similarly, old inactive cases with polyneuritic deformities and residuae of previous skin lesions should not be classed as indeterminate on the basis of such histological findings.

Proposition 6.—The tuberculoid type should be subgrouped clinically according to the degree of its lesions into (*a*) minor and (*b*) major, and when indicated by activity into (*c*) reactional.

Proposition 7.—There should be recognized, as distinct but subordinate primary groups, two kinds of "polyneuritic" cases: (*a*) primary polyneuritic (P′), presenting only manifestations of involvement of the peripheral nerve trunks, i.e., the "pure neural" cases called "anesthetic (Na)" in the Cairo classification; and (*b*) secondary polyneuritic, residual of one or another of the main classes after the healing of skin lesions.

Proposition 8.—There should also be recognized as a distinct form the kind of cases to which the term "borderline" and various others have been applied, which possess attributes of both the tuberculoid and lepromatous types and sometimes actually evolve to the latter one.

The following statements are for the most part, necessarily, condensed summaries or abstracts of the comments, usually without the supporting arguments however interesting they may be. So far as possible they are correlated with the propositions as listed above. Reference to the diagram of the memorandum is made where called for.

The material being far more than was expected it has been necessary, in order to conserve space, to use certain conventions and abbreviations, most of which are obvious. Type names are commonly indicated by their initials, including the familiar ones and at times B and P, referring to "borderline" and "polyneuritic," and in places P′ and P″ for primary and secondary whether or not the writers used them. The often-occurring "South American classification" is usually reduced to "S.A. scheme." "Re P-1," etc., refers to the stated propositions, which cannot be restated repeatedly. It has not been possible always to indicate by quotes precisely what phrases of the original statements are used and to distinguish them from paraphrases and summaries of the nature of abstracts.

—EDITOR

From Dr. Harry L. Arnold Jr., Honolulu, T. H.: The list of desiderata is "applauded without reservation," with emphasis on the specification in one (P-2) that by "histological basis" is meant an understanding of the histological processes in their relationship to clinical manifestations, rather than the obligatory examination of actual biopsy specimens. Histol. evidence is not always necessary, and it may be inconclusive, especially when it is "indeterminate." A case may be tuberculoid in every other respect without being that in structure. Uncertainty is expressed about what the South Americans mean by their "incaracteristico" cases,

and probably few others really appreciate it; but the writer suspects that the term "indeterminate" is too suggestive of simple uncertainty as to data or interpretation to suit their purposes. The "borderline" condition is a transitional phase, not sufficiently common to warrant much argument about terminology. Clinically tuberculóid except for negative or weakly positive Mitsuda reactions, these cases tend to progress toward the lepromatous re management and prognosis. "Borderline" conveys this idea of instability and uncertainty of status rather better than other terms suggested; "dimorphous" also seems suitable for the clinical picture of tuberculoid appearance and lepromatous outlook, particularly if there is shown a "double" histological pattern, but it does not yet have the merit of usage or familiarity. In a discussion of symbolization, P-6 and P-7 are included as accepted.

From Dr. C. J. Austin, Makogai, Fiji: Regret that pressure of work prevented prompt analysis of the memo. in detail, a certain amount of leisure being required for the assessment of the finer points of scientific classification. In teaching medical students and the Native Practitioners, and also in field surveys in areas such as the Solomons, only the simplest primary one can be used. Particular approval, therefore, of the proposition that "The criteria of primary classification should be objective and clinical."

From Dr. L. F. Badger, Atlanta, Georgia: Re P-3: What is needed is a classification which is workable by all and yet adequate, based only on clinical manifestations because so many leprosaria do not have the services of a pathologist trained in leprosy. *Re P-6:* The only question about "minor" and "major" is whether the terms will be applied uniformly, for if different workers are as inconsistent in distinguishing them as they are regarding advancement of the disease—some, e.g., calling a case early when others would call it moderately advanced—it will lead to confusion. *Re P-8:* Possibility that, by some, the "borderline" form may be confused with the indeterminate one.

From Dr. G. Basombrio, Buenos Aires, and Dr. J. M. M. Fernandez, Rosario, Argentina: General agreement with the first five desiderata, whereas the one re new groups is discussed at length. *Re P-7:* The S.A. scheme and its Havana modification provide for 3 primary types based exclusively on the fundamental characteristics of the disease (histol., clin., bacteriol. and immunol.) considered jointly, while the varieties or subtypes are based on partial or accessory aspects. Thus the polyneuritic cases simply represent varieties of the L, T and I types, and to recognize them as a heterogenous primary group would be to fall again into the error of using a secondary aspect (anatomical) as the basis for individualizing a main group. Although there are P cases which are difficult or impossible to assign to either proper type, they are relatively too few to justify the creation of a new one. Some can be recognized as T on clin. grounds alone (unilateral nerve thickening, irregular and with a tendency to abscess); or on immunol. grounds (intense lepromin reaction with ulceration); or by the clin. and immunol. criteria combined (L by symmetrically thickened nerves, negative lepromin reaction). Where the

type cannot so be determined, the cases should be classed as I. Nerve biopsy is decisive and is justifiable in extraordinary cases. *Re P-8:* In the S.A. scheme all cases neither L nor T are put in the I group, there being no provision for those which are a mixture of L and T, usually called "borderline" (*limitantes*). This condition, it is held, arises from the occurrence of reactional phenomena in cases which are in an evolutive stage of transition, unstable and extrapolar (not in the stable, polar form); and subsequently they may evolve to either L or T or I, or may undergo regression, or may remain borderline but with quiescent symptomatology. These cases should be linked with the reactional phenomena within what Fernandez has called the indeterminate type of reaction; but for the present, without giving them the status of a principal form, they may be put together provisionally in a *group* called "borderline" (*limitantes*).

From Dr. S. N. Chatterjee, Calcutta, India: A lengthy dissertation, with much argumentation and numerous questions and objections, taking up seriatim the following five forms: P, I, T, B and L. *Re P-1:* Although the S.A. groups are among those dealt with by the writer, the validity of the "polar" concept of L and T is denied because such cases may arise from I and on subsidence may return to it, and so "they are not polar throughout the whole course." The term "undifferentiated" would be better than "indeterminate," to signify that the lesions have not yet been differentiated into T or L. *Re P-2:* Agreement re clinico-bacteriol. basis, with questions re several problem cases with discordant findings. *Re P-3:* Indications that dependence on the histol. examination is unsatisfactory. *Re P-4 and P-5:* It is sometimes difficult to determine the previous nature of residual lesions and they can be classified only in cases under observation for some time. There are cases whose skin lesions, changed from I to T, later subside to the original form but subsequently become T again; would they properly be called I in the pre-T stage but not in the later one of recession? (See also P-1 above.) *Re P-6:* Disagreement re "minor" and "major," because there may be cases of intermediate degree; also to minimize danger of confusion. Re "tuberculoid reaction," inconclusive. *Re P-7:* The P group, recognized, is discussed wholly re difficulties. When only one nerve is involved "polyneuritic" would be incorrect, and so the term would perhaps better be "neuritic" or "neural"; it may be difficult to tell whether the P condition is primary or secondary; also difficult to say whether the cases are active or inactive; subgrouping would sometimes involve the lepromin test and histology, and so would "better be left out"; etc. *Re P-8:* Inconclusive, argumentative, saying (after quoting statements in the memo. re the histology), "That when the clinical and bacteriological findings indicate that the condition is lepromatous, the case should be so classified although the histological findings may not be typical." The descriptions of the I, T and L forms in the memo. are discussed in a similar manner.

From Dr. R. Chaussinand, Paris, France: After saying that the memo. should be very useful, and expressing accord with respect to the various clinical definitions, the writer took up particularly only the question of the P groups. Much of the following is derived from a tabulation supplied, the terminology of which, he pointed out, is based on words with

the same root in most languages. *Re P-1:* Evident agreement eventually (see below). *Re P-2:* Agreement. *Re P-6:* Agreement re minor and major. *Re P-7:* The usefulness of the proposed P groups is questioned. Re P′, it is usually necessary to depend on statements of patients, often valueless. Re P″, use of the qualification "residual" would be sufficient indication. *Re P-8:* Apparent disagreement (see below). The writer's own scheme (tabulation) divides leprosy primarily into two grand classes: "benign," comprising T and I, and "malign," being L. The T group is subdivided into minor, major and borderline; the other two have no comparable divisions. All three are subdivided into cutaneous, neural (*neuritique*), and cutaneo-neural, the first of these further divided variously. (This scheme, elaborated as the primary working document on classification for the meeting of the WHO committee, is scheduled for publication in a later issue of THE JOURNAL.)

From Dr. Robert G. Cochrane, London, England: A comprehensive statement of the writer's views on classification generally, from which his attitude toward the propositions of the memo. can for the most part be drawn only by inference. *Re P-1:* Apparent disagreement; the term "indeterminate" does not appear in the discussion of macules, whereas it is said later that it could be used for the "dimorphous" group, although the latter term is preferred. *Re P-2:* Apparent disagreement, it being said that "all lesions should be classified primarily according to their immunological response" (see tabulation below). *Re P-3:* Apparent agreement re histol., not re immunol. *Re P-4:* Agreement; better not apply "incharacteristic" [*sic*] to resolved lesions, but signify them as by T(res) or L(res). *Re P-6:* Apparent agreement, in a way: "minor" and "major" are used (see table), although "lepride" is preferred; reactional tuberculoid is to be distinguished from the atypical dimorphous condition. *Re P-7:* Position uncertain. In the text three P varieties are listed under the general term "anesthetic lesions"; but in the table, where that term does not appear, they are distributed in the three columns according to the immunol. response. *Re P-8:* Agreement, under the term "dimorphous." At the outset it is stated that all lesions [*sic*] can be divided into macular, infiltrated and anesthetic, and for each of these kinds there is given a tabulation on the basis of the lepromin reactivity, summarized in the final one below. Regarding that, it is stated that each division and subdivision has a definite, characteristic histol. pattern, except that it is not known whether in the dimorphous group there exist both macular or polyneuritic lesions. "Those types which can only be recognized by the lepromin test and/or histological examination are within ordinary brackets; those lesions which are at present only surmise are in square brackets."

Lepromin positive	*Lepromin negative*	*Lepromin variable or weakly positive*
Macular:	Macular:	[Macular:
Maculo-anesthetic tuberculoid (or lepride)	Preleproma Macular leproma	Dimorphous]

Lepromin positive	*Lepromin negative*	*Lepromin variable or weakly positive*
Infiltrated:	Infiltrated:	Atypical tuberculoid
Minor tuberculoid or lepride	Diffuse	Atypical leproma
Major tuberculoid or lepride	Nodular	
(Polyneuritic tuberculoid or lepride)	(Polyneuritic leproma)	[Polyneuritic dimorphous]
Reactional	Reactional:	Reactional
	Allergic: erythema nodosum	
	Progressive lepra reaction	
(Resolved)	(Resolved)	(Resolved)

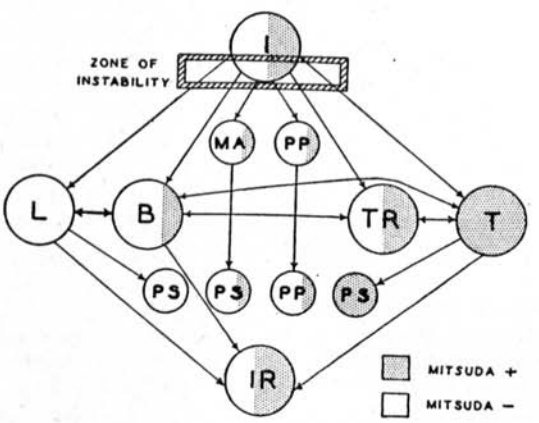
(This statement was also supplied to the WHO Expert Committee as one of the several working documents on the subject.)

From Dr. Dharmendra, Calcutta, India: This contribution is an actual commentary on the memo. affirming agreement with "most of the desiderata" but revealing important disagreements. *Re P-1:* The basic principles should be retained, but not the forms in their entirety; the S.A. and Cairo schemes could be reconciled to produce a formula better than either. A difficulty with the I group of the memo. is that the lesions are the same as the S.A. "uncharacteristic" group and include the "flat simple macules" (Ns) of the Cairo scheme; but these are not really "indeterminate" but related to tuberculoid [evidently referring to histology] with lower activity. A better name, perhaps "maculoanesthetic," should be found for them, although best would be an arrangement which would indicate the relationship between the tuberculoid lesions and the neural simple ones by placing them in the same group with suitable nomenclature. Retaining the "indeterminate" group but with a different composition, it would comprise two forms (see later). *Re P-2:* Agreement, with stress on the importance of the bacteriological findings in relation to the clinical data; e.g., cases with localized lesions closely resembling tuberculoid but with many bacilli and nonreactive to lepromin are almost always L, this being the type of lesion often called borderline, etc. *Re P-7:* Agreement re a P group, along with L and T, but better to substitute "neuritic" to include cases with local anesthesia caused by involvement of individual [evidently meaning cutaneous] nerves; proposed subdivision apparently accepted (see below). *Re P-8:* Another difficulty here, for although a place has to be found for cases called "borderline" or otherwise, they should be in the "indeterminate" group (see below). The discussion ends with a proposed modified five-group scheme, presented in a columnar tabulation but reduced here to running text: (1) Lepromatous (L), of usual composition. (2) Tuberculoid (T), also as usual. (3) Maculoanesthetic (M), or any other suitable name, for flat simple macules included in the memo. under "indeterminate" and in the Cairo classification as Ns. (4) Polyneuritic (P), or, better, "Neuritic (N)," composed as in the memo. (5) Indeterminate (I), comprising (*a*) flat patches neither lepromatous nor maculoanesthetic, and (*b*) borderline cases.

From Dr. Neil D. Fraser, Hong Kong: In a commentary which shows preoccupation with diagramming and the factor of evolution it is said first that the grouping of patients should depend on: (*a*) history of evolution, (*b*) clin. impression, (*c*) evaluation of prognosis, (*d*) bacteriol., (*e*) histol. and (*f*) immunol. Re the memo. diagram, "oversimplification of the classification or of the diagram makes for further confusion rather than for clarification." Grouping all L cases at one end and C cases at the other makes for confusion; grading both along a bar and indicating degree—L1, L2 and L3, and similarly for T (first for major and then for minor)—would convey the idea that no case of leprosy is stable, at least until "arrested," but is moving either toward the end which shows less resistance or that which shows greater resistance. The time factor should also be included to provide for indicating the condition at the time of the examination, the issue having been confused by neglect of this factor. Three diagrams show the stages of development of a three-dimensional scheme of representation (not reproduced). The upper level, or bar, is labelled "reacting skin lesions," the middle one "nonreacting skin lesions," and the bottom one "polyneuritic lesions." Re basic propositions: *Re P-1:* Uncertain; the diagram shows, left to right, divisions for L, I, T and simple macules. *Re P-2:* Uncertain (see criteria, above). *Re P-4:* Change from T to I, by lowering of resistance [*sic*], is held possible. *Re P-6:* Minor and major tuberculoid are mentioned. Re reactional, all such conditions should be recognized; they are indicated (without distinction of kind) in the "reacting skin lesions" bar, this to include borderline. *Re P-7:* Should recognize P cases, indicated by a separate bar; both primary and secondary mentioned. *Re P-8:* (See P-6 above.) "A chess player should have no difficulty in following [the moves by time periods on this] three dimensional diagram."

From Drs. J. Gay Prieto and F. Contreras, Madrid, Spain: Commentary in the form of an article which has been published (*Actas Dermosifil. 43* (1952) 667-674), a diagram (see below) showing the groups recognized and their relationships. Leprosy begins with a macular lesion (I) [although P′ (PP) cases are recognized], which may transform in either of four different ways (L, T, B, or TR=reactional tuberculoid); or the original form may persist with markedly anesthetic macules [MA, evidently meaning maculoanesthetic]. L, T and B cases may end up as residual "incharacteristic" (IR); but the P cases, whether primary (P) or secondary (S), are not connected with that final group in the diagram. With respect to certain forms, "Nature ignores the rigid molds in which we attempt to fit the observed clinical facts, and consequently there must necessarily exist intermediate forms which constitute the links of an unbroken chain which connects the polar forms." From the diagram and the text, the following emerges. *Re P-1:* Agreement. *Re P-2:* Uncertain; little is said of histology, but it may be that it is assumed to have fundamental significance. *Re P-3:* Uncertain. *Re P-4:* Disagreement, a residual "incharacteristic" group being recognized as the end point for various kinds of cases. *Re P-5:* Apparent agreement. *Re P-6:* Disagreement; minor and major are not mentioned, while reactional is set apart as a separate group. *Re P-7:* Agreement, dealt with at some length. Nerve biopsy *should not be practiced. Re P-8:* Agreement, for cases

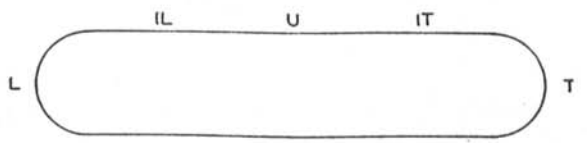
neither T nor L but nearer the latter, although some reactional T cases are very much like those originally described as "borderline." In the following diagram the shaded portions represent lepromin positivity.



From Dr. Frederick A. Johansen, Carville, Louisiana: Hearty approval of the suggestions made is expressed, and dissatisfaction with the classification as it has existed since the Havana Congress. "The South American classification, though good, still has its drawbacks, while retaining the 'polar' types and making the additions suggested really would make for a much better understanding and agreement. . . ."

From Dr. C. B. Lara, Culion, Philippines: Besides specific comments on the memo. a statement of general principles was supplied. The present "unsatisfactory" situation is as it should be, indicating unabated interest in a matter about which our knowledge is incomplete, with a tendency to assign settled values to what may be fragmentary observations or insufficiently grounded premises. Classification, with consideration of the several kinds of data now involved, "should be formulated on a biologic basis and facilitate an appreciation of its dynamic features," recognizing that variations are but expressions of the reaction of the individual hosts to the invading agent, and that changes even of form are liable to occur; also that localization and gross morphology may not always be of primary importance or even reliable guides. *Re P-1:* S.A. largely satisfactory, being biological, but the restrictive application of it is unsatisfactory. Re forms, five primary types and subtypes are proposed: (*a*) L, (*b*) "intermediate ('borderline') lepromatous," (*c*) "undifferentiated," (preferred to "uncharacteristic" or "indeterminate"), (*d*) "intermediate ('borderline') tuberculoid," and (*e*) T. *Re P-2:* The "objective clinical" criteria are not adequate for many initial and late early cases; it would be reverting to the old practice, "unsatisfactory to [the experienced] and confusing to the beginner." *Re P-6:* "Torpid" preferred for minor, and "reactive" for major. *Re P-7:* To introduce P groupings would confuse the concepts of the S.A. scheme, and there should be no need of it since they are merely clinical descriptive. If it should be done, "simple" would perhaps be better than "primary," but how can the condition be said to be primary? Re "secondary," not satisfactory, implying necessarily later de-

velopment; it would be better to amplify as P lepromatous or P tuberculoid. *Re P-8:* Subdivision into "intermediate lepromatous" and "intermediate tuberculoid" preferred (see diagram). The diagram reproduced here:



is accompanied by four others with the same markings but of different shapes to symbolize differences of relative preponderance of the various groups in different regions. One is broadened at the L end and narrowed at the T end, while another is the reverse of that; a third is broad at the middle (U part) and narrowed at the ends, while the fourth is the reverse of that, dumb-bell shaped.

From Dr. John Lowe, Uzuakoli, Nigeria: The writer would have little difficulty in accepting the proposals, despite some minor points not in accord with his experience; he would be prepared to support the scheme or any reasonable modification of it so long as the primary basis is clinical. However, he and others hold that, while a more or less standard and uniform system of classification and nomenclature would have obvious advantages, it would be unwise to try against opposition to get such a system adopted and used by all workers. A wide measure of agreement has been reached in theory and in practice, so that a worker in one country is no longer baffled by reports from others. The same terms may not be used, but it is the same language in slightly different dialects. The differences in theory and practice which persist are relatively minor and do not constitute a handicap. If general agreement can be reached easily and amicably that would be welcomed, but the writer is not prepared to engage in controversy to attain complete uniformity. Is there any major disease in which there is uniformity? Are we not attempting the impossible? Might not uniformity stifle originality of thought? Advances in knowledge and understanding often come from workers who see a disease in different aspects and have different ideas about it and employ different terms. "I am keen on controlling leprosy; this I believe is becoming possible. I am much less keen on controlling leprologists! This is not only impossible but most undesirable."

From Dr. E. Muir, London, England: With possible small alterations, it is stated, the memo. should win the approval of all leprosy experts. The description of the borderline group, which "fits in with my own experience," is particularly useful since perhaps most confusion has been caused by want of a clear understanding of this group. (Several changes in the text of the descriptions were suggested, but none with respect to the basic propositions.)

From Dr. V. Pardo-Castello, Havana, Cuba: Writing as a dermatologist interested in leprosy, this contributor points out that classification is not an academic matter but a practical one to determine in each

case the severity of the disease, prognosis, and infectiousness. We cannot hold back because "field workers" lack means of classifying their cases scientifically; that is unfortunate, and some way must be found to solve their difficulties, but we cannot for that reason remain behind in our scientific conceptions and advances. Division into L and T is satisfactory, with I for temporary designation of those early cases with a few macular lesions in which—and as long as—the bacteriol., histol. and immunol. tests do not indicate their place in either of the polar forms. The proposal of a P type is strongly disagreed with; only subtypes such as "tuberculoid P" or "lepromatous P." While there are cases with affection of peripheral nerves without skin lesions, the histol., immunol. and bacteriol. findings suffice to place them as L or T. Healed cases with only P symptoms remaining should be called "residual" L or T. Reactional cases also can always be placed as T or L, although a few T cases may under certain circumstances change to L, and rarely the reverse change may occur. These views, it is admitted, will by no means solve all of the problems of classification, for there are a few cases which cannot satisfactorily be put in any of the three recognized groups. However, all rules have their exceptions, and no classification of infectious diseases, whether tuberculosis, syphilis or any other, would provide for all cases. After all, each patient reacts to a specific agent in his own peculiar way.

From Dr. José N. Rodríguez, Manila, Philippines: For some reason the experience of most leprologists does not permit them to accept without modification the classifications of others, so disagreements regarding details of any proposed scheme may be expected to continue, at least for some time to come. Re the points of the memo. which are in variance with the Rio de Janeiro and Havana schemes, the opinions expressed are preliminary impressions pending check on cases. Agreement re the general principles of the first five desiderata, disagreement only re some of the details of the sixth one, concerning classification itself. *Re P-6:* The terms "major" and "minor" may well be dropped, there having been a tendency to confuse the former with the reactional condition. Two main divisions are favored, (*a*) torpid or nonreactional, and (*b*) reactional. *Re P-7:* Partial agreement. The "primary" cases should be assigned to an independent group. Although rare in the Philippines, there are seen cases with no indication of having had either L or T leprosy. But "secondary" cases should not be put in the same group; it would be less confusing to consider them as subtypes of the corresponding main types, L or T. *Re P-8:* Agreement. The writer has held since 1947 (THE JOURNAL **15**; 274-302) that there is a wide zone of cases between the typical polar forms, with atypical lesions and varying gradations or admixtures of the histol. and clin. features of both types. The term "dimorphous" would seem to fit those cases. A minor disagreement is re cases with an isolated area of cutaneous anesthesia without macule or thickening of the corresponding cutaneous nerve branch. Of 5 such cases followed up, 2 later developed lepromatous lesions elsewhere, 2 had reactional tuberculoid lesions at the place, and one a not well-defined tuberculoid macule there. (Besides these comments, the note contains interesting remarks on the operation of classification committees which are scheduled to appear as a separate communication in a later issue.)

From Dr. S. Schujman, Rosario, Argentina: Not touching on points with which the writer is in agreement, and indicating no actual disagreement, this commentary deals only with those which should be modified, these being in the descriptions and not the "desiderata" and mostly re lepromin reactivity (Mitsuda). This first applies to the I group and the lepromin test as an indicator of probable evolution; repeated testing—every 3 months for negatives, 6 months for positives—is advocated to establish an "immunological curve." *Re P-7:* Where frequent, such cases might well form a separate group. Primary (P′) ones with nerve abscess or nodules are almost always T, but mention is made of 3 cases negative to lepromin and with lepromatous structure and many bacilli found in the cubital nerve (later, in one, L skin lesions were seen); so biopsy is recommended in P′M– cases. Secondary (P″) cases should also be repeatedly tested for prognosis re relapse. *Re P-8:* Apparent agreement. These cases, arising from either T or I, usually remain as such for long periods but sometimes evolve to T, less frequently to L. Transformation of typical L cases to B under treatment has not been observed, "much less" change to T.

From Dr. H. C. de Souza-Araujo: The writer has previously published his opinion (*Mem. Inst. Oswaldo Cruz* **39** (1943) 77-96) that T is a transitional stage, not a stable clin. form, and confirmation has been seen in papers published since then re mutation of T to L and the occurrence of both T and L in the same lesion or in different lesions of the same patient. Thus the basis of the polar classification is not confirmed; the poles should never become mixed. Because no symptom of leprosy is stable for the life of the patient, all being transient or mutable in time, and even burnt-out cases with only mutilations being liable to return to the nodular (L_3) form, the L type must also be considered transitional. In practice the writer still uses the Cairo classification, with the important grading by degrees (e.g., L1, L2 and L3), and he speaks of South American colleagues who are frankly against the S.A. one. It is necessary to reestablish the importance of the neural type, because nerve signs are the first to appear in at least 80% of the patients. Much progress must be made before a "generally applicable system" can be arrived at; that cannot be expected at the Madrid congress.

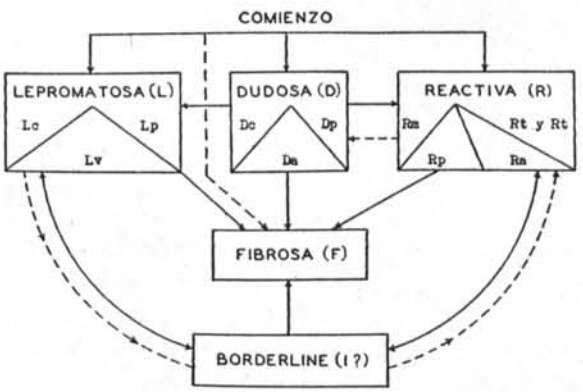
From Drs. Lauro de Souza Lima and Nelson de Souza Campos, São Paulo, Brazil: The memorandum, it was stated, has been studied carefully, and much would have to be said about it because there are many points which were not agreed with. It would be impossible to do that because of the language difficulties, and instead the report on subtyping of the Buenos Aires conference was referred to; with all its faults they were inclined to accept it. Dr. de Souza Lima has stated, however, re clinically I cases that he does not transfer them to T or L on the basis of subsequent histol. findings (this being in agreement with P-2 and P-3). It is known he does hold for transfer from T or L to I on the basis of clinical subsidence of the lesions to a recessive or residual macular state (in disagreement with P-4). It also appears, from the above statement and otherwise (his Tres Corações report) that he is inclined to recognize a separate borderline group (in agreement with P-8).

From Dr. F. R. Tiant, Havana, Cuba: The great majority of cases are grouped satisfactorily, with respect to prognosis and infectiveness, in either the L or T polar form according to their clin. and other features. For the much smaller group, dermatologically macular, which show only small foci of round-cell infiltration and are indefinite re evolution and variable re immunol., no entirely satisfactory designation has been found. *Re P-4:* Agreement. *Re P-6:* Distinction between major and minor is not important. *Re P-7:* Disagreement. Active cases with only the peripheral nerve trunks affected can and should be classified T or L—usually the former—and designated tuberculoid or lepromatous polyneuritic. The so-called "secondary" cases could be called "residual polyneuritic," the original form being of no importance in this stage re prognosis, infectiveness or treatment. *Re P-8:* There is a strong tendency to create a distinct "borderline" group, but the writer sees too few of them to have an opinion.

From Drs. Martin Vegas and Jacinto Convit, Caracas, Venezuela: The opposition to the Havana classification has been based mainly on administrative grounds; most leprosy workers were not prepared to classify [meaning distinguish?] the primary types, and many leprosaria and dispensaries were not equipped for routine histology. The introductory part of the memo. may help correct the wrong impression that that classification is not suitable for the great majority of workers. Re primary types, the Havana scheme "can be used by any reasonable well-trained physician." The correct interpretation of the lepromin reaction is a reliable guide for any physician and its use should be generalized. It is also necessary that laboratories equipped for the histol. examination should be available. *Re P-6:* The minor and major divisions are not justified, the latter being one of the reactional T forms. *Re P-7:* When histol. work is done, most P′ cases can be correctly diagnosed as of one of the primary types. Sometimes, however, only fibrosis will be found because the active condition is at the nerve ends; and with these will also be cases whose nerves show only fibrosis as a residuum of any primary-type process; such cases justify the P′ group. Agreement re the P″ group would be difficult to reach because, by history, residual lesions of the skin, and the immunol. and histol., cases can be diagnosed as LP, IP or TP. *Re P-8:* Agreement that a new group must be formed.

From Dr. X. Vilanova, Barcelona, Spain: A long manuscript (submitted to the *Actas Dermo-Sifiliograficas* for publication), mostly a detailed exposition of the writer's views on classification and nomenclature which cannot be dealt with in detail. They differ in important respects from certain of the propositions—although it is said that some of them give material support to some of his views, and although the writer's diagram follows in general the lines of the one which accompanied the memo. —and they also differ from the S.A. scheme. Accepting the L type, the lesion of which is a "leprous histiocytoma," the others are modified. The I one, given a restricted sense, is called "doubtful" (*dudosa*) (D); and the T one, the term "tuberculoid" being held objectionable, is called "reactive" (*reactiva*) (R). The persistent macular (maculoanesthetic) cases of the original I group are transferred to the "reactive" one because of their general nature, whether or not the lesions show tuberculoid

structure. Below these three in the diagram is a group called "lepra fibrosa" (D), referring mainly to changes in the nerves and corresponding to the P″ group. Finally, completing a five-group scheme, there is one called in the text "intermediate (or borderline) (I)" but labelled in the diagram "borderline (I?)" which has connections with both of the two polar types. Although stress is laid on histol., and although pure neural cases not of the P″ kind are apparently classified as belonging to one or the other of the polar types on the basis of nerve biopsy, it is held that classification should be primarily on clin. grounds. One of the lesser points is an objection to "lepra reaction," "reactional tuberculoid," etc.; such acute events should be called "*brotes agudos*," ("acute outbreaks"), the word *brotes* corresponding to the English "outbreak." *Re P-1:* Disagreement re terminology; also re retention of the maculoanesthetic form in the I group, which should comprise only the macular cases of doubtful evolution. Also, the histol. picture represents only the intimate structure of the lesion at the moment and does not reflect all of the clin. features. *Re P-2:* Agreement (see above). *Re P-6:* Agreement re minor and major, they being rated as divisions of a tuberculoid subgroup of the *reactiva* class. (Re reactional, see above.) *Re P-7:* Disagreement re P′, since on histological grounds most cases would fit into the *reactiva* class as a subgroup (Rp). Agreement re P″ cases, whose nerves show "curative fibrosis," they being of interest mainly for other reasons than what they were previously. This is the "lepra fibrosa" (F) class, among the cases of which there may be some which became such from the outset without skin lesions. *Re P-8:* Apparent agreement. The writer's diagram follows.



From the Associação Brasileira de Leprologia, Rio de Janeiro, Brazil: The official "evaluation" of the memo. by the Brazilian Association of Leprology, signed by Dr. Candido Silva as secretary, is presented in unmodified—if imperfect—translation. The [Association], after evaluating [the memo. referred to], expresses the following opinion. 1. There is complete agreement that the proposition relative to the recognition of a new "polyneuritic group" is unfortunately unacceptable because: (*a*) it threatens to destroy the basic concept of the extreme, stable (polar) types; (*b*) the "group" idea proposed in Havana, based on the work of Dr. Latapí, attempts to bring together a collection of cases that do not present in a way that is evident or understandable the distinctive characters

of any of the fundamental groups; for example, a P'T case only exists in fact within the T type and not in a polyneuritic group. 2. The question of a "borderline" group seems much more acceptable, and in this connection there is attached hereto a copy of the Brazilian proposals regarding subtypes (Buenos Aires, 1951) wherein not only "borderline" cases (i.e., Wade type), but also "major tuberculoid" cases (Souza Campos type) are combined in an authentic "group" whose cases—at least the reactional "borderline" kind—often pass from T to L. 3. The designation "minor tuberculoid" seems not recommendable; at least it does not seem better than the term "*tuberculoide figurada*," which in the English language may be translated by "circinate" or "configurate" (in Latin, *figurata sive circinata*).

[*Note:* In the document referred to, a report on subtyping prepared in 1951, the T type is spoken of as divisible into "torpid" and "reactional" forms, and the latter is tabulated as one of the subdivisions of that type. This reactional form, it is pointed out, includes not only cases which present the fundamental characteristics of the type—the majority—but also those which, whether *ab initio* or as a result of successive *surtos*, present aspects of transition to L, that is, the borderline (*limitantes*) lesions. The proposal was made to create a new "reactional tuberculoid" group, additional to L, T and I. The Buenos Aires conference for which this report was prepared (Third Pan-American, 1951; see THE JOURNAL **20** (1952) 266) put the "borderline" cases with others in the reactional subtype of T but recognized the "more or less established consensus" of individuality of such cases and recommended further study of them so that at Madrid it can be decided whether to create a "transitional (T.T.) group."