

**Jean-Michel Vappereau, *Fabric – Intrinsic Topological Surfaces***

translated by Marc Etlin

with semantic corrections by Anna Muir

{I}

***Series Presentation of the Fascicles of Results***

1. In the Freudian field, our fascicles of results take things seriously, and so they constitute a series. The series of our results of topology in extension address those who want to forge a path in this field without being petrified of fright or feigning thusly in a pose of stone-like indifference.

So we adopt the expression “fascicles of results,” taking it from the Bourbaki team [16].\* The mathematicians of this group develop the construction of mathematics starting from the terms of set theory. In the instructions for the use of their treatise, which is divided into various books, they specify the function of these fascicles:

“In some books (already published or in preparation) are attached fascicles of results. These fascicles contain the essence of the definitions and the results of the books, but no demonstration.”

Their way of working exhibits a rather specific difference from our own: our fascicles are not connected to any single treatise of a comparable magnitude.

On the other hand, in our construction of the object of psychoanalysis, [also] departing from the fundamentals of set theory, at our disposal we have the work of Freud and the writings of Lacan—the latter accompanied by the teaching of his seminar.

2. Psychoanalysis was invented by Freud upon discovering the unconscious. This invention was consummated by Lacan through his critical commentary of Freud's texts, which submitted it to the proof of its own logic.

This practice leans on a *method* and produces a *discourse*.

The method is known by those who study texts. This method received its letter of nobility with Champollion, who had already used it successfully. The psychoanalytic method consists in comparing two versions of the same text, inasmuch as analytic discourse is based in the hypothesis that our psychic apparatus is elaborated through a series of translations, transcriptions, and transliterations.

We regroup these different acts under the jurisdiction of translation, which we study here. To make use of this method one must have various versions of the text under consideration. Psychoanalysis is only applied to a speaking subject who provides himself, in a single discourse, {II} with different versions of the same text (E., pp. 747-748; “p”).<sup>1</sup> What is foolishly called applied

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□ The number in “{ }” refers to the page number of the text being translated (- Marc's note)

\* The numbers in brackets refer to the bibliography at the end of the volume (T)

1 The letter E. followed by the page number refers to the *Écrits* of Jacques Lacan (Paris, Seuil, 1966), and the letter to the list of the writings of Lacan at the end of the volume.

psychoanalysis is nothing more than employing the psychoanalytic method, for example, in literary criticism.

The study of the problem [25] raised in translation culminates in a practice of writing that Dr. Lacan encountered in the writing of the Japanese language. Perhaps the reader might know that the literate Japanese writes in his own language (reading kun-yomi) by means of recourse to the characters that were utilized in an archaic stage of the Chinese language (reading on-yomi)<sup>2</sup> that he is not ignorant of.



Fig. 1

This is how the element that we write as “water” is spoken and written. This practice of the letter calls for numerous observations. In order to initiate this discussion, we will content ourselves here with only some of them.

Recourse to this writing produces an effect of permanent translation. For the literate Japanese, this translation is carried out within the *same* culture. This effect is experienced in its maximum purity through Japanese writing due to the characters that introduce another dimension into translation; the latter is produced by a fiction of three.

We also find this instance of the letter in Lacan's *Écrits*, when he presents the structure of the signifier by means of the men/ladies couplet,

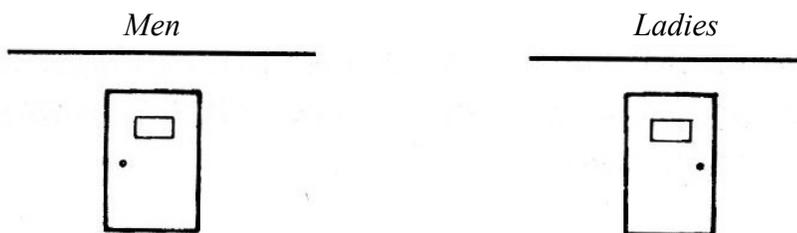


Fig. 2

that crowns two identical doors, which indicates amidst us the isolated places subjected to the laws of urinary segregation (E. p. 499, “ñ”).

There is some impertinence in the fact of illustrating the letter's functioning in this way, yet, it is the letter that is present among us, even as far as in our public life, and whose articulation seems to be erased in alphabetical writing.

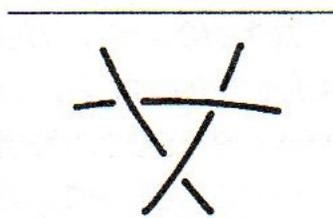
In practice, clinical elements can be understood in accordance with this very modality.

<sup>2</sup> Takatsuju Sasaki, “Mettre la psychanalyse en japonais,” *L'Ane* 26, pp. 8-9.

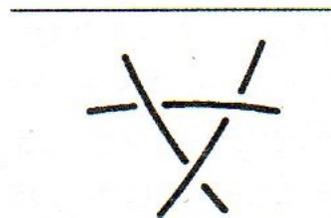
The words of the analysand must go as far as touching the structure of the Freudian field in order to reach the dimension of *discourse*. This structure is topological since analytic discourse is inscribed in the epoch of a logico-mathematical science whose topology points toward {III} foundation. Therefore, it is through a series of translations that there can be a passage from the particularity of the case to the universality of what has a foundation. This gesture does not pretend to rid us of this fantasm, but has the ambition of rendering an account of it.

This is not about making an abstraction each time more disembodied, as Husserl believed in his *Fundamentals of Arithmetic* with regard to the concept of cat, but rather of a literal materiality, as Frege reminds him, in which the fundamentals of the concepts rest upon the extension of particular cases taken to the dimension of the set. The concept of cat is not an abstract cat whose hair was pulled out, along with the whiskers, eyes, etcetera, but the collection of cats, when it makes a set occur, according to specific conditions. Therefore, we will speak of concept in relation to this collection, so long as a *letter*, that is, a name, can be assigned to it, and we will then say that it is treated as a set. This assignation depends on textual restrictions well known to set theory but less noticed in other domains.<sup>3</sup> Thus arises the delicate question of the proper name.

The practice of psychoanalysis is directed towards interpretation because of translation, leaning on the drawings or mathemes of topology and by using the topology used in mathematics; the latter actually does not lend itself to an applied topology but makes possible, just like the reading of Japanese, a bilingual speaking.



*Unary Trait*



*Triskel*

*Fig. 3*

We could multiply the examples with regard to each concept of psychoanalysis. From there lies the necessity of our topological elements, because what is to be said of a literate Japanese that would not really know the on-yomi reading (ancient Chinese), and would claim to do without it so as to write the Japanese language in a univocal manner (reading kun-yomi)?

Usually, conversation involves the gaze and the voice; Freud's practice consists in principle of isolating the voice to the detriment of the gaze in the psychoanalytic treatment itself (the main phase of analytic training - *E.* p. 698; "t"). This practice responds to what is discovered within it, namely the aches of the transference in which, through the play of passions, ignorance hides itself behind love and sometimes, behind hate. But, as we have just mentioned, these anxieties should be articulated with the entirety of *training* that makes a formation of the unconscious out of the transference.

Lacan's practice inscribes itself within this configuration. Lacan undertakes the work of returning to Freud, by effectuating, as much in the case of the practice itself as well as with respect to each concept, a slow but radical reversal. His practice of the structure consists then in casting off the voice: this is what Lacan did at the end of his journey, in order to focus attention on the gaze, especially

<sup>3</sup> *None* [Nons], fascicle No. 0.

with the drawings of {IV} topology. The tipping point of this reversal, according to the structure of the Freudian field, encounters its practical realization in the short sessions. This stage, in which this practice is reduced to a simple cut, is necessary.

Our trajectory does not consist in sticking to one or another moment of the structure, but consists in not ignoring any of them. Our project is that of an approach to Lacan, that is, an approach to Freud, in the prolongation of this double movement that is still unsurpassable; the consequence of which is that practice itself will continue broadening.

The practice of psychoanalysis probably does not aspire to produce mathematics but necessitates that we do not remain ignorant of it. For the analysand, the formation ends with the separation between the analyst and the analyzed material, which he must render an account of. The practice (the clinic, meaning both structure and act) is not sustained if the dogmatic foundation of translation, that is to say, of reading the unconscious, is avoided.

Analytic discourse progresses starting from this practice, yet it is in place already for the generations alive today. It wasn't the case for Freud, and it wasn't yet the case for Lacan, neither of whom had this analytic discourse at their disposal. Analytic discourse is the social link that is formed due to this practice and which receives it by its results. This obviously doesn't happen on its own. It begins starting from two, supplied with the works of Freud and the writings of Lacan.

These reasons lead us to consider in a preamble the way topology is going to be enunciated as an argument of discourse. This discourse, as it is developed, presents itself according to various versions of the work of Freud and various translations of the teaching of Lacan. We must make them enter a rationale by means of the psychoanalytic method, whose apprenticeship constitutes the other stage of training. This method should be neglected neither in the reports of the analytic experience nor in the internal effects that it produces.

3. The work of Freud is divided into two topographies, separated by an intermediary moment (1914-1915) in which the necessity of passing from the first to the second is affirmed.

In the teaching of Lacan there are three topological chapters, related to three types of mathematical variations: graphs (1953-1961), surfaces (1961-1971), and knots (1972-1981). We define and develop these notions in our series of results.

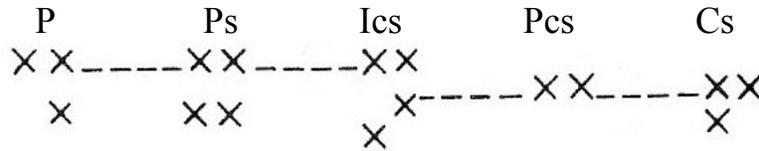
## ***FREUD***

*First topography.* Already in the 52<sup>nd</sup> letter to Fleiss, Freud designs a schema {shema}<sup>4</sup> that echos back to his hypothesis that the psychic apparatus is constituted by means of successive translations. The segments correspond to the disturbances produced by way of translation.

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4 We adopt the writing of the word schema to designate our figures in order to underline the fact that they do not only show but also want to give something to be heard. So then the recourse to the Hebrew “schema” (listening) is not fortuitous. This gives one something to think about, to interrogate and meditate over what P. Legrende calls the basic symbolic operation, the fundamental tele-handling ((27 s), p. 101) that makes power plausible [explained below- trans.] and whose pulsative structure we are examining here. Legrende, with the example of the tapestry making of Cettomai, designates the prototype of the following picture: “Power, as legislator, implicates joining edge to edge two things that at first sight are difficult to qualify—must one call these elements surfaces, etc?—to make some law come out of the them” ((27 a), p. 102). \*\*\* It is fit to point out that in French the pronunciation of schema is practically equal to that of schéma, outline, which offers an additional justification for its adoption. In all of the documents in Judaism, schema is a liturgical oration that is recited daily in the morning and evening services, and consists in three paragraphs that express the faith and ardent love that Israel professes to God [...] (from the translator's note to the Spanish edition)

{V}



The letters of the graph of letter #52 is read in this mode:  
*P* = Perception, *Ps* = Perception-Signs,\* *Ics* = Unconscious,  
*Pcs* = Preconscious, *Cs* = Conscious

Fig. 4

Freud poses the question of the conjunction of the extremities of the graph, of the knotting of perception and consciousness, in which our “reflexive tradition” “has undergone its standard of truth” [*E.*, p. 69]. This question reappears in *The Interpretation of Dreams* ([1 c], p. 460, note 1), where he gives a new optical version of his schema in which every stage of translation is represented by a lens that produces a reversal of the object, like in a telescope.

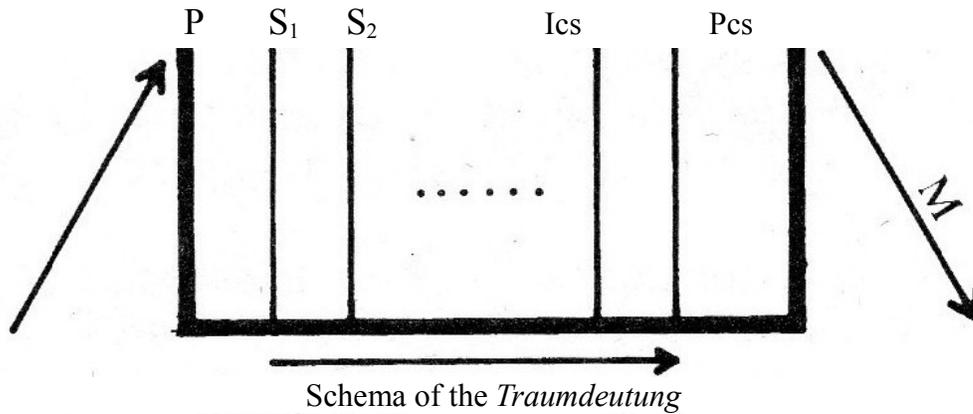


Fig. 5

This is the initial problem from which we will embark upon in our topology of the subject.

In the course of this first period, Freud establishes the work of the unconscious in the three major works that are *The Interpretation of Dreams*, *Psychopathology of Everyday Life* [1 d], and *Jokes and Their Relation to the Unconscious* [1 f].

*Second topography.* In his second topography, Freud examines the very structure that reappears in the stumbling blocks to be avoided, those of the dualism in the theory. With this aim, in 1914 he introduces, with narcissism, his theory of the ego. The other that speaks through the stumblings of my word is not symmetrical to myself, in the same way that my unity does not have to do with the unity of

\* I translate this term this way to avoid a potential confusion in writing “signs of perception,” as if these signs were within perception, whereas it is actually about taking perceptions, generally understood as a continuous process, as discrete signs, rendering perception into discontinuous units. (Marc's note)

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the organism. What makes one starting from this two? In the same manner, Freud distinguishes the sexual drives that invest the object and the drives of the ego that supposedly preserve it. He recognizes that it is really the same thing [1 k]:

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“Apparently, in quite a few cases this could also be a conflict between several different tendencies that are properly sexual.” (p. 330, retranslated)

and

“We are lacking any motive for affirming a difference of nature, actually not easy to grasp, in the two groups of drives.” (pp. 389, retranslated)

but they are not equals:

“But in essence it is the same thing, given that of the two tendencies that are in conflict, one always is, so to speak, satisfactory for the ego (*ichgerecht*), whereas the other constitutes a threat to the defenses of the ego. Therefore, things remain close to the conflict between ego and sexuality.” (p. 330, retranslated)

“For us, the two groups [of drives] are opposed uniquely as designations of the energy sources of the individual, and the dispute, whether in essence they are one or of a different nature, and even if [they were] of one [sole group], is to see when they are actually separated, one from the other.” (p. 390, retranslated)

It is for this same reason that in 1914 Freud introduced narcissism, since in the narcissistic neuroses the ego is sexually invested like an object, which incited him to think that he was able to resolve the enigma via the study of these neuroses.

“Without a doubt, our knowledge of the development of the ego is less than that of the libido because only the study of the narcissistic neuroses promises an examination of the structure of the ego.” (pp. 330-331, retranslated)

This difficulty of structure, reoccurring over and over starting from the presentation of the unconscious right up until the death drive's introduction into the doctrine, is also present in the 1914 article in which Freud distinguishes, in a more assured manner, the terms of the Ideal ego and the Ego ideal; the fact that “we still cannot distinguish their use in that text, should be fairly worrisome for us” (E p. 672/563 [Fink translation]), this being Lacan's expression in which some see a reproach aimed at those bad readers of Freud who do not distinguish these [two] uses. It's not like that. If a reproach should be heard in this phrase, it is only destined to those whom it does not trouble, since we suppose that they have read Freud's articles. In fact, if they have not read them then they cannot distinguish these two usages; if they have read them, then did they take notice that it is impossible to distinguish between them? Very few have read the text and, as a consequence, very few worry about it.

In this intermediate moment, in 1915, Freud intends to redact his *Metapsychology* [1 j] in twelve articles, of which remains no more than four elements plus one that has just been recovered (1985). It is this failure that incites Freud to construct his second topography, in which he radicalizes his position by going as far as getting down to that which his initial hypothesis was leading him

towards, since this topography necessarily brought him to subverting our conceptions related to causality, under the heading of repetition automatism.

### {VII}

Freud looks for a rational shoring of this enigmatic occurrence in phylogenesis ([1 k], p. 334). Therefore, for this he constructed already in anthropology the myth of the primal horde [1 h]. In biology [1 k], he seeks a support that brings him to mention Weissman [1 l]. As this structure presents itself in the materials of analysis, he looks for its reason in philology by Abel [1 g]. The answer is logical: it is topological.

### LACAN

Let's distinguish between historicity and structure. The temporal development of phenomena gives us some surprises like retroactions, reversals, interruptions, and resumptions that only structure clarifies.

We must indicate by which rational course, and in which reasonable context was Lacan led to introduce his mirror stage.<sup>5</sup> It is by taking notice of the fundamental dependence with respect to the-let's say social, or even familial- context of the subject, [and yet] one must withstand the counter-strike of the radical insufficiency of the most precise reports of this context. More still, we arrive at an uncertain or, in appearance, a simply paradoxical concept of an innately acquired character, in which we can see that the categories which are necessary in this situation are lacking for us. These are those that we denominate as structure, and whose study we are undertaking in this series of fascicles.

The one who says structure says traits and invariants, in agreement with some principles that regulate the acts which are to be carried out.

*First chapter.* The first historical reference to topology in Lacan's teaching is encountered in his first Rome discourse, in 1953, with respect to the structure of language. On this occasion, Lacan utilizes the torus taken as object, as illustration of this structure (E., pp. 320-321; "i").

Dr. Lacan devoted the first epoch of his teaching (1953-1961) to a symbolization of the imaginary by means of the alternation of the similar and the dissimilar (E., p. 821; "v"), to bring out the Symbolic from an imaginary position of being stuck in which psychoanalysis had fallen after Freud.<sup>□</sup>

We must relate this Imaginary to the instance of the Symbolic, which is to say, according to the structure of language. Since this period, Lacan proposes a graphic solution to the conjunction of the extremes of Freud's graph.

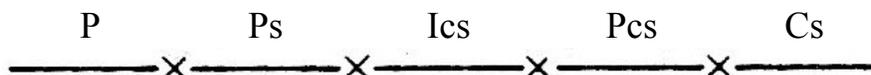


Fig. 6

5 We forward the reader to the study of B. Oglivie, *Lacan and the formation of the concept of subject*, in which, for once, the historical pretext does not serve in order to ignore structure, even when the author would be kept on the edge of our field with a Lacan reduced to Hegel. For us, the notion of "transcendental materialism" cannot be more than an indication, already that there is nothing of the transcendent in our practice of literal materiality.

□ The French *engluement* signifies a state of being glued in place, stuck in a sticky position.

{VIII}

Let's take the graph out of the lines of the graph designed by Freud in his 52<sup>nd</sup> letter. We replace the segments by points and the points by segments. We find the same terms. If we fold this graph of lines,

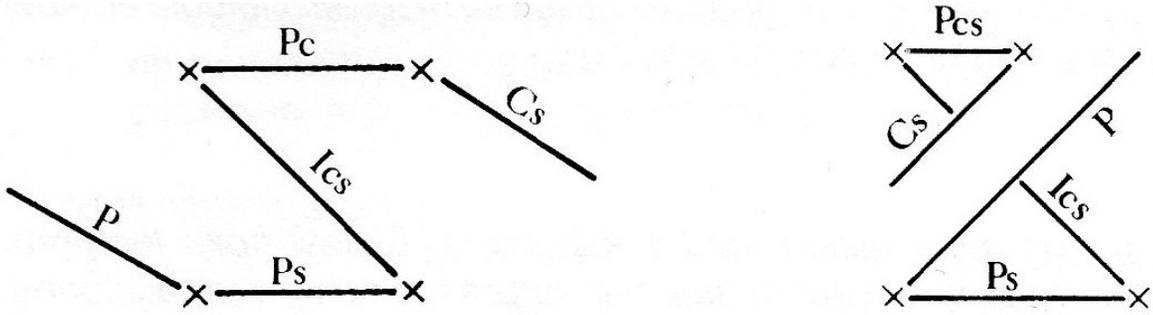
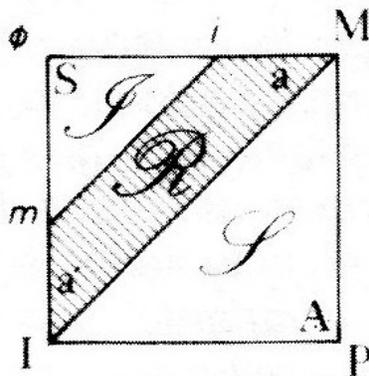
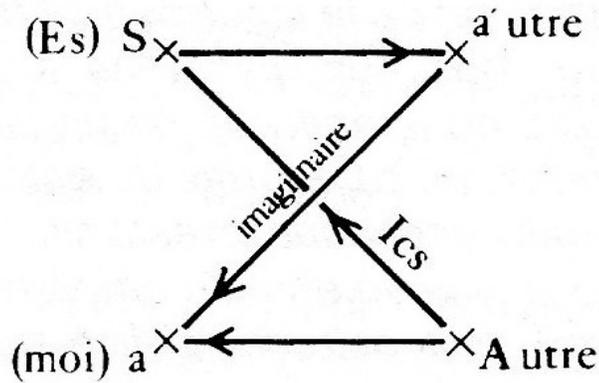


Fig. 7

we obtain the schema we call F, which allows us to find our way in the two schemas of Lacan that are contemporary with this first epoch of his teaching.



Schema R.  
(E., p. 553; «0»)



Schema L.  
(E., p. 53; «|»)

Fig. 8

We study the conjunction of these two schemas on the surface of the projective plane in fascicle #2 [this volume]. Thus Dr. Lacan poses, from the beginning of his teaching, the enigma that we have to relate to the structure of language, by formulating with respect to those elements the question of whether they are one or they are two; and Lacan thus prolongs the subversion of our reflexive tradition.

Let's take up again Freud's graph, transformed into its graph of lines. Thanks to our F schema, we can transfer the letters of Lacan's R schema onto it (one must point out that at the extremities of the graph of lines there are no marked points; at these positions, however, corresponds the letters m and M) as well as the orientations of the edges of the L schema.

*First*

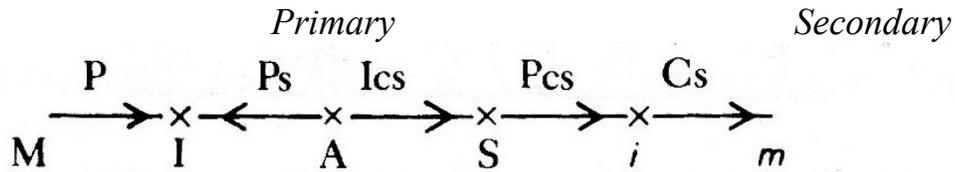


Fig. 9

The primary process, in which the pleasure principle dominates, is a process of thinking that rules in the unconscious (E., p. 650). It would be an error to believe that what is primary is first. So, for us there is {IX} a first process that dominates the perceptions separated from the unconscious by the perception-signs. The secondary process, ruled by the reality principle, dominates the conscious, separated from the unconscious by the preconscious.

In the same manner, we transfer the letters of Freud's schema to our F schema, with those of the R schema and the orientations of the L schema.

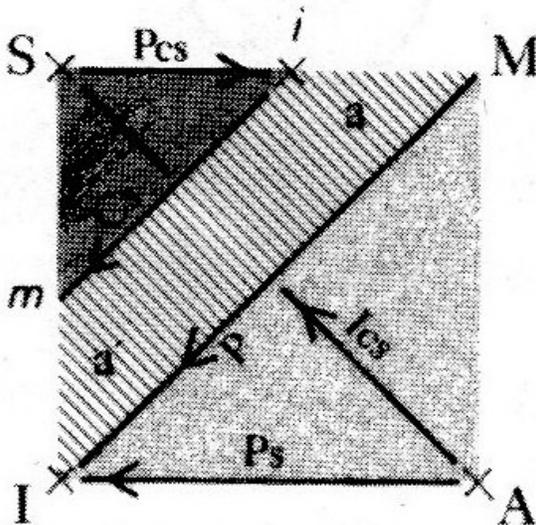


Fig. 10

In our F schema, the orientation of the edges by way of arrows come from the L schema and the threads of the zones corresponds to the R schema. We replace the letters *I*, *R*, *S* by three different colors. *S* on the side of the first process, *R* the imaginary row of reality, *I* on the side of the secondary process, and thus they cut the primary unconscious process in our schema into three.

Dr. Lacan continues this examination so as to present to his audience the articulation of his schemas by construction the graph of desire, in which we read the problem of the disjunction and intersection of two logical sets in Euler-Venn diagrams placed upon a sphere. Lacan will develop this

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logical presentation during the next stage of his teaching.



The quilting point<sup>x</sup> on top of the sphere

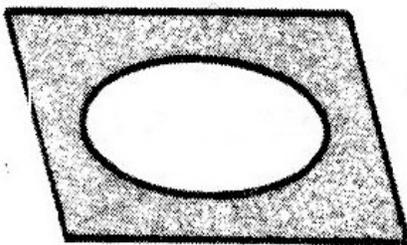
Euler-Venn Diagram<sup>6</sup>

Starting from the mirror phase, Dr. Lacan deals with the ideals of the person, relating them to the structural schema that we read in the optical schema (E., pp. 673, 674, 680). It is what we make with topology starting from the Imaginary in a mathematics, and yet in which the Imaginary conserves a function.

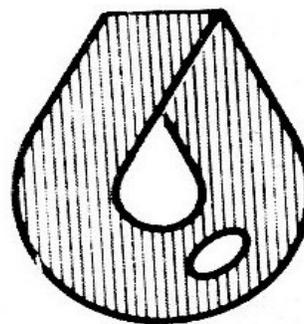
*Second chapter.* During the second period of his teaching (1961-1971), Dr. Lacan practices an imaginization of the Symbolic using the resources of the theory of topological surfaces.

{X}

It is in this period that he puts into correspondence the four objects of the drives with the four elementary topological surfaces.



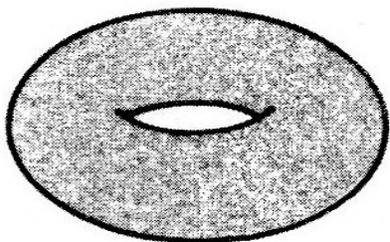
I Hole: the hole as rupture of surface



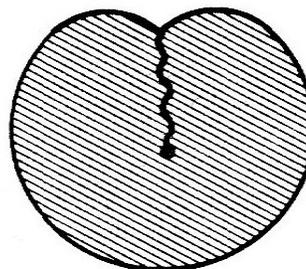
IS Hole: the Moebius Strip, here with a hole

<sup>x</sup> Although some translators prefer to write this Lacanian expression as “anchoring point,” I am sticking with “quilting point” to correspond to the cloth-making metaphors prevalent throughout this volume: *Fabric*. (-Marc's note)

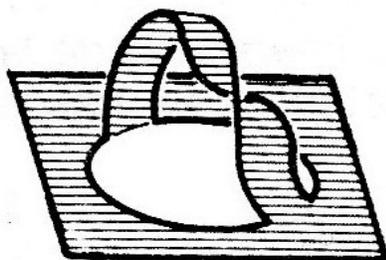
<sup>6</sup> See chapter IV of this volume.



S Hole: the torus (its hole is specific)



ISR Hole: the real projective plane (immersed in a cross-cap)



SI Hole (the edge of the moebian hole is an interior width)

### Relief elements of the topology of surfaces

Fig. 12

The Freudian moment—we should indicate it on each occasion as a double question—is formulated like this: “Is it one? Is it two?”\* At this stage, this moment reappears with the aspect of the articulation of non-orientable surfaces with orientable surfaces in Lacan's construction, which he calls a signifying involution, and by means of which he summarizes Freudian repetition (*Logic of the Phantasm*, 1967; *L'Étourdit*, 1971, pp. 26-27).<sup>7</sup> Our works coordinate this structure with the logical version, by replacing the Euler-Venn diagrams with the flattening of the knots which come from the third stage of Lacan's teaching.

Actually, in the second period Lacan's teaching reconsiders stage by stage the set of the construction of mathematical logic, in respect to three levels: the calculus of propositions, the language of predicates with the Kantorians [*Kanteurs*], and set theory.<sup>8</sup>

*Third chapter.* In the third topological chapter (1972-1981) of his elaboration of the analytic discourse, Dr. Lacan reformulates the totality of these questions in the field of the knot's existence, without a doubt because the preceding formulations manage to clearly show the threads of structure in failing to write it.

## {XI}

In order to avoid the pitfalls of representation, avoided before thanks to the projective plane, it

\* In the Spanish version, unlike the French, this is a play on words, also asking “S<sub>1</sub>? S<sub>2</sub>?,” referring to the unary and binary signifiers of Lacan. (-Marc's note)

<sup>7</sup> See chapter VII of this volume.

<sup>8</sup> *None*, Fascicle #0.

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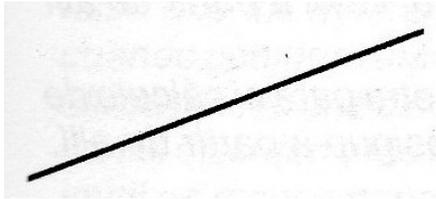
is not possible to construct it in the manner of dimension three;\* [so] the question of another writing is formulated in terms of knots.

The issue is, of course, to situate the Real in addition to the preceding instances, i.e.: the Imaginary and the Symbolic, and so no longer is it to situate the psychic reality said to be implicit in the knot of three (Seminar RSI, 1974-1975).

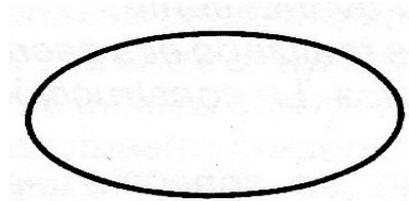
But topology is not a fantasmagoria of the Real, as some endeavour to say in order to imply that it is impossible; whereas, basically, it is difficult for them. As we have said already, topology does not claim to rid us of the fantasy but renders an account of it, in the manner of a writing, with knots.

It is true that this topology departs from the Imaginary— as it is thusly reapproached by those whom we alluded to before, this time to disqualify it, in account of this [*Kant à ce*] supposed Symbolic — whereas it produces a profound disturbance of the set because of the Symbolic.

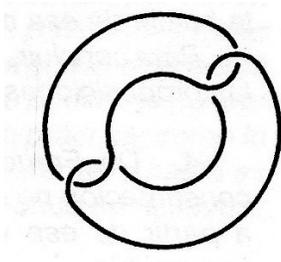
For our part, in order to read this state of completion, we consider in a first approach the edge knots of pierced surfaces, defined by the surfaces' extensions. Their existence is uniquely extrinsic.



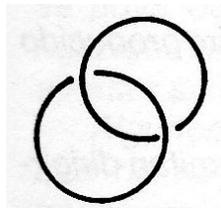
R Hole: the straight infinite  
(the hole is around)



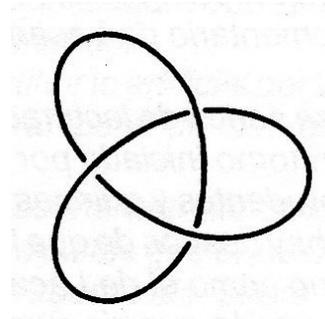
SR Hole: the ring  
(with its hole)



The false hole



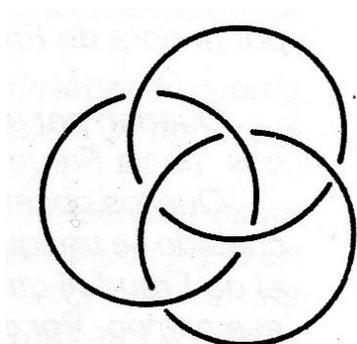
S Hole: enlacement



The trefoil knot

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\* Vappereau later asks the reader to consider dimension in reverse, starting from a given topological dimension without implying a counting up from dimensions that would precede it, as in ordinary geometrical thinking. By reminding the reader of this topological reversal of this geometrical concept, the mathematical style of writing “dimension three” (as in, “dimension  $n$ ”), is thus a preferable translation to the everyday conception, written as “three dimensional.” See “The Illusion of Topology,” pp. 14-16. (-Marc's note)



RSI Hole: the borromean knot

Prominent elements of the knot topology<sup>9</sup>

*Fig. 13*

It is remarkable that the knot is erased on the intrinsic register and that this presentation still conserves its trace (the genus of the knot). The theory of surfaces, disputed in the preceding chapter of Lacan's teaching {XII}, is for us a means of investigation in the space around the knot.

In our first fascicles we give the indications necessary for those who want to verify through calculus what we bring about by way of drawing in the study of knots (starting from fascicle #3).

For Dr. Lacan, one has to depart from an impossibility encountered in the preceding stages as a hole, that is to say, for him, the Real, in order to account for the imaginary function of the phallus that veils this hole. But in order not to relapse into this “damned” phallus in the philosophical manner, he must not prosper [from it] too easily. In his commentary on structure, these categories always reappear, in exactly the same way as we have said them; the Real; its impossible becomes existence; and the Symbolic: hole (insistence), approached each time in a closer and tighter way, from the imaginary consistency, of the failure to account for the sexual relation.

One must have recourse to another writing, in which this failure consists; the fact which shows at what point this structure cannot be written (“Introduction to the publication of the RSI Seminar,” p. 88, and “On the lecture of December 17”); a structure whose failure to be written explains its very impossibility. It provokes the modification of the set of psychoanalysis' concepts in a roundabout way, since each one, like any one of the elements of clinical material, carries from this the trace of that evanescent structure.

To conclude, we have already realized this other writing by the calculus of logical propositions. Construction proceeds from this.

4. From Freud to Lacan, a certain journey is consummated. The term consummation does not signify a cessation of the practice, but its formalization starting from this change of direction in which the situation of psychoanalysis has become irreversible.

From now on it inscribes itself retroactively in the double twist produced by the work of Freud and the commentary of Lacan.

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<sup>9</sup> See Fascicles #3,4, and 5.

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A series of lectures still remains to be established that will allow us to direct ourselves “towards Freud,” in this return initiated by Lacan.

May the prudent observers and those who have preferred to remain to one side be reassured: there are no risks that there would be an other phenomenon like that of Freud or an other like that of Lacan. This is no longer necessary in this field. Anyway, who would want to fulfill this function which is now obsolete, unless he were to accept slipping down the slope of imitation, and without results?<sup>□</sup> Today, the difficulties are of another order.

5. The sewing of the subject's place is hereafter finished. It seals the hiatus whose aperture first Freud and later Lacan preserved, and so there is no reason to preserve it in a different manner. The double loop that Freud and Lacan speak is completed; what comes is the arrival of Canrobet (“Introduction to Scilicet...,” p. 11), it couldn't possibly be a common seal of approval. Our results belong to a new style of {XIII} reading, whose mathematical reach consists in going beyond the interests of a corporation. Our seriality is not one of filiation but of transmission and as a result of invention.

An out-of-phasesness between the order of a term and its index always constitutes the principal difficulty in the study of a mathematical series. The terms of a series are adjusted by the set of numbers that are called natural. This set begins with the number 0.

The number 1 is not first; there is always an element before the one. In such a way, we will publish a number 0 related to logic, in order to situate us in the order of the series.

Our fascicles are six:

- #0: None [Nons] (the topology of the subject)
- #1: Swarm [Essaim] (the fundamental group of the knot)
- #2: Fabric [Étoffe] (the topological surfaces)
- #3: Knot [Nœud] (the borromean knot)
- #4: Symptom [Symptôme] (knots of four and the continuation)
- #5: Sinthome [Sinthome] (the generalized borromean knot)\*

In our era there is a great difficulty that can be summed up as such: it is false that, even in the Freudian field, nobody wants topology, and it is false that the same people accept it. This situation is described by Lacan when he compares psychoanalysis with architecture (E., p. 698; “t”). There he points to a discordance between on the one hand a logical power that relates it with discourse and on the other hand the aims of utility that all power claims to have. Although it is useless it is nevertheless essential in our presentation of the practice, as we were explaining before. Usefulness is not a pertinent notion, and it is even dangerous in this field in which lost time produces its findings.

When the classical logic of thought is subverted, the one who is deprived of this imagination runs the risk of believing that he is only dealing with irrationality. Everything happens as if one were

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□ There is a play here in the French with *pente au mime*, which sounds like *pantomime*, a pantomime being just a show (no actual results). Thanks to Anna Muir for this observation. (- Marc's note)

\* In the revised series introduction to *Nœud*, the parenthetical description of *Nœud* becomes “a theory of the knot for psychoanalysis” and no longer specifically “the borromean knot;” *Pas* replaces *Symptôme*, whose parenthetical description reads “chains of four rings and more;” and *Sinthome* is replaced with *Si étroit, comme treize et trois...pas large*, still described as “the generalized borromean knot.” (- Marc's note)

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taking away the floatation device from someone learning to swim.

Some would like to substitute the artificial with the natural, without taking into account the fact that there is nothing natural for the being which is subjected to a double narcissism.

In this manner, the first psychoanalysts were divided with respect to these questions, and the literate men that were their contemporaries and that for the larger part ignored everything about the articulated logic of signifiers, about the possibility of articulation itself and even more, about the impossibilities that are inferred from it—on every occasion they fell into these pitfalls.

The same occurs with post-Freudian psychoanalysts, and with neo-Lacanianians as well.

Letting go of the received categories of logic would be for them equivalent to losing their footing. A first step in the direction of truth consists in modifying these categories, and the study of the effects of this very modification provides us with the help that we ask for. Lacan understood this necessity when he took up again some investigations inaugurated by others (linguistic, logical, mathematical, ethnological) for psychoanalysis. He endowed psychoanalysis with {XIV} a topology of the subject that liberates it from the classical categories and cannot be considered as an auxiliary discipline.

Those of his pupils that adopted the “feeble” thesis of the auxiliary character of topology did not utilize topology for a long time, and they all confessed that they didn't find it useful either in their practice or in the account they gave of it. Nowadays we are few in number, those of us who hold the use and practice of a topology which we hold as important because of a stronger thesis.

It is false to say that “topology is psychoanalysis” and it is false to say that “topology is not psychoanalysis.”

Since 1983 we have at hand a construction of mathematical logic that modifies classical logic thanks to a topological operator which is said to be of the inside. It is the topology of the subject. Our works consist in following the consequences of this structure when we find it in the discourse, which does not fail to happen in many opportunities. It is this structure that we encounter in the approach of the topological surfaces and that is the only one that organizes the topology of the knot in the necessary manner. Indeed, enlacements are encountered there that are and are not. This begins by four.

It is for arriving at this degree of simple structure that we put within reach of the reader the specifications that are available to us when they are necessary.

Dr. Lacan indicated the necessary references, without developing them in an integral manner, leaving to his audience the work of specifying and refererring themselves to the references. This doesn't mean that he didn't do this for himself, as many can thusly testify. He was happy to use them in multiple relevant ways, and he did this carefully enough so that one would be able to find that which is only announced and used in translation. Much work of explication is yet to come in the tackled domains, and already there are some outlines of it. Our series is proposing to be more than an outline.

7. The issue is to make use of these precisions in the practice for the work of the construction of the psychoanalyst, that of the object a. This task continues, and it is none other than that of Canrobot; a psychoanalytic clinic will come out of it, produced by those interested themselves.

We will also give indications for those who search for reasons to be formed by this topology without yet being involved in it. We will limit ourselves to the ideas that should be assimilated with the greatest facility, and we will save the novelties of discovery for our reading. This reading cannot be

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intelligible without the practice of the topological matheme, to which we refer to constantly.

Others can extract other results out of this topology . Additionally, we have the testimony of those who are devoting themselves to topology for a moment, and their work cannot but refer to it.

{XV}

We construct this topology of the subject into an elaboration that involves the subject, to the extent that “conscience without science is no more than complicity with ignorance.”

The interest of our series of manuals also has to do with the connection with current mathematics, a restriction that we have imposed on ourselves. We give the classical algebraic components, which is to say elementals (Bourbaki) of the topology of the subject, and [for] those who are in progress, meaning that our field (P. Soury) is in the process of making itself, these [algebraic components being] necessary for the reading of Freud and Lacan.

We take the elaboration of the topology of the subject up to the point where it is ready to be converted into a mathematical theory; we do not make, unfortunately for those who condemn it, exclusively mathematical work. It will be the mathematicians' task to reformulate it in their discourse in order to discuss it and to discover its consequences in their discipline.

8. We define topology in extension in the manner in which Lietzmann speaks of explicative topology (*Anschauliche, visual*) [5], but we grant a much greater role to the logic, since it forms part of our topology of the subject in an eminent way, and we provide special attention to the drawings that we establish as mathematical formulas.

With respect to topology, we are habitually met with three different attitudes.

In the first place, anyone can ignore what it is about. Ignorance continues being the customary situation and specialists are responsible for this state of things. To be convinced of this, it is just enough to point out that, on the French domain, by intervention of the academies, the teachers employ topological terminology to designate some of the activities that they propose to their students starting the second year of pre-school. So, then, there is nothing very inaccessible in the approach of topology.

Next there are two situations that are linked among themselves, one of those we will qualify as studious timidity, necessary but insufficient on its own; the other, we will call effective practice of topology, which at some point needs the first. The fact that both attitudes are encountered separately has to do with a particularity of style in mathematics, and with the structure of the discourse that is divided into general topology and topology (algebraic, differential, semi-linear, combinatorial, geometric...). Here there is the same articulation between these two domains, that of general topology and that of topology properly speaking, as between mathematical logic and mathematics. Let's describe this.

The taking into consideration of topological structures, in any domain, is made by means of an investigation that consists in constructing invariant features in the course of continual transformations.

{XVI}

Thus, in the practice of topology, we bump up against the necessity of defining continuity. This definition constitutes the object of general topology, called set topology.<sup>10</sup>

It is true: topology supposes and presupposes the sound definitions of general topology, but in practice the elaboration is carried out knowing to give space to these definitions without returning to them in each case. There is a principle of abbreviation that we can situate in the recourse to a language, that of the categories.<sup>11</sup>

On the contrary, the fact that some novices are stuck in general topology makes them avoid the effective practice of structure to the benefit of works of another order. If they do not pass the barrier that separates those two aspects of topology, they see themselves reduced to eternally refining their definitions without ever encountering convincing results because formalism becomes weighty in this path without exit. For them the issue then becomes to study families of open, closed, neighboring, and filtered sets, in which very few see any interest other than the anecdotal in a domain so rich in nuances. Our topological learners fall into a relativism that is disreputable for psychoanalysis.

In addition we must indicate that there are mathematicians, and not the least of them, who refute the impractical aspect of these general definitions for those who interrogate the structure of a particular domain; this is because general topology has remained historically directed towards classical functional analysis (which is about the analysis of real functions with real variables). There is idealism and transcendence in this classical and restrictive interrogation, when it comes to the mathematicians themselves, when these are fascinated by the structure of real numbers without a true strategy, because of not having integrated the results of mathematical logic owed to K. Gödel and P.-J. Cohen.

Let us point out that in depicting the attitudes regarding topology we do not even come to speak about, in any obvious way, the unreliable, presumably topological, activity of some. It seems to us that our contemporaries call the supporters of this fantastical topology “Lacanian.” We do not want to fall into giving up, condemned to such sorry luck, the teaching of Lacan before claiming responsibility for being his disciples. The intuitions of each one of them holds our most profound respect; the main issue depends on the work's presentation.

In order to resolve the difficulty encountered in the apprenticeship of topology, without evading its profile, we want to beckon the attention of the reader over to a particularity of style within mathematics.

We call the *principle of abbreviation* this condensation that does not come under the jurisdiction of any transcendence. According to this principle, a work that is said to be of topology, to take the example that concerns us, makes understandable and supposes, from its title or in that of the series in which it is published, that the functions (morphisms of the category, transformations) of which it treats are continuous and that the objects that it studies are associated {XVII} with well known topological spaces, without it being necessary to redefine them every time.

In the same way that in mathematics we do not redefine the material's implication in every work. However, there are idealist mathematicians among us, some of whom are complaining of the fact that their colleagues pursue some works in spite of knowing little of logic and set theory, whereas naïve theory seems to suffice.

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10 *None*, Fascicle #0.

11 *Swarm*, Fascicle #1.

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It is as if the knowledge of the mechanic would have been ideally required of each motorist to be authorized to conduct an automobile. With this [requirement], they do nothing more than to negate the characteristic feature of the industrial method, the feature that motivated its success and its development. Indeed, in the industrial empire as in language, the user can make a just and relevant use of the object without knowing [much about it]. That is to say, without having participated and being available to participate in the conception and the fabrication of the object. Of course, the question arises of its maintenance, which was being resolved in a much better way during the era of Neolithic technicians.

It is true: in psychoanalysis things occur in another manner because from the beginning right up to the end, the analysand, he who addresses the psychoanalyst, is considered responsible for the unpredictable consequences of his saying, and topology is necessary in his education in order that the analysand can assume this [responsibility] with discernment. But this datum, under pretext of mathematics, should not go as far as foreclosing (coagulating, holophrasing) the style of mathematicians, as occurs in the case of some simple spirits. This means that even in mathematics, there is recourse to some condensation.

Of course within topology is supposed general topology or renovated set topology, but the strategy is different in the mathematical method, since it has to do with the structure of language, which is to say with a practice of the absence of metalanguage. It is this structure which is sealed in the industrial method.

We neither mock these premises nor do we pass them by, and we even encourage those who still stammer them out. Since we want to signal to them that it makes sense that they do not comprehend the use of our topology in practice, nor the practice of Lacan when he makes use of topology, because they themselves go about it in a manner that is not adequate. We want to show them why that is.

It is for this motive that we propose to take things by the two extremities at the same time, each one situated in its place.[..]

In some essays that, without waiting, put topology into practice by means of manifolds.

In a return to set topology, not in general but with the specific question and principle of the structures of propositional, predicative, and set logic. This, to get down to each one of those three chapters of mathematical logic in a topology in the general sense of the term. This way we attain the premises of the topology of the subject by means of the modification of negation in the style of modal logic in a topology.

### {XVIII}

Our mathematical work of reference for the practice of topology is that of E. E. Moïse [10]. Perhaps some will consider that in this book there are too many results. It is because a resistance exists that deflects all proof of certainty. The results are falsified by the mere fact of being recorded by the very ones who are interested in them. Two procedures allow us to crush this obstacle.

One consists in introducing a protocol of experience and recording that leaves room for functioning. The latter is, by the way, each time more supported by those who have been using it.

The other is summed up in a communication of results, with views to its discussion by anyone, even someone exterior to the field in question.

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These two solutions are opposed only when it comes to the ignorance of those who support the resistance with which the discontent of civilization is sustained, marvels and surprises always renewed in each case of transference. As to the rest, they can be undertaken jointly.

Plasencia, May 1988