Jacques Lacan

Seminar 26: *Topology and Time* (1978-1979)

Draft translation by

Dan Collins

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Topology and Time

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Contents

Note

This is a translation of all the sessions of Seminar 26, *Topology and Time*, in which Lacan gave presentations. In the final two sessions, Lacan turned the podium over to Alain Didier-Veil, Juan-David Nasio, and Jean-Michel Vappereau.

In secondary sources, this seminar is often characterized as "silent," and Lacan is described as not speaking at all. In fact, although it is clear that Lacan is having difficulties, he makes a number of interesting suggestions and attempts to develop new lines of thought.

This translation is a draft that has been prepared from the French transcript. The diagrams and drawings have been copied directly from the French transcript and are left unedited.

Session 1:

21 November 1978

There is a correspondence between topology and practice. This correspondence consists of time. Topology resists, and that's why the correspondence exists.

I've drawn a Möbius strip (Figure 1, *a*). This is what is called a triple band. We can see that this triple band is characterized by edges that are a bit like this (Figure 1, *b*).

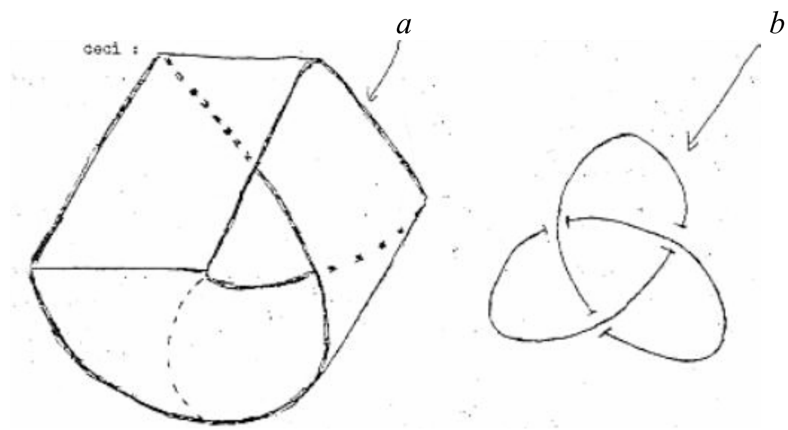


Figure 1

The edges are like this (Figure 2, *a*) or more clearly, like this (Figure 2, *b*).

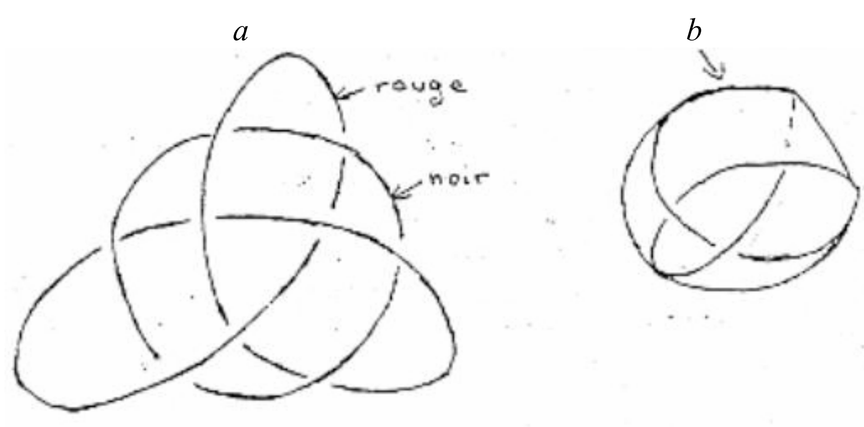


Figure 2

If you flatten out the edges, you get something that looks like this (Figure 3).

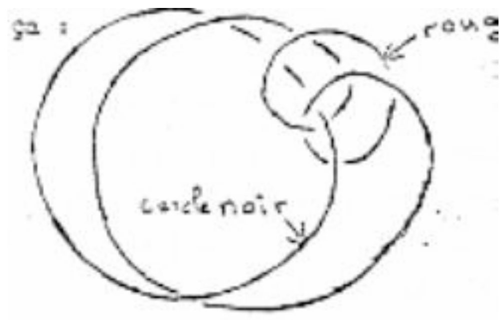


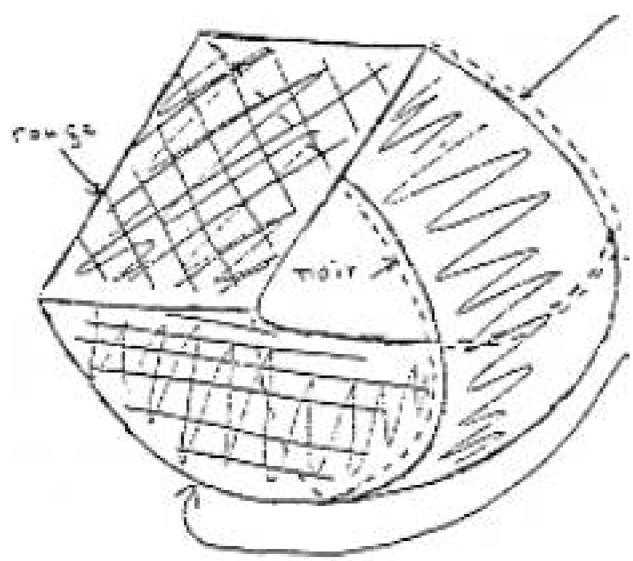
Figure 3

And then the black circle looks like this. That’s a bit closer to what is produced.

Here the black circle is white. (*He holds up a model made up of a ring of white string passing through the interior of a coil of yellow string*.) There, I’ll pass that around.

There’s a way to cover up this strip (Figure 4, *a*). And then it passes behind the other one. But what you have to see is that what passes behind the other one is precisely what comes back again in front of strip 3 (Figure 4, *b*). After that, it again goes behind what’s written there, I mean, behind the triple Möbius. That’s why it comes out in front.

a



b

Figure 4

In such a way that what we get is—

	(1	2)	
in front	(3	4)	behind
	(5	6)	

And 6 connects up with 1. This is what I've noted about the enveloping strip—You can manipulate it and even recover from it the triple strip. What you have here is another exemplar of what I just called the enveloping strip. You can observe its identity with [. . .][1]

What is striking is that a normal Möbius strip, like this one for example (Figure 5)—

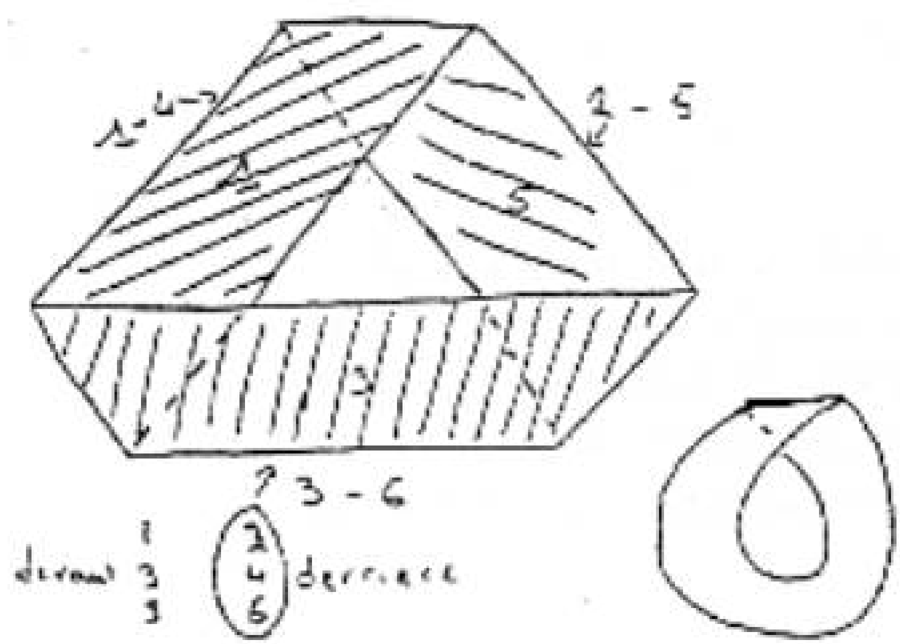


Figure 5

A normal Möbius strip, like this one, has the 1 and the 2 and the 3 and the 4 in the same place.[2] All those these are behind and all these are in front. Here the 1 passes behind at this point to the 2,

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[1] This gap is in the text.

[2] Lacan's meaning isn't quite clear from the text here, assuming that the transcription is correct. But he does explain the drawing in what follows.

and then it [2] comes out in front in front as 3. Then 4 goes behind, which allows it to come around in front as 5 and to go around back to reconnect to 1 by what we're calling 6.

Thus the enveloping strip has two edges, two edges in the triple strip, the triple Möbius. We can easily see this on the strip that I'm now manipulating.

This is an important point. You can test it out on what I just manipulated for you.

There is something that all Moebius strips have in common, which could only be this alteration. Is it possible—in fact it is—to cut Moebius strips? Not only can we cut each one, but we can also cut the one I call the double (*la doublure*).

What is the double? There could be a double all by itself. But in that case, you have to cut the Moebius strip, the Moebius strip that is basically the heart (*âme*) of the affair.

There's a way of drawing a Moebius strip on a torus. This is how you can draw it when it's a triple strip that's involved (Figure 6). You have to pinch the torus and place the two surfaces of the torus side by side. The interior surface disappears, it's blotted out, crushed. It's also easy to make a torus out of a triple strip. What I mean is that it's just as easy to make a single band.

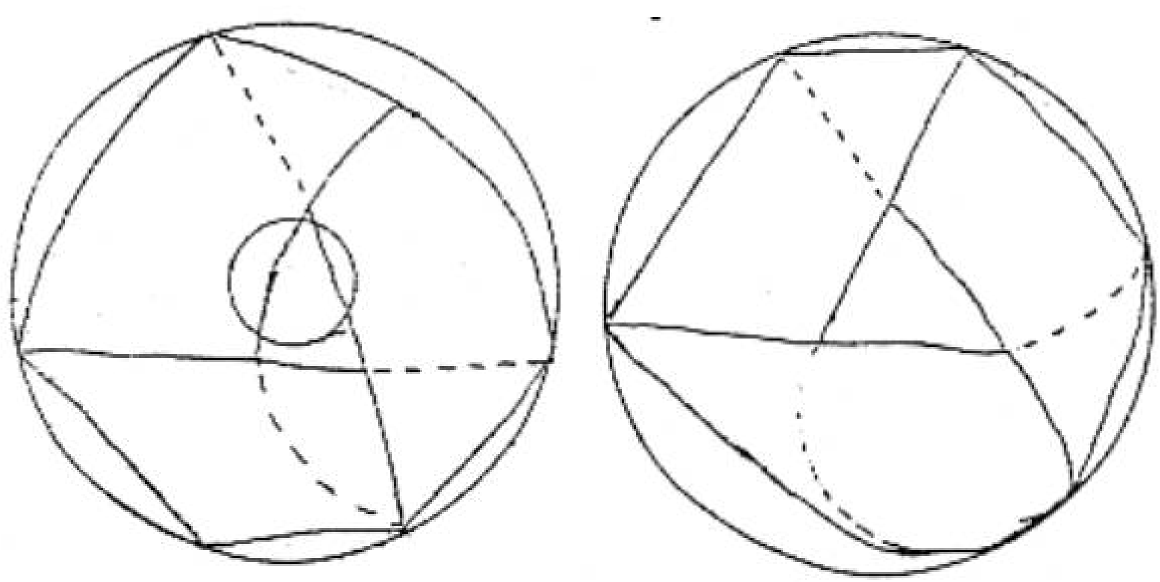
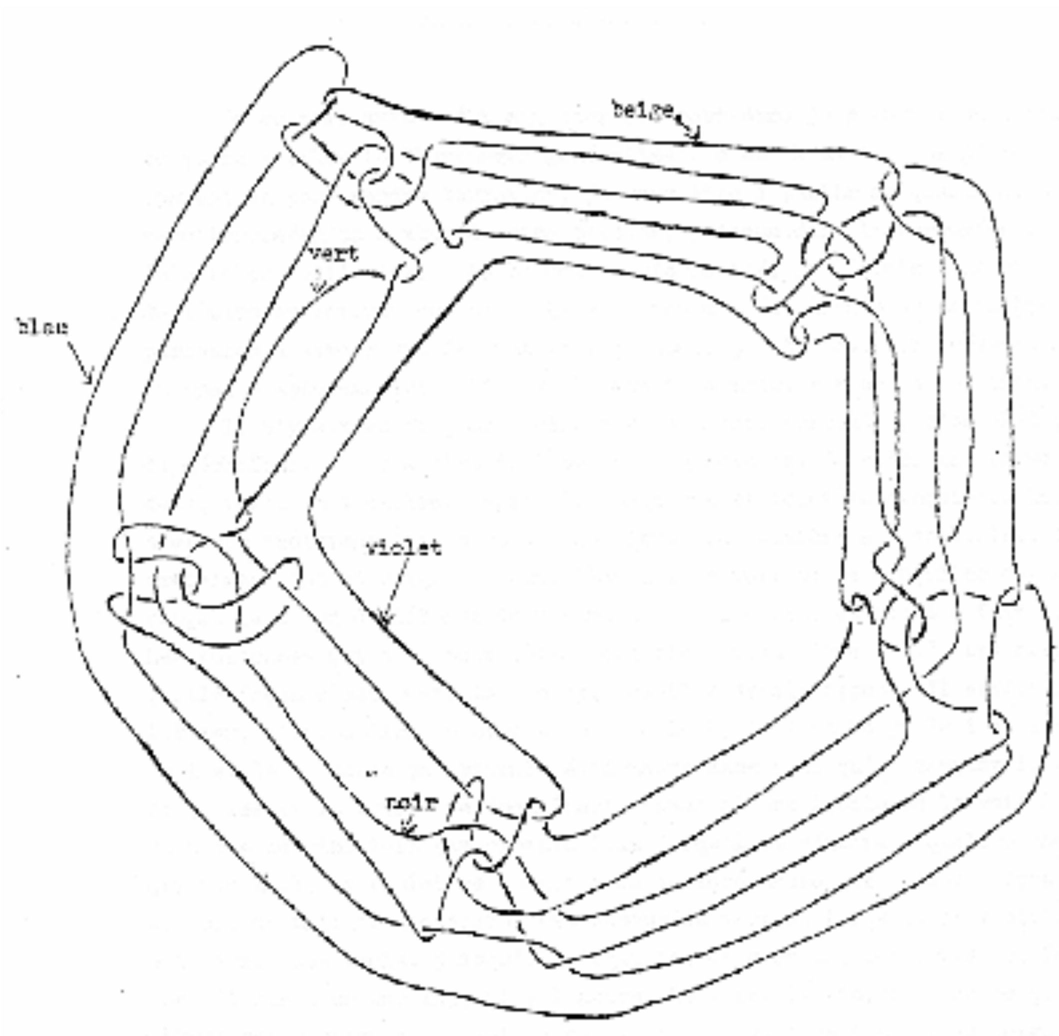


Figure 6

Even so, there's a gap between psychoanalysis and topology. What I try to do is fill it. Topology is exemplary. In practice, it permits us to make a certain number of metaphors. There's an equivalence between structure and topology. That's it, the It that Groddeck speaks of, that's what It is.

It is necessary to be oriented in structure. There aren't only Borromean knots. There could be a way to generalize what are called Borromean knots in such a way that cutting one doesn't free all the others. There's a certain way of constructing it such that cutting two out of five of them is precisely what results in (*nécessite*) the freeing of the three that remain. This is what I call the generalization of the Borromean knots. By cutting two out of five, the three others are freed. I'll try to give you an example of this by the end of the year.

There. I've talked for an hour. I thank you for your attention.



Session 2:

12 December 1978

I ventured to announce that perhaps I would give an example of what I call the “generalized Borromean,” that is, I would state how one can make a group of five circles Borromean, I mean starting from the moment the Borromean appears, since with the Borromean, it’s always a matter of circles. I announced the generalized Borromean as two circles taken out of five. The solution came at the hands of two people, namely Madame Parizot, who I hope is present, and one named Vappereau, who also contributed a lot to the solution.

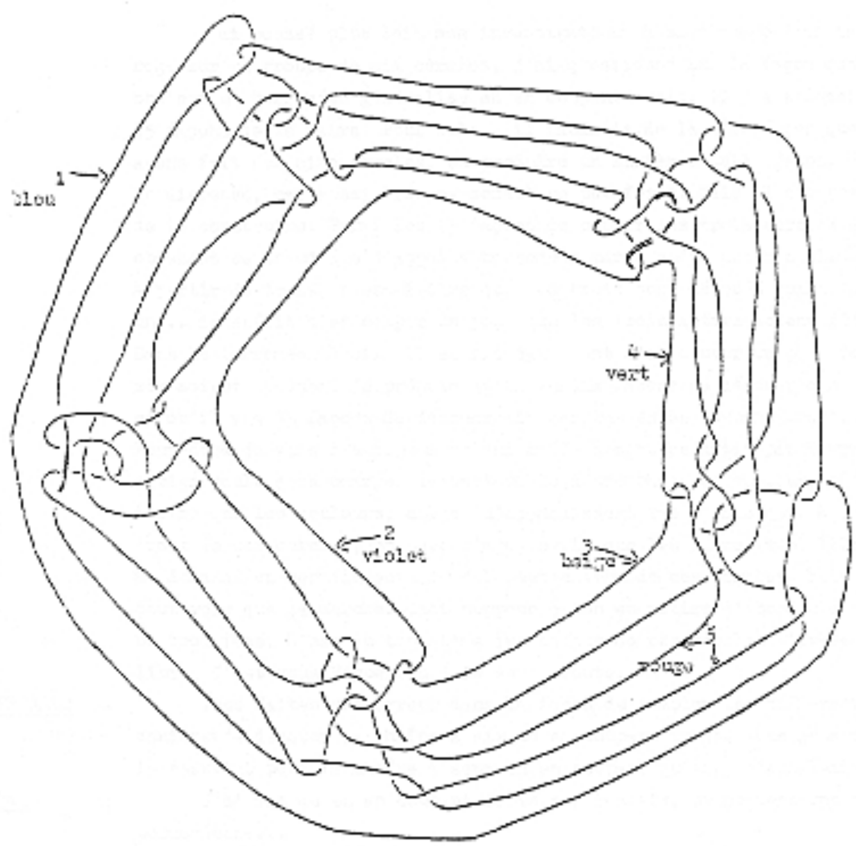


Figure 1

There’s nothing simpler than making five Borromean circles, that is, unknotting them, liberating them. Here’s 1, then 2, here’s the 3, the 4, and the 5 (Figure 1). This one here is the third, and that’s the second. The second is purple. The third is brown, the fourth is green, and the fifth is red. It’s completely clear how to liberate two out of the five. The people who got involved in this both really wanted to be able to say that this was in some way possible. It's possible in ten ways. It suffices to liberate, that is, to cut, 1 and 2, 1 and 3, 1 and 4, and 1 and 5 for the three others to be unknotted, which is easy to see from the fact that the purple, for example, can be pulled until it's reduced to something that appears like this. The purple is reduced to something that slides over here and, from the fact that five disappears, is unknotted from the green, the brown, and the purple. These are free, these three, since it's a matter of circles, the three circles are free, one in relation to the other. The green, the purple, and the brown are free in relation to the purple, that is, the green is unknotted, the brown is too, and equally the purple.

It's easy to see that by unknotting the 2 joined to the 3, the 2 joined to the 4, and the 2 joined to the 5, we'll get the same results. The 3 joined to the 4, and the 3 joined to the 5 yields the same result. And the 4 joined to the 5 will also give the same result. Thus there are six ways of separating out one of the five circles, of dividing them in a way that these results are obtained.

I've taken my investigation farther, that is, I've inquired about a group of six circles. I've asked about the way in which we obtain a generalized Borromean by cutting three of them There are effectively 35 ways of doing it. In order to do it, the same thing that we did with five circles, we have to produce a sixth one. I'll spare you the explanation because it would be a bit forced. But it is possible to construct it. Among the 35 ways of cutting the three circles to obtain the knot that I call Borromean because it is symbolized starting with three, that is, that three are unknotted when you take away one, it suffices to cut one of them for the three others to be unknotted.

In the six-circle Borromean, it also suffices to cut one of them such that the six are unknotted. I'm trying to make clear that there are ten ways of unknotting five circles and that there are 35 ways of unknotting six circles by cutting three.

Perhaps I will distribute what Soury obtained this morning. He wanted to make a photocopy of a color photo. The colors didn't come out, but it can still be seen that by cutting three of the circles, the others are freed.

It takes a certain care to color each of the circles, but you can see that it works. This supposes that we remove first two and then a third. It's at the third that each of the circles turns out to be freed. Is that you Vappereau? I'm listening.

VAPPEREAU: You made a mistake in counting the different ways of unknotting the chain of six by cutting three. You gave the result for the chain of seven by cutting four, that's 35. . . .

LACAN: I said that by cutting three out of the six, we get a Borromean chain. . . .

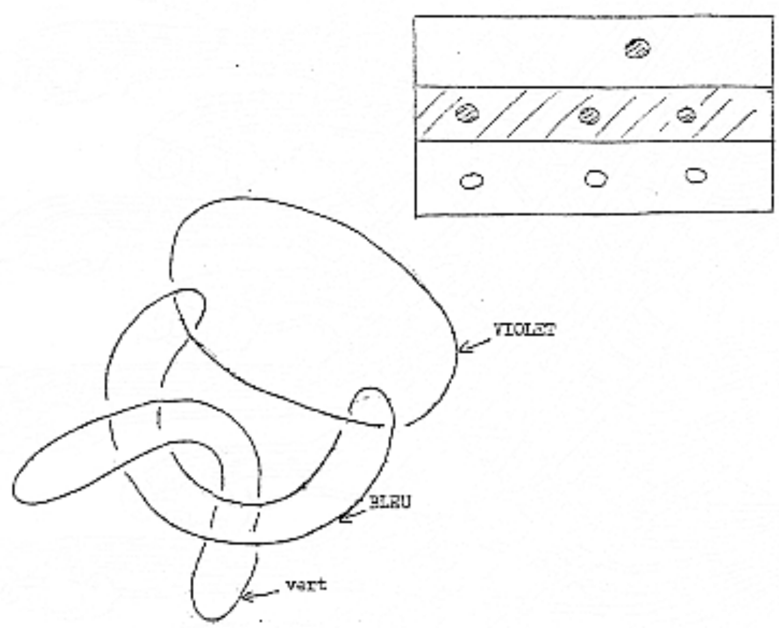
VAPPEREAU: You said that there were 35 ways to do it, but there are only 20. . . .

LACAN: Yes, it’s true that there are only 20 ways. It’s true that there are only 20 and that I was wrong about this. All that remains is to excuse myself and to promise you that the next time, I won’t keep going on to you about these circles.

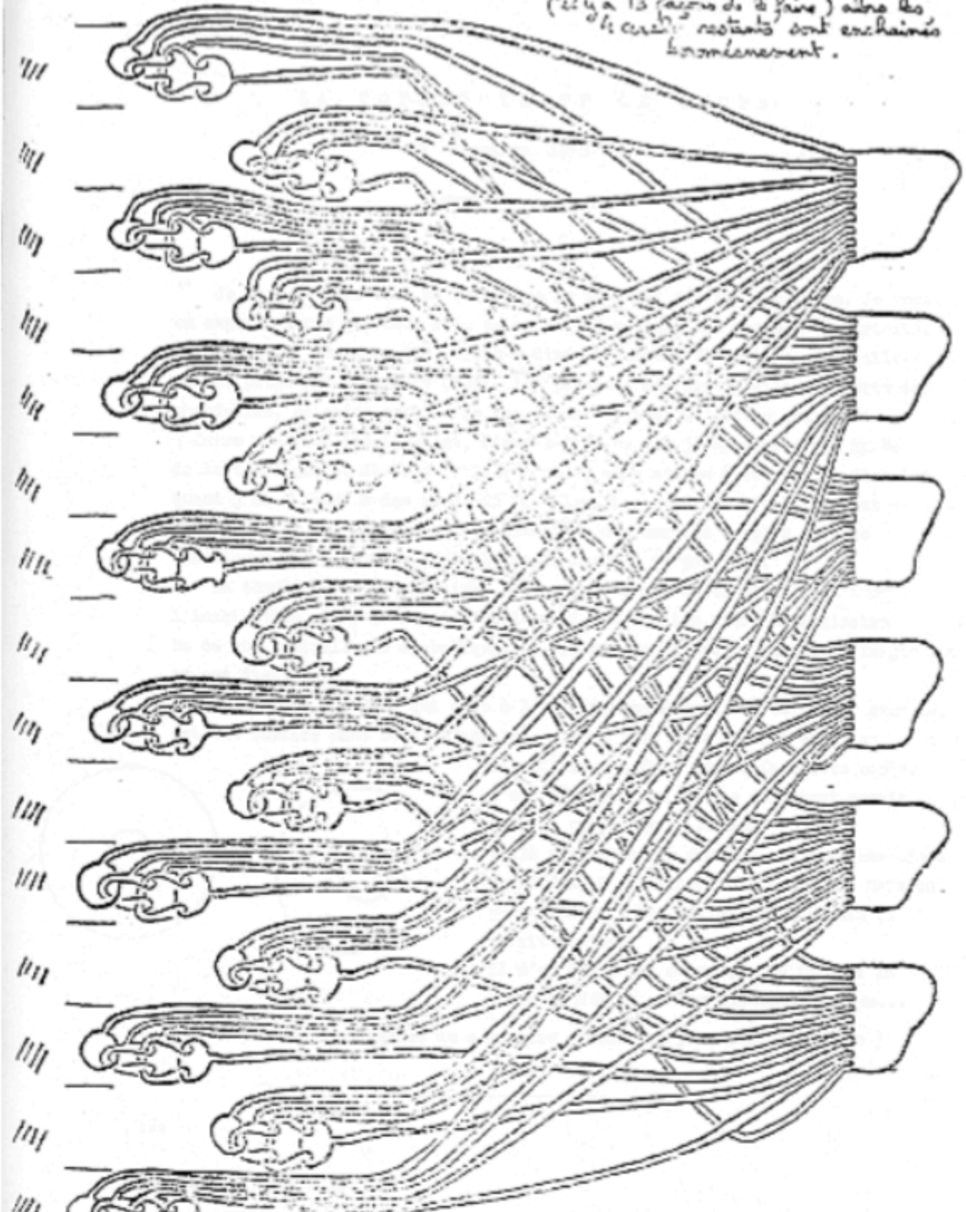
Well, goodbye!

Dessins du tableau

12	23	34	45
13	24	35	
14	25		
15			



Chaîne à 6 cercles, telle que chaque fois qu'on enlève 3 cercles (il y a 20 façons de le faire) alors les 3 cercles restants ne sont pas enchaînés. Cela implique qu'à chaque fois qu'on enlève 2 cercles (il y a 15 façons de le faire) alors les 4 cercles restants sont enchaînés borroméennement.



Distri bué au séminaire du 12 - 12 - 72

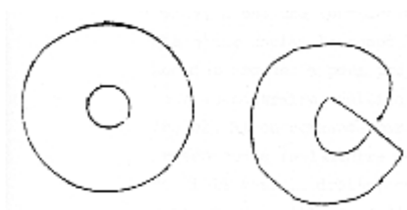
Dessin de SOURY

Session 3:
19 December 1978

I'll tell you right away that I'm not going to do my seminar. This is because at my place, this morning, there was a blackout. The lights, as one says, that is, the electric lights, wouldn't go on. Naturally, Gloria, who is here, helped me. She brought me candles, what we called in my day *bougies*. What does Gloria have to do with my teaching, that is, with what I am teaching this year on topology and time? She helps me. She helps me cut the strings when I have to make my rings of string. The rings of string are theoretical, that has to do with circles, circles that are flexible and even elastic. That's what I imagine, but imagination doesn't go very far.

Topology is imaginary. It only develops by way of imagination. There is a distinction to be made between the imaginary and what I call the symbolic. The symbolic is speech. The imaginary is distinct from it.

Sometimes there are surfaces that are without edges. A torus, for example, is a surface without edges. Nevertheless, a torus can be flattened and if it is, it's a surface with edges.



That's even why a torus can serve as a Moebius strip.

That's how to draw it. It becomes a Moebius strip on the condition that it's flattened. But one can inflate this surface, in which case it becomes a torus.

It's nonetheless true that the Moebius strip and the torus are distinct. What . . . [The last few minutes of the seminar are inaudible because of sound problems.]

Session 4:

9 January 1979

I've told you that there is no sexual relation. But what takes its place? Because it's clear that people—or what are so called, human beings—make love. There is an explanation for this, the possibility—note that the possible is that which ceases to be written—of a third sex. After all, why are there only two? That's explained not at all.[3] This is what is alluded to in [the story of] Eve's double, Lilith. This allusion is not, however, a precise thing. It is exactly precision, that is to say, the real, that I mentioned in reflecting briefly on that of the Borromean knot.

The Borromean knot has to be imagined as consistence. What is the difference between the imaginary and that which we call symbolism, otherwise called language? Language has laws for which universality is the model, and particularity no less so. What the imaginary does is imagine the real—it's a reflection. A reflection captured in the mirror. That's why it's in the mirror that it functions. The mirror is the simplest of apparatuses. Its function is, in a way, entirely natural. It is strange that I should have chosen the Borromean knot to illustrate it. But the Borromean knot has the characteristic that it can begin anywhere. Quite the contrary here (Figure 1)—it can't begin just anywhere. If it starts there [the green], there is an obstacle. That makes a braid, as in shown in the figure on the left (Figure 3). It is braided as shown in the drawing on the left, but if one pulls this one to the right, the other two are dragged along with it and it is not known what happens as a result of this pulling. In any case, these are the other two. It's the same with this one (Figure 2), and that's why what's there can't serve to symbolize the imaginary, the symbolic, and the real. It's the interior of a circle (Figure 5). It's the interior field of a circle, the *field* (*f-i-e-l-d*).[4] Such that it's a matter of metaphor. In would be much more difficult to install a metaphor in this figure (1) than this one (5), all the more so in the third figure (2?). For the third figure (2?)[5] seems more complicated, but it's the same. It's the same, insofar as the red has an alteration that could allow it to be regularized, to bring back the figure on the left in the figure on the right (2). The difference is that this one (2) is consistent with the that (3) and that this one (1) is braded like that one (4).

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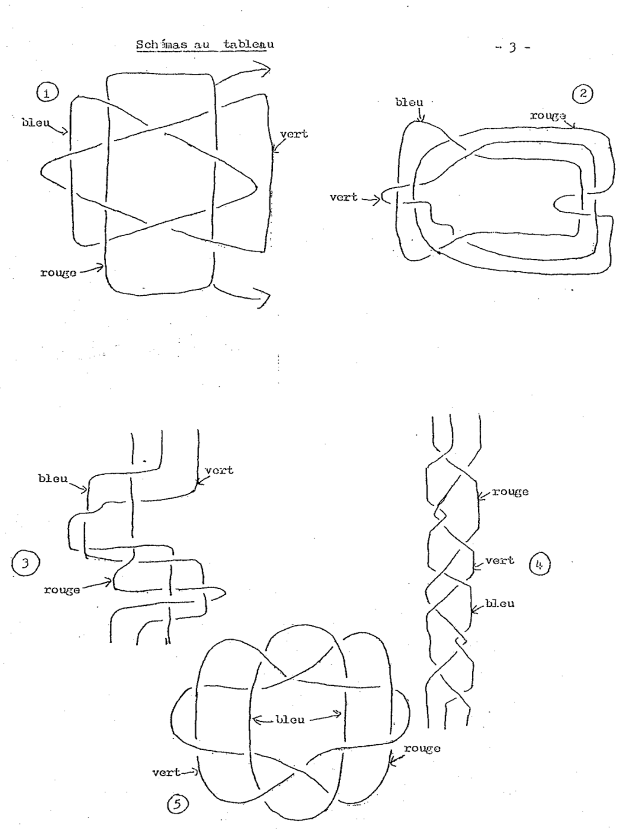
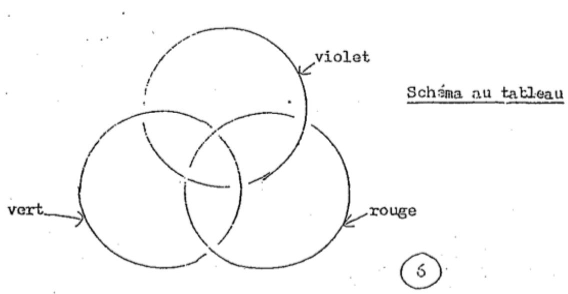
[3] Or, "That's not accounted for." The more awkward phrasing, "That'*s ex*plained not at all," preserves in English Lacan's perhaps unintentional pun on the word "sex": "*ça s'explique mal*."

[4] The French word is *champ*. It's unclear why Lacan spells it out, *c-h-a-m-p*.

[5] The French transcript gives 2 in parentheses—twice—when Lacan mentions "the third figure."



The metaphor of the Borromean knot in its simplest state is improper. It's an abuse of metaphor because in reality, there is no thing that supports the imaginary, the symbolic, and the real. What's essential in what I say is that there is no sexual relation. What I don't dare to say is that there is no sexual relation because there is an imaginary, a symbolic, and a real. But I still say it.

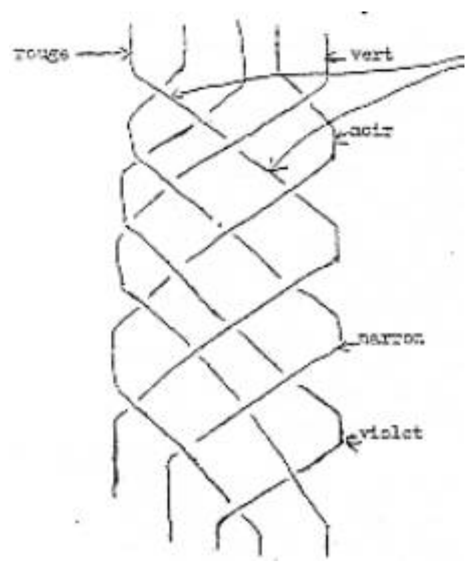


It's quite obvious that I was wrong, but I let myself slip into it. I let myself slip into it quite simply. It's frustrating, and annoying. It's all the more annoying because it's unjustified. This is how it seems to me today, and also what I confess to you. Good!

Session 5:

16 January 1979

I am rather troubled (*embêté*) by what I announced to you the last time—that a third sex is lacking. This third sex can't subsist in the presence of the other two. There is a forcing that is called initiation. Psychoanalysis is anti-initiation. Initiation is that by which one, if I may put it this way, rises to the phallus.[6] It is not easy to tell what is initiation and what is not. But briefly, the general orientation is that one integrates the phallus. It is necessary that, in the absence of initiation, one be man or woman. Good![7]



You see here that there are two that it crosses over and two that it goes below. . . .

It's necessary to repeat this sequence, that is, here (*at the bottom of the schema*).

We can see that here in our drawing a weaving is reproduced twice that concerns . . .

It's very annoying that I get confused. But I must say that I must acknowledge that I am confused.

Well, that will be enough for today.

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[6] Or, "amounts to the phallus"; in French, "*s'élève au Phallus*." The translation given here attempts to preserve Lacan's joke. There are, of course, any number of comparable jokes in English involving the phrase "rising to the occasion."

[7] There follows a discussion of a braid with five strands. Much of this discussion is missing from the transcript.

Session 6:
20 February 1979

I'm troubled (*embêté*) because of the generalized Borromean. I can't believe that the generalizing is four minus two, five minus three, six minus four, seven minus five, eight minus six. I can't believe it because in every case there are two that are different, and this implies that to take them two by two should be neutral, and that to take them three by three should be Borromean. I have the feeling that the generalization of the Borromean extends to four and even—why not?—to five. Such that it's necessary that it's not just be a matter of two different ones. It's a matter of knowing if everything is neutral prior to four, or even five.

So today, I will set aside this question, and I hope that I will bring you something next time. For it's a fact that the generalized Borromean always has a difference of two and that it's necessary that the generalized Borromean proceed otherwise.

Today I'd like to draw something else for you, namely, a Slade band. The strange thing is, it's the same band as this (see accompanying figures), which is found by first folding this one, which allows to fold this and that ends up, simultaneously, making this identical to that. In other words, by folding this, we're permitted, by folding it in a way such that it's equal to that, that is to say, to the six crossings of this figure, whereas this one has eight. Maybe this will help me in resolving the question of the generalized Borromean. Questions?

Mme. MOUCHONNAT: Excuse me, sir, if you will allow me to pose a question in my rather naïve style, I think that I'm not the only one here, moreover, but . . . respond to it if you think it's worth the trouble. It's a question that's worthwhile to me. We have six or eight of them, but I'm completely overcome. Up to three? It works! The question actually arises for me since you advanced, not long ago, about two lectures ago, that there is a metaphor of the Borromean knot, that is, the three. . . . I'll pause for a moment. Isn't this suitable to give an account of R.S.I.? I don't know how it is with my comrades, but that really affected me and appeared to me to be extremely important. I think that we could even say that there is something that's no longer asleep, which isn't at all bad.

So here are a few of my thoughts. The Borromean knot, like everything that Lacan presents, I must—in every case, for me it's like this—it takes me several years to understand, to get it. Well, I've arrived at somewhat of an understanding of how to make use of the Borromean knot in analysis, in any case for me. It's a means.

Math isn't my thing. I'd go so far as to say, I don't give a damn about it. But it's a means to an end, that is, it allows me not to get myself too mixed up about psychoanalysis. Thus my interest in the Borromean knot, which is a way of writing R.S.I. Roughly speaking—well, I'll describe it—there are three rings that are attached. In the middle, there's a hole—that's the little *a*. But they're attached in a certain way that's very important, no? I think that from the time that it's been drummed into our heads, up to now, it took some work to grasp. . . .

Still, I want to say something about the Borromean knot. I see the interest that Lacan aroused in me about it is at two levels. First, he gave us a demonstration that has endured, that endures, which is a true demonstration, that is, he grabbed the real by the scruff of the neck. He got tangled up in it, he showed it to us. I'd even say that he encountered there a certain readiness. And I think that's a lesson—at least for me it is one.

The second level interests me because, as I say, it helps me with my work in psychoanalysis. So, to get back to the point, I would say, roughly, that it's a version of the story of the ram, at least I see in it a version of the story of the ram, that is, the primordial body that one incorporates, the origin of which, as everyone knows, is perhaps mythic, which I'd rather put on the side of R, the real. And then, secondarily, there's "You owe a life to your father," the S, more or less. No, I'm mistaken about the first—it's the imaginary, I mean, the ram, that's the imaginary body. And then the symbolic on the side of Yahweh—"You owe your father a death." Which god doesn't matter! As we all know, the question of god is posed for each of us, even the atheists.

Good, well, the Borromean is useful to me. I must say that when Lacan told us, two or three lectures ago, that perhaps this metaphor isn't suitable, that really shattered me.[8] So, then I said to myself, It's not suitable, what does that mean? Then he said something—I don't have my notes, I lent them to someone, so I wasn't able to go over them carefully—but briefly it was something like, there's something like the adjective "able" in "it's not suitable [*convenable*]." Perhaps it was something else, like "unjustifiable." So, it's unjustifiable, I said to myself—why? Unjustifiable means that our demonstration isn't very suitable, the model that we've put forward—I way "we" because we attend [*assiste*] his seminar, and after many years I think that we even assist [*assiste*] his seminar, and that's what allows me to talk this way—so it's unjustifiable because the model

[8] The reference is to session four. Lacan actually doesn't use the word "suitable." Neither does he use the word "unjustifiable," as Mme. Mouchonnat summarizes below.

isn't suitable. We made a mistake somewhere, since we well know that we went back a bit to review, or really this model can't be suitable, and so my question is this, and I think it's an important question. He said, this metaphor is, let's say, unjustifiable. So can we say that a metaphor is liquidated because it isn't valid [*juste*]? I think not. A metaphor is never completely valid, otherwise it wouldn't be a metaphor. But we can't speak if we don't use metaphors, and in the manner [*sens*] of the Borromean knot. It's useful to me as a metaphor. So I understand it to be a little bit on the side of the paternal metaphor, but maybe I don't understand Lacan well enough. The question that I'd like to pose is this—Is it simply that it's a mathematical problem, in which case, I'm content, since that doesn't interest me, not much, not really! But the R.S.I., that particular arrangement of the three categories, linked as they are, with a hole in the middle, that's the paternal metaphor or perhaps by adding a fourth ring, that's how we suggested that Freud played upon the father, with this other ring. Good, well, if it's not suitable, that takes us farther. I think it's a very important question. Finally, the question—but I think that what I'm saying isn't very clear, even though I'm saying it as well as I'm able—the question that I pose to Lacan is, Are we, all of us, mixed up in these knots, faced with what are properly speaking mathematical difficulties, but doesn't it still have effects since even so it speaks to us in psychoanalysis and for psychoanalysis? Doesn't it re-question us about our psychoanalytic categories? Isn't there something at the level of the names-of-the-father that would be readjusted? We would be mistaken. Either our model isn't suitable or we have to rethink something at the level of the paternal metaphor. So the third solution is that obviously I haven't understood, which certainly isn't out of the question, not at all.

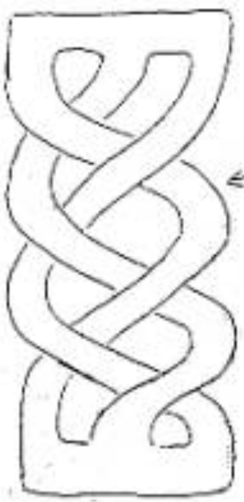
LACAN: What bothers (*tracasse*) me in the Borromean knot is a mathematical question, and I intend to treat it mathematically.

X: Doctor, allow me to correct your third schema. In the picture of the Slade band, if we give 1-2-3 as the starting order, we arrive below at 1-2-3, but in the third schema, if it's 1-2-3 at the start, we wind up with 2-3-1.

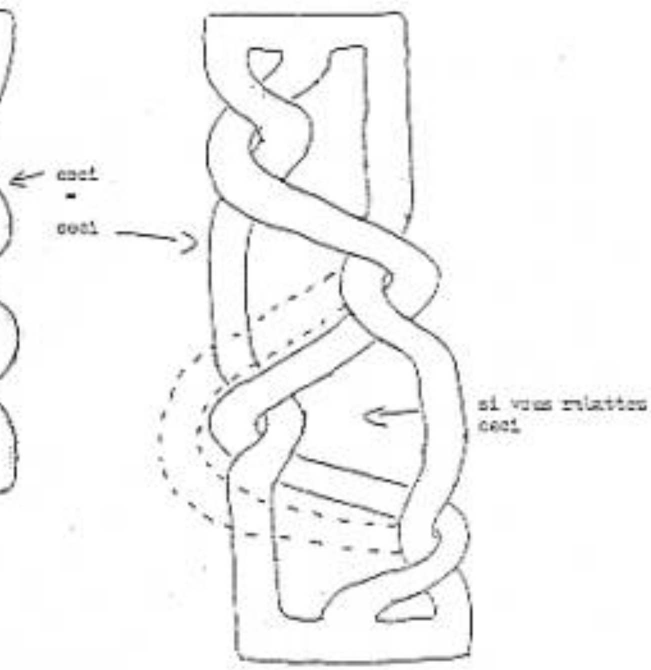
LACAN: That's completely true. . . .

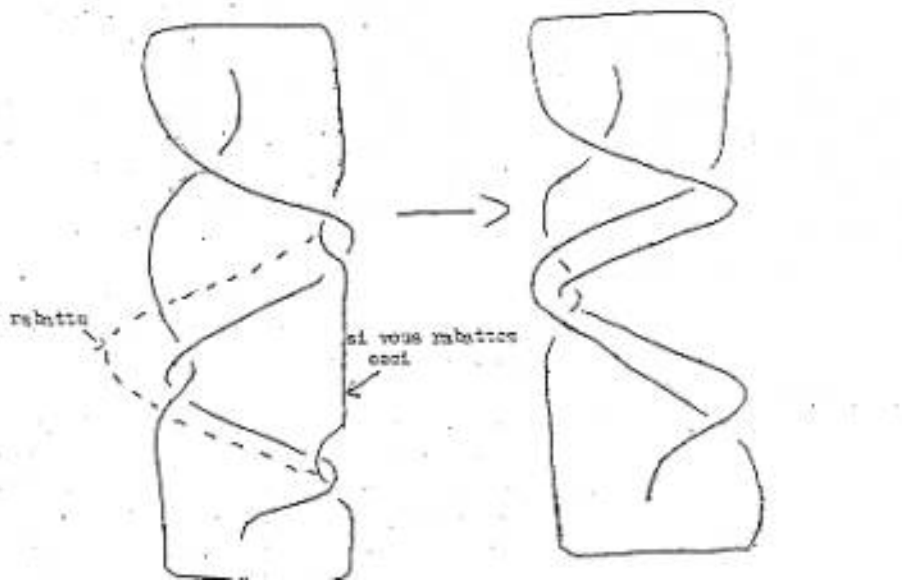
That's completely true, but I'm confused.

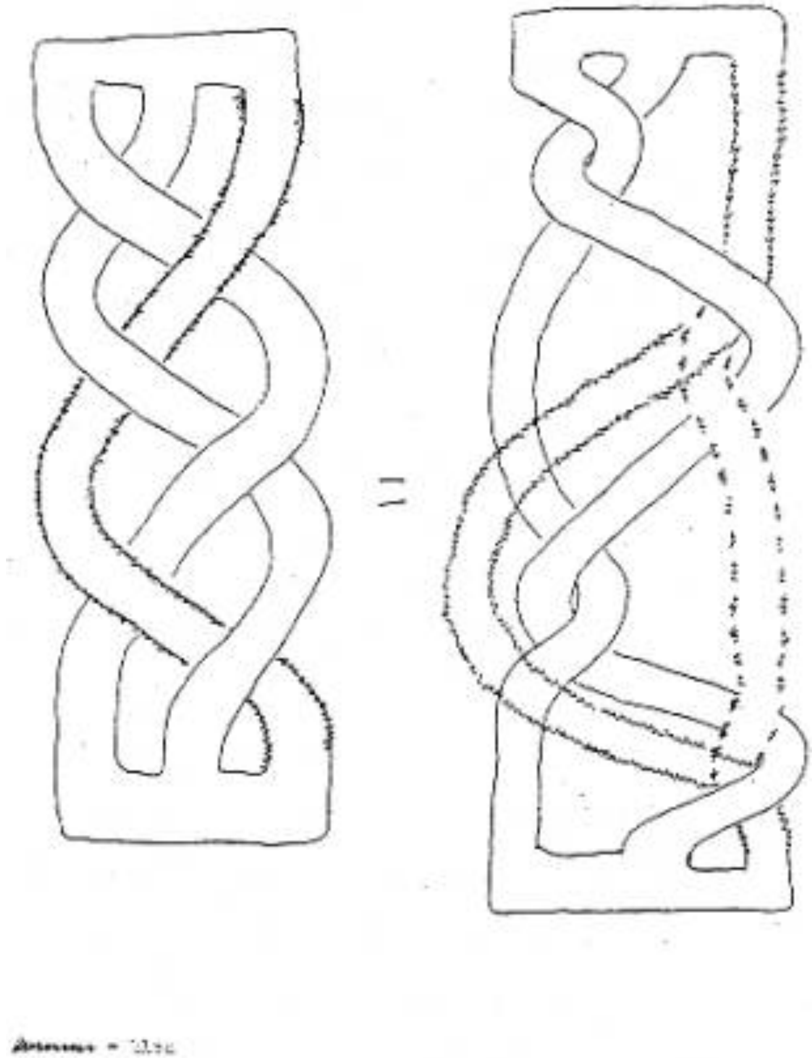
Well, I'll talk to you later. I'll try to do better next time.



Bande de Slade







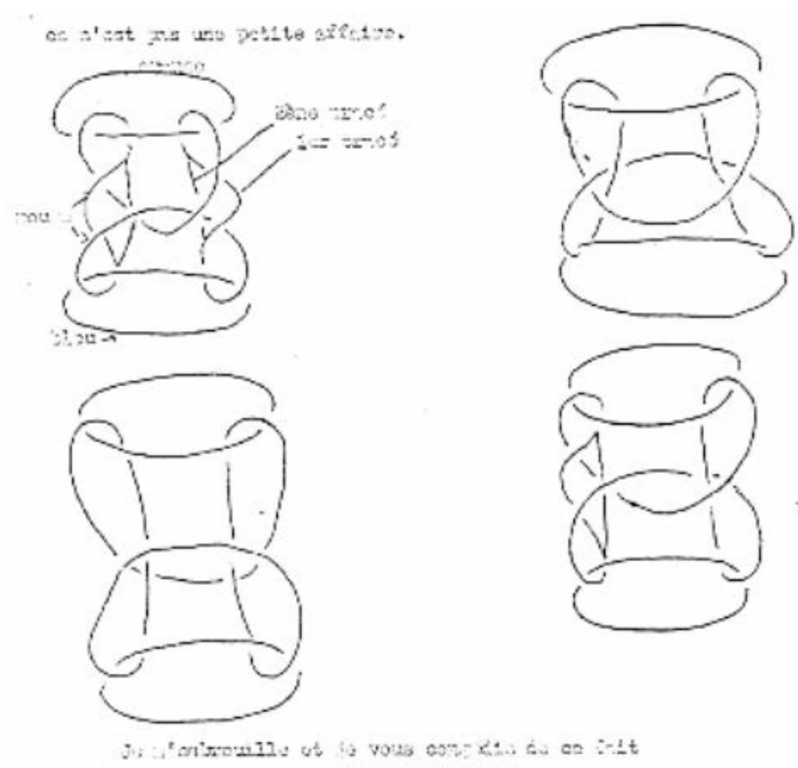
Session 7:

13 March 1979

There is something that I told you—why isn't there a third sex?

All that comes from what I've been studying, the generalized Borromean. The generalized Borromean—it's obvious that I don't understand a thing about it. I'm all tangled up. I'm all tangled up,[9] which is illustrated (*témoigne*) for you the fact that in writing on the board, I am—this is the fact of the matter—absolutely entangled in it.

Today I would like to make you understand that the generalized Borromean is no small affair.

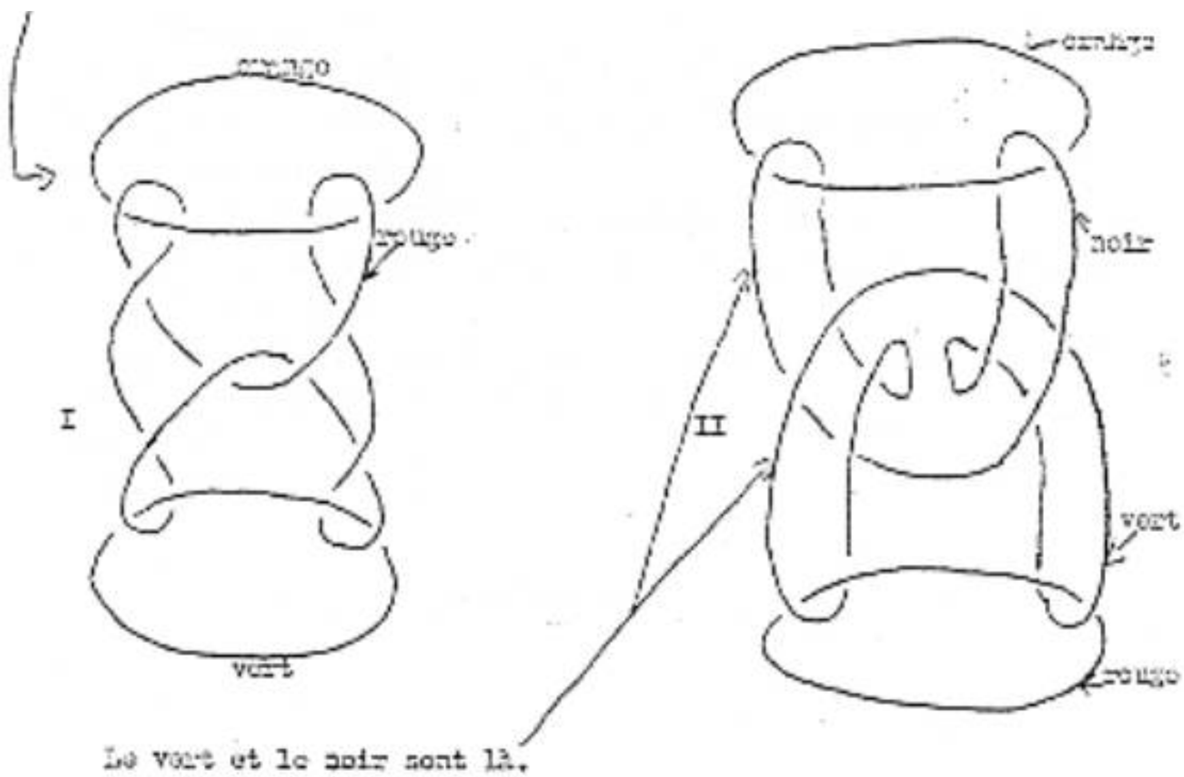


I'm confused (*m'embrouille*), and because of that, I'll dismiss you.

[9] Lacan's verb here is *embrouiller*, which means "tangled up," like cords. *Embrouillé* means "snarled," "entangled," but also "complicated," "muddled," and so on. Reflexively, the verb, *s'embrouller* means "to be confused." Normally, this entire passage would be translated using the figurative meanings of the verb, "confused," "muddled," but since Lacan is talking about being confused by the knot, I've used the expression "tangled up." This seems to be his meaning.

Session 8:
20 March 1979

There's somebody who wrote to me to tell me what he thought of my last seminar. Well, in truth, what I did was this (Schema I). It's a generalized Borromean, whereas the person who wrote to me reduced it to what's normal, namely, what was discovered by making these two, the green and the black, continuous.

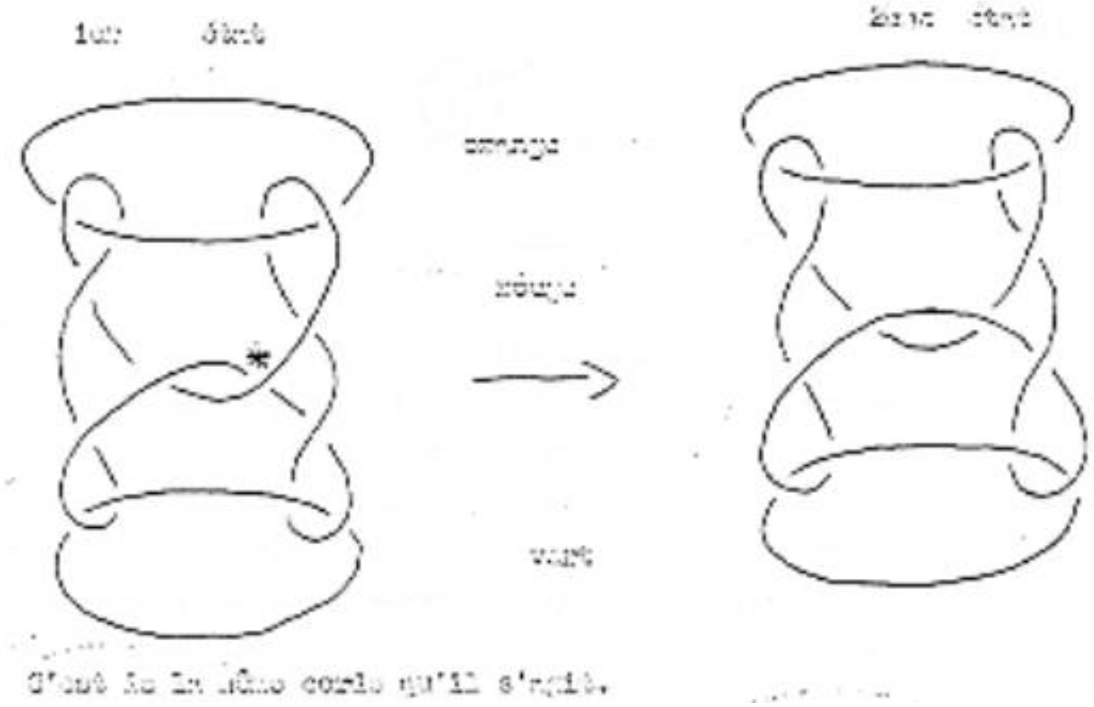


Schema I Schema II

Another way to resolve it would be to make what I've drawn as orange and what I've drawn as red continuous (Schema II), or better still to make what I've drawn as red continuous with what I've drawn as black.

It's a question of knowing what's homotopic. What's homotopic is internal to consistence.

Last time I did something like this (Schema I). I would say that within the same string, homotopy consists in being able to transgress the figure. What results is that the knot is undone. It suffices to cross the string at one point.



It’s the same string that’s involved.

X: The same string has to be crossed at three points.

LACAN: Yes, I think so.

X: The twisting on the right, sorry, the twisting on the left and above, on the right and below and on the left. . . . If you only correct one point, as you’ve said, it isn’t unknotted.

LACAN: You think that by changing this, it will be unknotted?

So we have to change these points here?

X: (inaudible)

LACAN: Well, goodbye.