

Results' Fascicule No. 3

KNOT

The Theory of the Knot Outlined by J. Lacan

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Notes in text marked TR (Translator's Notes) are at the end of the text and refer to the graphs.

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Presentation of the series of fascicules of results

1. In Freud's field, our fascicules of results take things seriously, they make a series. The series of our results of topology in extension are addressed to those that want to make their way in this field without becoming petrified by fright or shaped by indifference.

We borrow the expression "fascicules of results" from the Bourbaki team. The mathematicians in this group developed the construction of mathematics based on terms from set theory. In the instructions of their treatise that they divided into books, they specify the function of these fascicules:

"Results' fascicules will be appended to certain Books (either published or in preparation). These fascicules contain the essential definitions and results of the Books, but no demonstration."

Their attempt presents ours with a distinction that cannot lead to confusion: our fascicules will not be appended to any treatise of comparable girth.

In our construction of the object of psychoanalysis, based on the foundation of set theory, we have the work of Freud and the writings of Lacan, the latter writings are accompanied by his seminary teaching.

2. Psychoanalysis was invented by Freud when he discovered the unconscious. This invention was finished by Lacan through a critical commentary on the text of Freud, which puts him to the test of his own logic.

This practice is supported by a method, it produces a discourse.

The method is known to those who study texts. It received its letter patent of nobility with Champollion who had already used it successfully. The psychoanalytical method consists in comparing two versions of the same text since the analytical discourse rests on the hypothesis according to which our psychic apparatus is elaborated through a series of translations, transcriptions and transliterations.

We group these different acts under the term of translation, which is being studied here. To use this method, several versions of the text being studied must be available. Psychoanalysis is only applied to a speaking subject who himself supplies, in the same discourse, the different versions of the same text (É. pgs. 747-748)¹. What is dumbly called applied psychoanalysis is none other than the use of the psychoanalytical method applied in literary criticism, for example.

¹ The Letter É followed by a page number refers to the *Écrits* by Jacques Lacan, published in 1968.

The study of the problem that translation poses culminates in a practice of writing that Dr. Lacan encountered in the writing of the Japanese language. The reader may know that a Japanese person of letters writes his/her own language (kun-yomi reading) by using characters that were used to write an archaic state of the Chinese language (on-yomi reading) ² that he/she was not unfamiliar with.

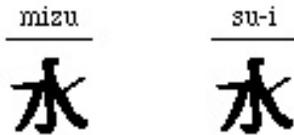


Fig. 1

This is how the element, which we write as water in our lands, is said and written. This practice of the letter calls for numerous remarks. To enter into the discussion, we shall content ourselves here with a few of them.

Recourse to this writing produces a permanent effect of translation.

This translation is made in the same culture for a Japanese person of letters.

This is felt at its most pure in written Japanese due to the characters which introduce another dimension in translation: the one produced by a fiction of three.

We find this instance of the letter in Lacan's *Écrits* when he presents the structure of the signifier with the men/ladies opposition couple.



Fig. 2

Hommes=Men Dames=Ladies

which is over two identical doors, signaling in our country those separate areas that are subject to the laws of urinary segregation (É. p 499).

There is some impertinence in illustrating the function of the letter in this manner yet it is this one which is present in our country, even in our public life and the articulation of which seems erased in alphabetical writing.

It is in the same mode that clinical elements can be heard in clinical practice.

The words of an analyzand must go as far as encountering the structure of the Freudian field to reach the dimension of discourse. This structure is topological because analytical discourse is inscribed in the epoch of logical-mathematical science of which topology aims at the foundation.

² Takatsuju Sasaki, "Mettre la psychanalyse en japonais" L'Ane No. pp. 8 and 9.

It is thus through a series of translations that there is passage from particularity of the case to the universality of that which is founded. This gesture does not claim to get us out of this phantasm (*fantasme*) but does claim to account for it.

This is not about an increasingly disembodied abstraction, as Husserl believed, in his *Foundations of Arithmetic*, with regard to the concept of cat, but of a literal materiality as Frege reminds him, where the foundation of concepts rests on the extension of particular cases to the dimension of the set. The concept of cat is not an abstract cat whose fur, whiskers and eyes, etc. have been removed but the collection of cats when it gives rise to a set according to specific conditions. We shall, thus, speak of concept with regard to this collection on the condition that one letter, one name can be assigned to it and we shall then say that it is a set. This assignment depends on textual constraints that are well known in set theory but less perceived in other areas.³ This is how the delicate issue of the proper name is posed.

The practice of psychoanalysis goes to interpretation due to the fact of translation by supporting itself with the drawings or mathemes of topology and by using the topology in use in mathematics. This topology does not lend itself to applied topology but carries out, as in the reading of Japanese, a bilingual speech.

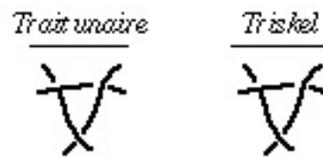


Fig. 3

Trait unaire = Unitary Trait

We could give many examples with regard to each concept in psychoanalysis. Whence the necessity for our elements of topology for what can be said of a Japanese person of letters who is unfamiliar with on-yomi reading (old Chinese), claiming not to need it to write in an univocal manner the Japanese language (kun-yomi reading)?

Everyday conversation makes use of the gaze and the voice, Freud's practice consists in its principle of separating the voice to the detriment of the gaze in psychoanalytical treatment itself (a major stage in psychoanalytical training (É. p. 698). This practice responds to that which is found there, the throes of transference where, in the interplay of passions, ignorance is hidden behind love, at times behind hate. But they must, as we have just said, be articulated to the entirety of the training which makes of this transference a formation of the unconscious.

Lacan's practice is inscribed in this configuration. He undertakes a return to Freud by making, in the case of clinical practice itself as well as with regard to each concept, a slow but radical reversal.

³ Nons, fascicule No. 0.

His practice of the structure thus consists of putting the voice aside, that's what Lacan did at the very end of his route, to condense attention on the gaze, especially with his drawings of topology. The moment of toppling of this reversal, according to the structure of the Freudian field, finds its practical realization in the short sessions. This stage - where this practice is reduced to a simple cut - is necessary.

Our route is not to remain stuck at any of the moments of the structure; it is to not neglect any of its moments. Our plan is to approach Lacan, approach Freud, in the extension of this double movement which remains impassable - practice will be broadened by it.

The practice of psychoanalysis does undoubtedly not aim to produce mathematics but requires that mathematics not go unrecognized. Training (*formation*) comes to an end for the analysand by the separation of the analyst from the analysand about whom the analysand owes it to himself to account for. Practice (clinical practice, structure and act) does not hold up if one dodges the dogmatic foundation of the translation, that is to say, the reading of the unconscious.

Analytical discourse moves forward based on this practice but it is already there for those in our generations. This was not the case for Freud, nor yet for Lacan, they did not have it available to them. Analytical discourse is the social tie which is formed, due to the fact of this practice, and which greets this practice with its results. From this, it can be seen that this cannot be done on one's own. It starts off with two, equipped with the works of Freud and the writings of Lacan.

These reasons lead us to consider topology in a preamble such as it is going to be said as an argument of discourse. This discourse, in-the-making, is presented according to several versions in Freud's body of work, several translations in the teaching of Lacan. We must make them reasoned by using the psychoanalytical method, the learning of which constitutes another stage of training. This method cannot be neglected in the accounts given of the trials (*épreuves*), as it cannot be neglected in the internal effects it produces.

3. Freud's work is divided into two topographies, separated by an intermediate moment (1914-1915) where the necessity is asserted of passing from the first to the second.

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

During this first period, Freud establishes the work of the unconscious in the three major works – *The Interpretation of Dreams*^{TR1}, *The Psychopathology of Everyday Life* and *Jokes and Their Relation to the Unconscious*.

2nd Topography. In his second topography, Freud questions the same structure that returns in the pitfalls to be avoided from dualism in theory. To that end, he introduces, as of 1914, with narcissism, his theory of the ego. The other that speaks through the stumbling of my speech is not symmetrical to me, just as my unity does not arise from the unity of my body. What makes one from these two? In the same way, Freud distinguishes the sexual drives that invest the object and the drives of the ego that are supposed to maintain them. He recognizes that these two things are the same thing. (*Introductory Lectures on Psychoanalysis*):

“It seems that in a series of cases this could also be a conflict between different sexual tendencies themselves.” (p.330, retranslation).”

and

“We lack any motive to assert a difference in kind, which is furthermore not very graspable, of the two groups of drives.” (pp. 389-390, retranslated)

but they are not the same:

“But it is in the end the same thing because two sexual tendencies are in conflict, one is always, so to speak, satisfying to the ego (*ichgerecht*) while the other challenges (*herausfordert*) the defense of the ego. This thus remains close to the conflict between the ego and sexuality.” (p. 330, retranslated)

“The two (groups of drives) are opposed for us only insofar as they are designations for the sources of energy of the individual, and the discussion, about whether they are, in the end, one or different in nature, and even if (they were) from (a single group) when were they separated from each other?” (p. 390, retranslated)

It's for this same reason that Freud introduced narcissism in 1914 since in narcissistic neuroses, the ego is invested sexually as an object, and that Freud thought he could elucidate this enigma by the study of these neuroses.

“We certainly know the development of the ego much less well than the development of the libido because only the study of narcissistic neuroses promises an examination of the structure of the ego.” (pp. 330-331, retranslated)

This difficulty of structure, recurring since the presentation of the unconscious up to the introduction of the death instinct in the doctrine is also present in the 1914 article where Freud distinguishes, in the most certain manner, the terms of ideal ego and ego ideal, but the fact that “nonetheless one does not manage to distinguish their use in this text *should* give rise to concern” (É, p. 672). An expression where some believe they are reading a reproach to the poor readers of Freud who do not distinguish these two uses. This is not at all so. If a reproach is to be heard in this sentence, it is only being addressed to those who are not concerned about this because we suppose they have read Freud's article. In fact, if they have not read it, they cannot distinguish these two uses in the text; if they have read it, did they perceive that it is impossible to distinguish them? Few have read it so consequently few are concerned about it.

In this intermediate moment, Freud tried in 1915 to write his *Metapsychology* in twelve articles of which only four plus one remain, that has just been found (1985). It was this failure that spurred him

to construct his second topography where he radicalizes his position by going as far as dealing with what his starting hypothesis resulted in, since it led him necessarily to subverting our conceptions of causality under the title of repetition compulsion.

Freud seeks rational support for this enigmatic fact in phylogenesis (*Introduction to Psychoanalysis*, p. 334). For that, he has already constructed the myth of the primitive horde (*Totem and Taboo*), in anthropology then. In biology (*Introduction to Psychoanalysis*, p. 390), he seeks support as far as evoking Weissman (*Beyond the Pleasure Principle*). As this structure presents itself in the material of analysis, he looks for the reason in philology with Abel (*Antithetical Meanings of Primitive Words*). The answer is logical, it is topological.

Lacan

Let us distinguish between historicity and structure. The temporal development of phenomena holds several surprises in store for us such as retroactions, reversals, interruptions, *retakes* [*reprises*] that the structure alone sheds light on.

We must indicate by what rational approach, in what reasonable context, Lacan was led to introduce his mirror stage [54].⁵ It was from perceiving the fundamental dependence of the subject on the - let us say social even familial - context, that the counter-blow of the radical insufficiency of the most precise account of this context must be borne. Better yet, we end up with an uncertain or seemingly simply paradoxical concept, of acquired innateness. From where one can see that our categories of that time lack something, that we lack the necessary categories in this situation. These are the ones that we call structure and of which we undertake the study in this series of fascicules.

Whoever says structure says traits or invariants, according to a few principles regulating the acts to be effectuated [carried out].

⁵ We refer the reader to the study by B. Ogilvie, *Lacan et la formation du concept du sujet*, where, for once, the historical pretext does not serve to neglect the structure, even if the author stops at the edge of our field with a Lacan who is taken back to Hegel. The notion of “transcendental materialism” can only be an indication for us, for there is nothing transcendent in our practice of literal materialism.

What is invariant is what is produced on the occasion of each utterance. We shall write it down in the terms of the signifying condensation used above insofar as the product of this signifying involution is written down by Lacan by the letter a:

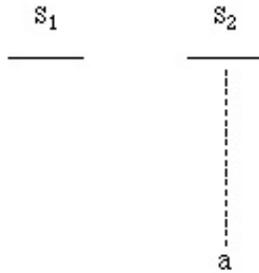


Fig. 6

This structure establishes, between structure and history, the reason discovered by Freud about which there is no question in the Rome discourse and which Lacan begins to go into in the “Instance of the Letter” and that he takes up again in “Position of the Unconscious” (É. pgs 835-836).

We thus schematize the psychical event in Freud’s sense, that is the rupture of semblance that provokes, according to Lacan, the trickling of lower case letters furrowing the signifier, the latter only resolving itself by the counting of elements, on the condition of not missing [lacking] a letter, in a ravishment of having found the name. We present it in all our works by the T-shaped graph below.

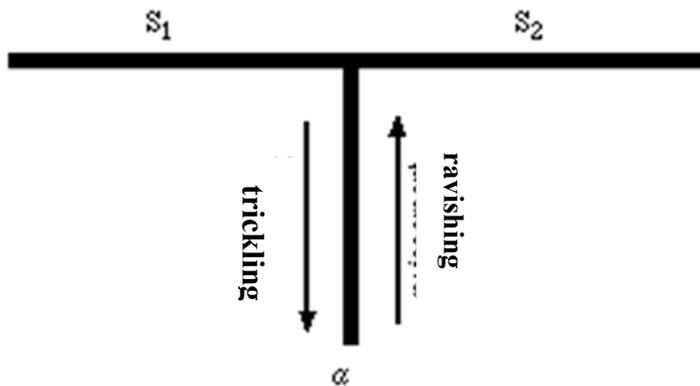


Fig. 7

We find this presentation at each stage of Lacan’s teaching.

Chapter One. The first historical reference to topology in the teaching of Lacan is found in his first Rome discourse, in 1953, about the structure of language. He uses, on this occasion, the torus taken as object to illustrate this structure (É. pgs 320-321).

Dr. Lacan devoted the first epoch of this teaching (1953-1961) to a symbolization of the Imaginary by the alternation of the similar [*semblable*] and the dissimilar [*dissemblable*] (É. p. 821), to raise the Symbolic out of an imaginary miring into which psychoanalysis had sunk after Freud.

We must relate this Imaginary to the agency of the Symbolic, that is to say, the structure of language. As of this period, Lacan proposed a graph solution to join the ends of Freud's graph.

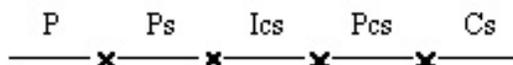


Fig. 8

Let us take the line graph drawn by Freud in his *Letter 52*. We replace the points by segments and the segments by points. The same terms are still there. By folding the lines of this graph,

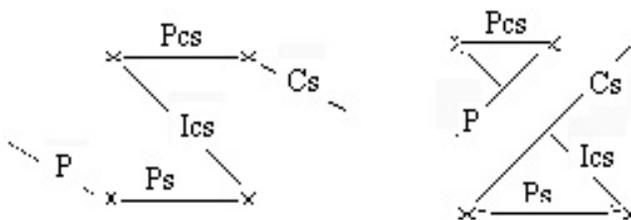


Fig. 9

we obtain the schema, said by us [*dit par nous*], schema F which makes it possible to find one's way in the two shemas of Lacan from the first period of this teaching,

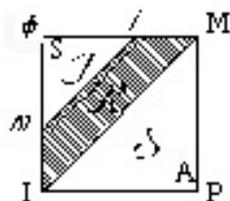


Schéma F
(É. p. 553)

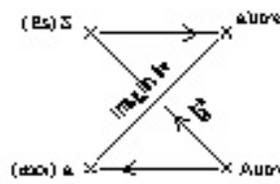


Schéma L
(É. p. 53)

Fig. 10

We were studying the conjunction of these two schemas at the surface of the projecting plane in Fascicule No. 2. Dr. Lacan thus poses, from the beginning of his teaching, the enigma that we must relate to the structure of language, by formulating with regard to these elements the question of knowing whether they are one or two, and thus extend the subversion of our reflexive tradition.

Let's go back to Freud's graph, transformed into a line graph. Due to our Schema F, we can locate the letters of Lacan's R schema on it (it should be noted that there is no point at the ends of the line graph: however, the letter m and M correspond to these places) and the directions of the edges of the Schema L.

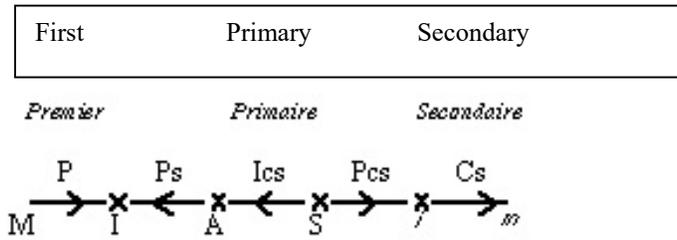
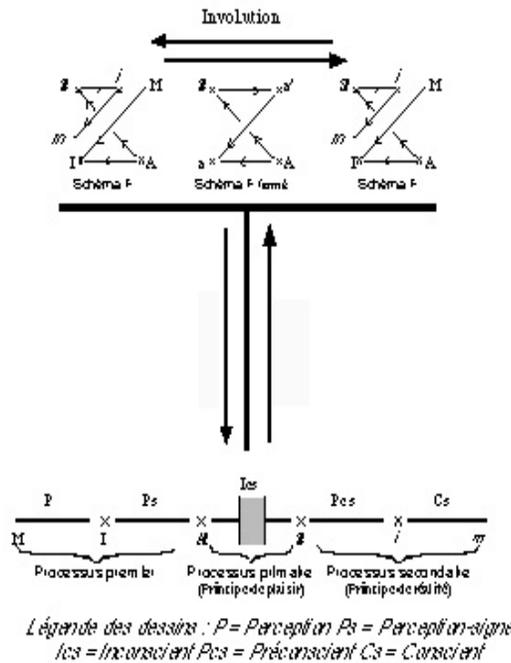


Fig. 11

The primary process, where the pleasure principle rules, is a thought process that reigns in the unconscious (É. p. 650). It would be an error to believe that what is primary is first. There is therefore for us a first process that dominates perceptions separated from the unconscious by sign-perceptions. The secondary process, ruled by the reality principle, dominates the conscious separated from the unconscious by the pre-conscious.

We place these results on the structure graph.



L'involution signifiante
du schéma de Freud

Fig. 12

Signifying Involution of Freud's Schema

We also place the letters of Freud's schema on our F schema with those of the R schema and the orientations of the L schema.

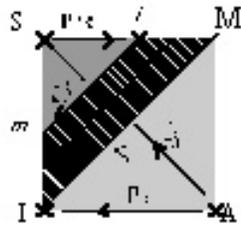
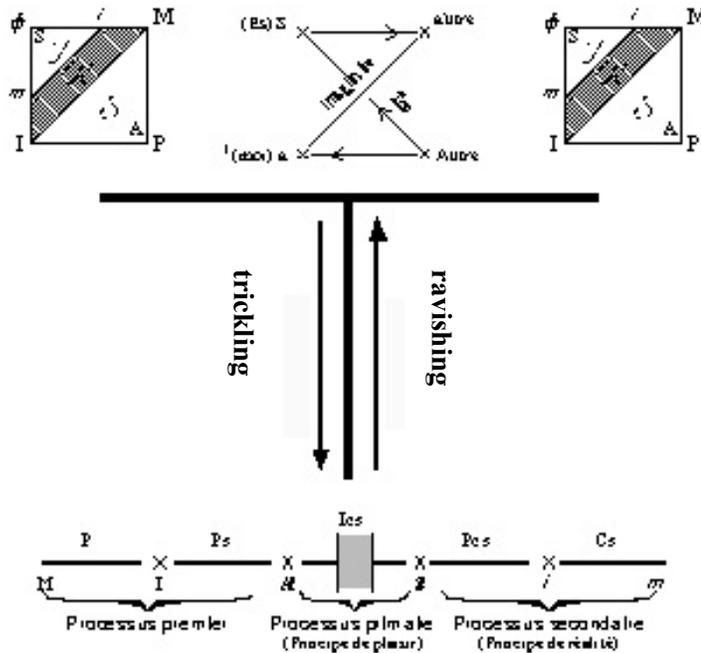


Fig. 13

On our F schema, the orientation of the edges by the arrows comes from the Schema L and the shading of the zones comes from the R schema. We replace the letters *I*, *R*, and *S* by three different colors – *S* next to the primary process, *R* next to the imaginary grid of reality, and *I* next to secondary process which divides the primary Unc. process into three in our shema.

This remark allows us to read Lacan’s R and L schemas placed in our graphical presentation of the structure.



L’involution signifiante

entre les schémas de Lacan et le schéma de Freud

Fig. 14

Signifying Involution between Lacan’s schemas and Freud’s schema

Dr. Lacan extends this questioning in order to present to his audience the articulation of his shemas by constructing a graph of desire, which is the most developed version of our T-form graph of structure that provides reason to the links between structure and history, but where we read the problem of disjunction and the intersection of two logical sets in Euler-Venn diagrams placed on a sphere. Dr. Lacan will develop further this logical presentation during the following stage of his teaching.

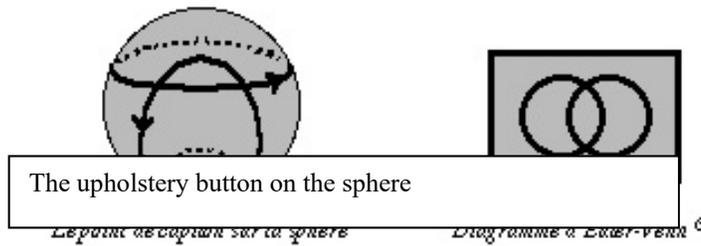


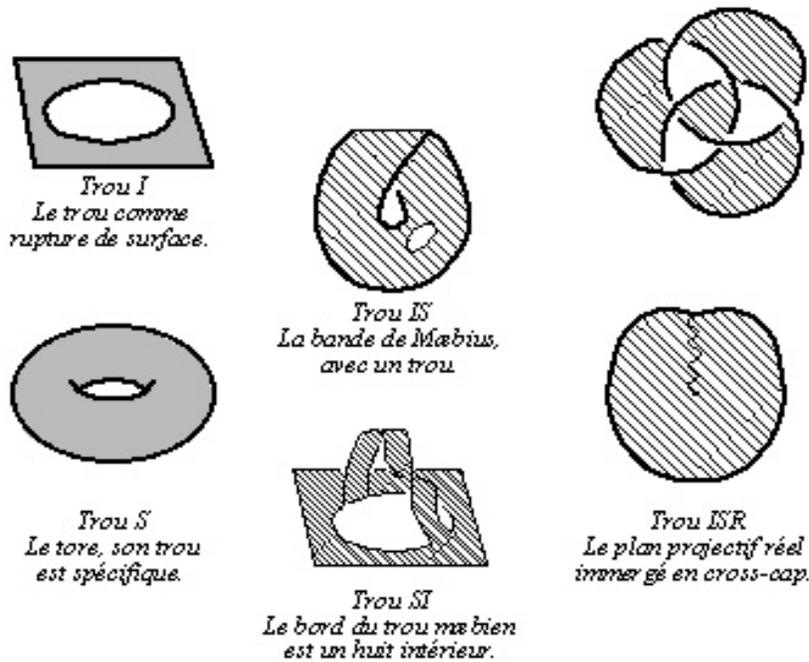
Fig. 15

6

As of the mirror stage, Dr. Lacan deals with the ideals of the person by relating them to the structural schema that we read in the optical schema (É. pgs. 673, 674 and 680). This is what we do with topology as of the Imaginary in a mathematics. But where the Imaginary retains a function.

Chapter Two. During the second stage of his teaching (1961-1971), Dr. Lacan practices an imaginari- zation of the Symbolic by using the theory of topological surfaces.

It is during this period that he has the four objects of the drive correspond to the four elementary topological surfaces.^{TR2}



Éléments remarquables de la topologie des surfaces

Fig. 16

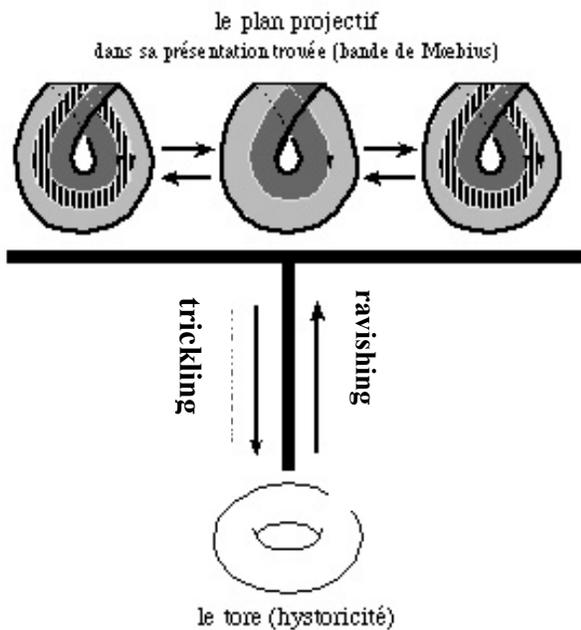
Notable elements of surface topology

⁶ Étoffe, fascicule No. 2, Chapter IV

Freud’s moment – we must indicate it as a double question each time – is formulated thus: “Is it one? Is it two?” This moment returns at this stage through the aspect of the articulation of non-orientable surfaces to orientable surfaces in the construction by Lacan, said by him, [*dit par lui*] signifying involution by which he summarizes Freudian repetition (“*Logic of the phantasm*”, 1967: *L’Étourdit*, pp 26-27, 1971)⁷.

We can place these elements of the theory of surfaces over our simplified presentation of the graph.

The projecting plane presented with holes (Moebius strip)



L’involution signifiante
entre les surfaces non-orientables et les surfaces orientables Fig. 17

The torus (hystoricité)
Signifying involution between non-orientable surfaces and orientable surfaces

Our work coordinates this structure to the logical version by replacing the Euler-Venn diagrams by the flattening of the knots which come from the third stage of Lacan’s teaching.

Indeed, in the second period, he reconsiders stage by stage all the set of the construction of mathematical logic by respecting the three stages of **propositional** calculus, the language of predicates with the Kantorians [Kanteurs] and set theory.⁸

Chapter Three: In the third chapter on topology (1972-1981) of his elaboration of analytical discourse, Dr. Lacan reformulates the set of these questions in the field of existence of the knot.

⁷ Étoffe, fascicule No. 2, Chapter VII
⁸ Nons, fascicule No. 0.

The preceding formulations *do* succeed in showing the pattern of the structure by failing to write it.

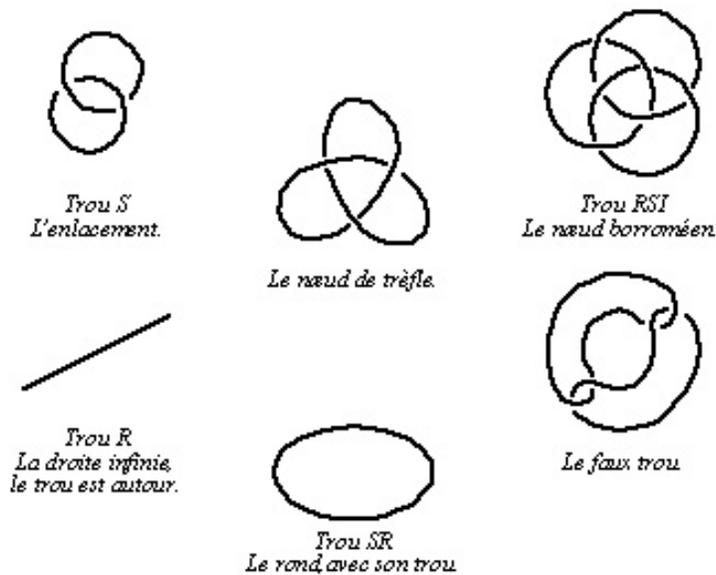
To avoid the pitfalls of representation, earlier avoided due to the projective plane, it cannot be constructed in three dimensions; the question of another writing is formulated through knots.

This is about, of course, situating the Real, in addition to the preceding instances that are the Imaginary and the Symbolic, and no longer psychic reality which is said implicitly in the three-loop knot (RSI Seminar, 1974-1975).

But topology is not a fantasmagoria of the Real, as some people would say to make themselves heard in this way that the Real is impossible, whereas it is simply difficult for them. Topology does not claim, as we have already said, to get us out of the phantasm but to account for it, in the manner of a writing, with knots.

This topology certainly starts from the Imaginary, as the same people reproach him for disqualifying it this time, with regard to this Kant [TR3: quant à ce soi-disant: with regard to the so-called Symbolic-TR\$] of what one says is the Symbolic, whereas this topology produces an overturning of the set of the fact of the Symbolic.

For our part, to read this state of accomplishment, we first consider the edge knots of the surfaces with holes, defined by embeddings of surfaces; they only exist extrinsically.^{TR4}



Éléments remarquables de la topologie du nœud⁹ Fig. 18

Notable elements of knot topology

9

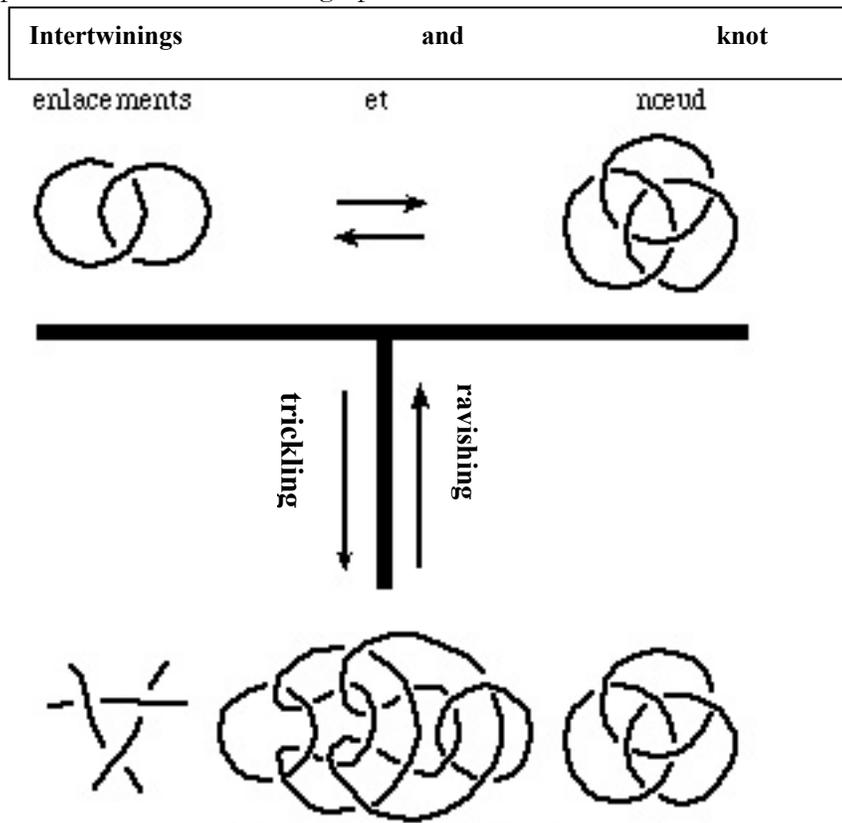
⁹ Fascicules of Results Nos. 3, 4 and 5.

It is notable that knots are erased in the intrinsic but that this presentation conserves the trace of the knot (type of knot).

The theory of surfaces, the argument of the preceding chapter of Lacan's teaching, is for us a means of investigation in the space surrounding the knot.

We provide in our first fascicules the indications necessary to those who would like to verify through calculation what we are carrying out through drawing in the study of knots (as of Fascicule 3).

Let's put these elements in our graph:



L'involution signifiante
entre les non-noeuds (2 ou 4) et le noeud Fig. 19

Signifying Involution between the non-knots (2 or 4) and the knot

For Dr. Lacan, it's about starting from an impossibility encountered in the preceding stages as a hole, that is, for him the Real, in order to account for the imaginary function of the phallus that veils this hole. But to not fall into the damned phallus again in a philosophical manner, he must succeed in doing so too easily. In his commentary of structure, these categories come up always as we have said them, the Real: its impossible becomes existence; and the Symbolic: hole (insistence), in an increasingly precise tightening, from imaginary consistence, of the failure to account for the sexual relation.

He must gather his thoughts about it by another writing, what this failure consists of. That says in which manner this structure cannot be written [*Introduction to the publication of the RSI seminar*, p. 88 , and *A la lecture du 17 décembre*]. Structure whose failure to write it provides reason for its very impossibility. The set of concepts of psychoanalysis finds itself modified by a counter blow [*contre coup*] since each

one, as any one of the elements of clinical material, carries from there the trace of this evanescent structure.

To conclude, we have already done this other writing [*écriture autre*] in calculating the propositions of logic. The next part of the construction is accomplished from there.

4. From Freud to Lacan, a certain path is accomplished. The term achievement does not mean cessation of practice but its formalization from this turn where the situation of psychoanalysis has become irreversible.

From now on, psychoanalysis is retroactively inscribed in this double turn produced by the works of Freud and the commentary of Lacan.

There remains to be established series of readings that allow us to direct ourselves “toward Freud”, in this return begun by Lacan.

May prudent observers and those who have preferred to remain on the sidelines be reassured. There is no risk that there will be another phenomenon like Freud’s or an other phenomena like Lacan’s. This is no longer necessary in this field. Who would want to ensure this function that has now past, unless one lets oneself slide into mime [TR5.: *la pente au mime*: pantomime] and to do so without results? Today, the difficulties are of another order.

5. The seam of the place of the subject is now accomplished. It obturates the void [*béance*] of which Freud and then Lacan preserved the opening and there is no place to preserve it in another manner. The double loop that Freud and Lacan speak, is past, there comes the coming of Canrobert (*Introduction de Scilicet...*p.11), this cannot be about a label of usage. Our results participate in a new style of reading, whose mathematical scope is to go beyond the interests of a corporation. Our seriality is not about filiation but about transmission and invention consequently.

A gap between the rank of a term and its index always constitutes the major difficulty in the study of a mathematical series. The terms of a series are indexed by the set of numbers that one calls natural. This set begins with the number 0.

The number 1 is not first. There is always an element before the one. Thus we shall give ourselves a fascicule number 0, in order to situate ourselves in what comes next in this series.

Our fascicules number six:

No. 0 – **Noms** (Topology of the subject)

No. 1 – **Essaim** (the fundamental group of the knot)

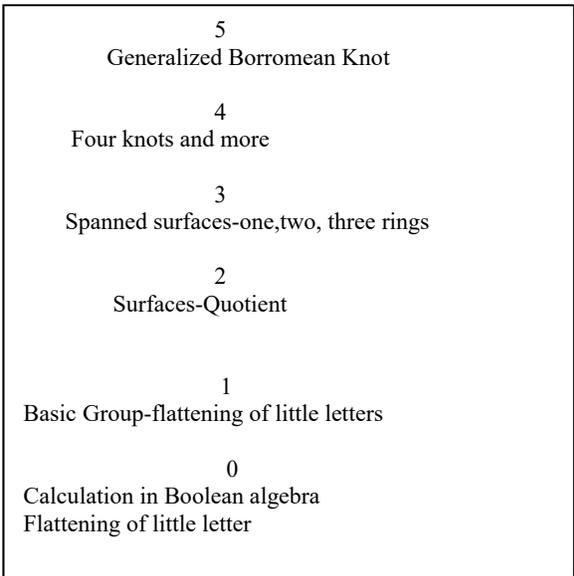
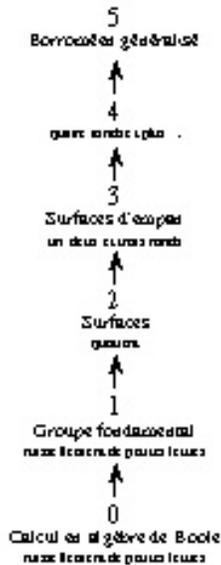
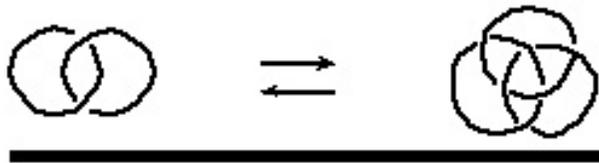
No. 2 – **Étoffe** (intrinsic topological surfaces)

No. 3 – **Noeud** (a theory of the knot for psychoanalysis)

No. 4 – **Pas** (chains of four rings and more)

No. 5 – **Si étroit, comme treize et trois....pas large** (the generalized Borromean knot)

Our fascicules themselves respond to this structure from having been provoked by a rupture of semblance, they are from a trickling of lower case letters in the first number a reading a counting that follow the nodal [knot] structure and produce a ravishing oriented by names. [check out with Vap]



L'involutions signifiante
entre les fascicules de résultats

Fig. 20

Signifying involution
Between the fascicules of results

6. A major difficulty for our times can be summarized thus: it is false that anybody, even in the Freudian field, does not want topology and it is false that the same people accept it. This situation is described by Lacan when he compares psychoanalysis to architecture (*Écrits* pg. 698). In it, he finds in it a discord between a logical power that relates the discord to discourse and the useful ends which all power claims for itself. By being useless, it is nevertheless not less major in our presentation of the practice as we explained above. Utility is not a pertinent notion, it is even dangerous in this field where lost time produces small discoveries.

When one subverts the classical logic of thought, he who one deprives of this imagination risks believing that irrationality is the only matter to be dealt with. Everything happens as if one were removing the cork belt from a beginning swimmer.

Some people would like to substitute the natural for the artificial without taking into account that there is nothing natural for a being who is subject to a double narcissism.

Thus the first psychoanalysts were divided on these issues and the erudite persons who were their contemporaries and who knew nothing, for the most part, about the articulated logic of signifiers, of the very possibility of an articulation and even more of the impossibilities that are deduced therefrom, fell into these traps at every instant. Thus it was for the post-Freudian psychoanalysts as well as for the neo-Lacanian.

To drop the received categories of logic would have been equivalent for them to losing their footing. A first step toward truth consists in modifying these categories and the study of the effects of this modification itself supplies the help that we are seeking. Lacan understood this necessity by taking up once again for the account of psychoanalysis, research inaugurated by others (linguists, logicians, mathematicians and ethnologists). He provided psychoanalysis with a topology of the subject that freed it from classical categories and that must not be viewed as an auxiliary discipline.

Those of his students that adopted the “weak” thesis of the auxiliary nature of topology did not make use of it for long and have all admitted to not finding any use for it in their practices nor in accounting for it. Today few of us make use of and practice a topology to which we adhere due to 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 had available to us a mathematical logic that modifies classical logic due to a topological operator said from the inside. That is the topology of the subject. Our work consists in following the consequences of this structure when we encounter it in discourse, which does not fail to happen in all [spoken] remarks. It is this structure that we find in the approach of topological surfaces and it alone which organizes in a necessary manner the topology of the knot. Indeed, there are intertwinings found there, they are there and they are not there. This begins with four.

It is to attain this degree of simple structure that we place within the reach of our readers the specifics that are at our disposal, when they are necessary.

Dr. Lacan indicated the necessary references, without developing them fully, leaving it to his listeners to refer to them and specify them. It is not that he did not do this for himself as many can attest to. He used them always in multiple and pertinent ways with enough care so that if his indications are followed, one can find what is only announced and used in the translation. Much explanatory work in the domains he approached is to come; there are already some outlines of this work. Our series proposes to be more than an outline.

7. It involves using these specifics in practice for the work of construction of psychoanalysis, the one of the object a . This task is being pursued, it is none other than the task of Canrobert: clinical psychoanalysis will come out of it, produced by those who are interested in it.

We also provide indications for those who are seeking reasons for training themselves with this topology without having yet committed themselves to it. We shall restrict ourselves to the ideas that should be the most easily received, keeping the novelties of the discovery for our reading. This reading cannot be intelligible without the practice of the topological matheme, to which we refer constantly.

From this topology, others can extract other results. Furthermore, we have the attestation of those who devote themselves to this for a moment, that their work cannot but return there.

We are building this topology of the subject in an elaboration that has the subject participate insofar as “a conscience without science, is only ignorant complicity.”

The interest of our series also arises from the connection with current mathematics, a constraint which is self-imposed. We provide the classic algebraic components, that is to say, the elementary ones (Bourbaki), of the topology of the subject and those that are in progress, that is, in the manner that it is being done in our field (P. Soury), necessary for the reading of Freud and Lacan.

We carry the elaboration of the topology of the subject up to the point where it is ready to become mathematical theory, we do not, unfortunately for those who reprove it, do exclusively mathematical work. It will be up to the mathematicians to reformulate in their discourse in order to discuss and discover the consequences in their discipline.

8. We define topology in extension as Lietzmann talks about explicative topology [W. Lietzmann, *Anschauliche, visual*, Verlag, R. Oldenbourg, Munich 1955], but we accord more room to logic since it is part of our topology of the subject in an eminent manner, and we accord special attention to drawings which we establish as mathematical formulas.

Currently, we encounter three different attitudes with respect to topology.

First, anyone can not know what it is about. Ignorance remains the current situation and this state of affairs is the responsibility of specialists. To persuade oneself of this, it is sufficient to note that, in the French era, through schools, schoolteachers use the term topology to designate certain activities that they propose to their students beginning in the second grade.. There is therefore nothing that is inaccessible in approaching topology.

Then, there are two situations which are inter-related. The first we qualify as studious timidity such as is necessary but insufficient in and of itself while the second we qualify as effective practice of topology that necessitates the first at some moment. That these two attitudes are encountered separately arise from the particularity of style in mathematics, and from the structure of discourse which is divided into general topology and topology (algebraic, differential, semi-linear, combinatory, geometric...). There is here the same articulation between these two domains, of general topology and topology properly speaking, that there is between mathematical logic and mathematics. Let us describe it.

The taking into account of topological structures in any domain is done through an investigation that consists of constructing non-variable traits during continuous transformation.

Thus, in the practice of topology, we encounter the necessity of defining continuity. This definition is the object of general topology, called set theory topology¹⁰.

Of course, topology supposes and presupposes good definitions of general topology but in practice the elaboration is pursued in knowing how to make room for these definitions without having to return to them in each case. There is a principle of abbreviation that we can situate in the recourse to a language, the language of categories.¹¹

Inversely, the fact that certain beginners spin their wheels in general topology eludes the effective practice of the structure to the benefit of work of another order. If they do not pass the barrier that separates these two aspects of topology, they are reduced to fine tuning definitions eternally without finding any probative results, so much does formalism become heavy on this path without end. For them, it thus becomes a question of studying the open, closed, neighboring, and filter families of which few see an interest other than anecdotal so rich is this domain in nuance. Our topologist apprentices fall into a relativism that is unsavory for psychoanalysis.

Furthermore, it must be pointed out that there are mathematicians, and not inconsequential ones, who contest the bad practice aspect of these general definitions for those who are questioning the structure of a particular domain, so much has general topology remained historically directed towards classical functional analysis (that is, the analysis of real functions with real variables). There is idealism and transcendence in this classical and limiting questioning done by mathematicians themselves, when they are fascinated by the structure of real numbers without a real strategy, due to not having integrated the results of mathematical logic from K. Gödel and P. J. Cohen.

We point out that in this small portrait of attitudes encountered with regard to topology, we are obviously not even talking about the fantasy-like activity with claims to topology from some persons.

We believe we have understood, with regard to our contemporaries, that the purporters of this fantastic topology are called “Lacanian”. We do not wish to abandon, left to a sad end, the teaching of Lacan before claiming to be one of his students. The intuitions of each person have our profound respect, the principal things depend on the presentation of the work that has been constructed.

To resolve the difficulty encountered in the learning of topology, without eluding its profile, we want to direct the reader’s attention to a particularity of style in mathematics.

We call the condensation that arises from no transcendence the abbreviation principle. This principle requires that a topology-entitled work, to take the example that concerns us, allows to be heard and supposes, from its title or in the title of the series in which it is published, that the functions (morphisms of category, transformations) which it treats are continuous and that the objects it studies are attached to well-known topological spaces without it being necessary to redefine them each time.

In the same way as in mathematics, we do not redefine material implication in each work. There are among our idealist mathematicians some that complain due to the fact their colleagues pursue their work while knowing little of logical and set theory whereas naïve theory seems to suffice.

It is as if they required, ideally, knowledge of mechanics from each car driver for authorization to drive a car. In this way, they are negating the characteristic trait of the industrial method, a trait which has succeeded and developed. Indeed, in the industrial empire, as in language, the user can make correct, pertinent use of the object without knowing. That is to say, without having participated, nor even being capable of participating in the conception and manufacture of the object. There is of course the question of maintenance which was better solved in the era of Neolithic techniques.

Certainly in psychoanalysis things go another way since from the outset and to the end, the analyzand, he or she who speaks to the analyst, is taken to be responsible for the unforeseen consequences of what he or she is saying, and it is so he or she can assume this responsibility with reason that topology is necessary in teaching psychoanalysis. But this fact should not, with the pretext of mathematics, go all the way to foreclosing (rigidifying, holophrasing) the style of mathematicians, as this is done for some simple spirits. That says that there is, even in mathematics, recourse to some condensation.

Of course, in topology, general topology or renewed set-theoretic topology is supposed but the strategy is different in the mathematical method since it arises from the structure of language, that is to say, a practice of the absence of metalanguage. It’s this structure which is sealed in the industrial method.

We do not scoff at nor do we neglect these premises and we encourage those who are yet to harvest them. For we want to point out to them that they will have a good game in not understanding the use of our topology in practice, nor the practice of Lacan when he resorts to topology since they go about it themselves in an unsuitable way. We insist on showing them the reason.

It is for that reason that we propose taking things by both ends at the same time, with each thing located in its place.

In essays which put, without waiting, topology in practice through varieties.

In a return to set-theoretic topology, not in general but in the specific and principal question of the structures of the logic of statements, predicates and set theory. This is to treat each of the three chapters of mathematical logic in a topology in the general sense of the term. We thus obtain the premises of the topology of the subject by the modification of negation in the manner of modal logic in a topology.

Our mathematical work of reference is the one by E. E. Moïse [28] for the practice of topology. Maybe some persons will find that there are too many results in this group of articles. It's that there is a resistance which deters all test of certainty. The results are falsified from the mere fact of being recorded by the interested parties themselves. Two procedures allow the breaking up of this obstruction.

One consists of putting into place a protocol of experience and recording, leaving room for functioning. The latter is furthermore increasingly supported by those who have already produced themselves there.

The other is summarized in a communication of results with a view to their discussion by any one even if he or she is outside the field.

These two solutions are only opposed for the ignorance of those who sustain the resistance by which civilization and its discontents are maintained, marvels and surprises that are always renewed in each case of transference. For the rest, they can be undertaken jointly.

Plaisance, July 1996.

Translator's Notes:

TR 1: La Signifiante des rêves

TR 2: From left to right, the captions for the figures are: Hole I – The hole as a break of surface;

IS Hole – The Moebius strip with a hole;

S Hole – The torus has a specific hole

IS Hole: The edge of hole in the Moebius strip is an interior eight

ISR Hole – The real projecting plane immersed in a cross-cap

TR 3: note in text

TR 4: From left to right, the captions for the figures are: S Hole – Intertwining

Cloverleaf Knot;

RSI Hole – The Borromean Knot

R Hole – Infinite straight line, the hole is around it;

SR Hole – The ring with a knot

The false hole

TR5: note in text

All square brackets [] inserted by translator in text.

