

THE HYPOTHESIS OF COMPACTNESS IN CHAPTER ONE OF ENCORE

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With his illustration of the story of Achilles and the tortoise, Lacan discusses the male side of sexualisation and he shows the movement towards “embracing one another”, clutching one another in bed, thereby defining what he calls “sexual jouissance”. In order to do this, Lacan appeals to the notions of succession, series and real number, notions which are all the more necessary, given that he argues that this “embracing one another” is attained only at a limit. To investigate this formulation, we will comment on the chapter of Encore, in which Lacan tackles what he calls the “hypothesis of compactness” on both the male and female sides of sexualisation. It is especially interesting that he says that this hypothesis, although designed for men, “verifies itself” for women. Lacan’s formulation of the hypothesis, represents, I think, a reformulation of Zeno’s paradox, although we will leave aside this aspect in our discussion today.

What is compactness? A compact space is defined in a metric space by the notions of closed and bounded. Here are some very simple examples: of these metric spaces, the numerical line or the real line is a one-dimensional metric space; the plane, a black board, is a two-dimensional metric space; space is a three-dimensional metric space and to get a four-dimensional metric space, one could add the dimension of time, for example. A compact subset in a one-dimensional metric space is a closed interval, that is, its furthest points belong to it (a and b belong to the compact space I, as represented in the diagram by the figure pointing towards a and on the left towards b). A bounded interval means that one cannot extend all the way to infinity, one is blocked by the end points.

I) CLOSED SETS

Closed and bounded compacters

non-compact space

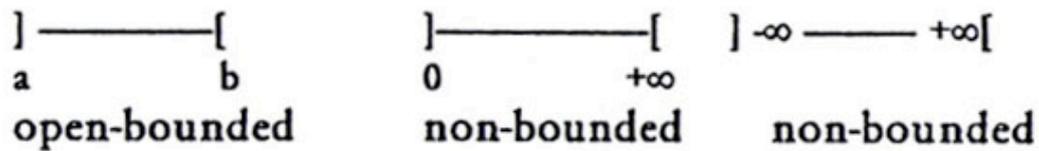
a [—————] b



[—————]
a + ∞

- 2) closed, non-bounded
- 3) closed, non-bounded plane.

II) OPEN SETS



Dimension 1.



Dimension 2.

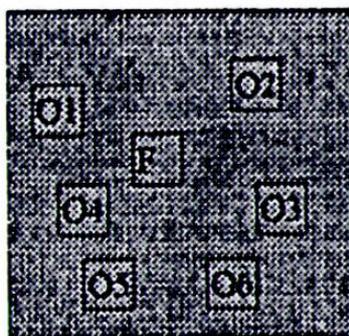
The property open is applied to those spaces which, on the contrary, do not contain their own limits. The open interval $]a,b[$ does not contain its furthest limit points a and b , which are excluded. Lacan takes the property of compactness as a model for “embracing one another”. The meeting point, the space of sexual jouissance, is conditioned by the impasse caused by the presence of the big Other, for both sexes, and we can represent it as the closed segment $[a,b]$. There is a space which is common to sexual jouissance: both sexes, in “embracing one another”, are in a relation with the Other, although not in the same way and they thus have different ways of assuming the “embracing one another”. The key problem of the chapter is, how should one formalise the way in which each sex misses its target? It is always interesting to know how one fails, how one misses something even if knowing this does not give us the recipe for success. The impasse here is due to the presence of the Other and Lacan asks the question: “What does the most recent development in topology allow us to say about this place of the Other, of a sex as Other, as absolute Other?” This expression “absolute Other” is found in Lacan’s earlier work in the 1958 articles in the Écrits. How should we understand the term “absolute”? I interpret it in its philosophical sense, as indicating an absolute alterity, something for which we have no standard of comparison, no access by identification, no access by the One.

Lacan’s hypothesis of compactness consists of the supposition that the topological structure of embracing one another (to the extent that this relates to the Other) is a compact one. We will now turn to the consequences of this for women. Lacan says: “Let’s follow here the complement of this hypothesis of compactness (the complement of the hypothesis of compactness is thus now the side of women). Take the same closed, bounded, instituted space - the equivalent of what I was saying earlier on, about intersection extending to infinity” (Encore, p.14). He thus admits that there is a space in common for both sexes (the “embracing one another” with the presence of the Other) which gives the continuous structure of the compact space. But what specifies the woman’s side here?

Lacan says on page 15 of the seminar Encore that "... the space of sexual jouissance - is, for this reason, compact". This way of speaking of a hypothesis of compactness for the man's side, following the complement and then considering that the latter functions as a proof - it "is verified" - is rather amusing. It means that, perhaps, he started out from the woman's side in the first place! This is a well-known structure of reasoning: from one idea, and to develop it, one constructs something from its apparent opposite. But the idea of supposing that the point of truth is found on the woman's side - whereas the hypothesis had been posed on the man's side - might suggest to us that, as the Don Juan example at the end of the chapter shows so clearly, the whole elaboration had originally been founded on a consideration of the side of women. All the more so, in that Lacan talks so often about Don Juan, even as early as the Object Relation seminar. In any case, analysts were discussing Don Juan well before Lacan, and other people were at it, even before the existence of analysts! It was a subject of debate from the sixteenth century, I believe. What is certain is that on this side, sexual jouissance proves itself compact.

To illustrate this, Lacan uses a different definition of compactness from the one he had used for the male side, this time in terms of open sets. Here is his definition: a space F is compact if it is separated and if for any open cover of F , one can produce a finite subcover. 'Cover' - covering a table for example - means that you put bits of paper on it until you can no longer see the colour of the table but only the white of the paper. But the bits of paper may overlap or go beyond the edges of the table. This is called a cover.

If we take as our space F the square in diagram 2, that we introduced earlier, and we cover it with open sets, we get the following schema:



I cover the square in diagram 2 with discs $O_1, O_2, O_3, O_4, O_5, O_6$ etc., which do not contain their limits. This family of open sets, which may be infinite, covers the square (they are the bits of paper placed on the table). This is the sense of the term cover. I assume that the number of discs is infinite.

So, what does the property of compactness tell us in this context? We can say that a space F is compact if for any open cover on F , one may obtain a finite subcover, that is, only a finite number of discs is necessary to cover the place and there is thus no need to refer to an infinite number of them. What is interesting about the property of compactness is that one can move from the infinite to the finite. The finite number of discs gives the same effect, then, as the infinite number.

With the male side, there is a requirement of the infinite; with the female, we move from the infinite to the finite. But we are dealing with the same compact space, in other words, the space of sexual jouissance. This means that if the compact big Other is covered by an infinity of open sets, a certain, finite number of them will be

enough to cover it; hence the infinite collection is not necessary.

Lacan draws certain conclusions here as to feminine sexuality. The structure indicates the way in which a woman will approach the question of how she can be attained. How can we understand this? If the compact space allows one to transform the infinity of the big Other into the finite, we no longer need an infinite number of open sets: we are able to cover our space of sexual jouissance (represented by the compact space) with a finite number of sets. These open sets, Lacan says, represent women: "... these spaces can be taken, one by one - since it is a question of the other side, let's put them in the feminine - one by one". If we take each woman - open set - one by one, we will attain the compact space linked to the existence of the Other. That is the basic idea.

Lacan gives the mythic illustration of Don Juan. Don Juan, he says, is a woman's phantasy, or better, a feminine myth. After all, these are not identical: for Lacan, a myth aims at the real, at structure, and is always equivalent to a formalisation, whereas a 'phantasy' evokes something more imaginary.

Don Juan is thus a 'character' - I think that in the myth he does not really represent a man (a point to which we will come back) - he is a character who has the reputation of making a list of women (the famous *mille e tre*): he takes women one by one and makes his list. Lacan seems to be saying that women see things in this way (the feminine myth). This does not mean that they can only have relations with Don Juans, a fact confirmed by the clinic.

Contingencies

Let's try to tackle this question with both the story of Don Juan and the idea of compactness. Assume a woman to be one of the open sets of the compact space. Within this infinite number, a certain finite number of open sets (or women) will allow one to attain the space A, the space of sexual jouissance, but one does not know which ones, the theorem fails to tell us. We do not know which open sets will end up as the cover. We do not know where to start or to finish and, even worse, we could take an infinite number of open sets without any of them forming a cover. So we do not know how to proceed and there is no method to tell you in what order to try. This introduces a dimension of contingency which is very powerful for women. The finite number is aleatory - we don't know who the right ones are: we don't know what the right number is (1, 2, 3, 50,000,000 etc). All one can do is to count the open sets which have already been used: we tried such and such an open set and it did not work.

Lacan stresses the importance of the 'one by one' in the compact space: we try the open sets one by one, in a succession, we take one woman after another, but in an aleatory sense. And, he says, this is what the masculine sex is for a woman. The feminine myth of Don Juan is the way in which a woman understands how the opposite sex proceeds to encounter her. What does this mean? Lacan specifies that the 'one by one' has nothing to do with the One of universal fusion ($i(a)$), Freud's Eros. The 'one by one' in question is linked to the continuum of the Other (as illustrated by compactness equivalent to this idea) and not to the One of love. It is a question of the One of succession, to the extent that this is required by the structure of the Other. Indeed, the structure of the compact space requires that one tries out the open sets to produce the cover of the space one by one. The structure thus

allows us to differentiate the 'one by one' and the One of union and fusion. The One in question here is the One which is based on the continuum of the Other (the infinite aleph 1). As Lacan says at the end of the chapter, it is the Other which requires this 'one by one'.

So, what about the *mille e tre* of Don Juan? Rank, who wrote an essay on Don Juan, says that he is a "fantastic figure". That's nice! What is so interesting is that he represents the aim for the infinite and the not-all, the aim towards the continuity of aleph 1. Don Juan's list is finite - *mille e tre* - at the moment when he is counting, but we do not know if he has covered the space. Perhaps, a woman may think, perhaps I will be the one needed by the list to attain the Other. Perhaps I am the open set which is needed by the finite number to cover the compact space. This is possible. We are in the field of the possible, but only on condition that we accept contingency. For, after all, it is certainly possible (even if rather difficult) that a woman, by some contingency, be the open set needed to cover the compact space. Hence the special importance of contingency at play in the not-all. In other words, how does a woman situate herself in all this? In the list, or outside the list? I think that the key to the story is that it is women who are outside the list, as well as the fact that they think they are outside it even if, in fact, they are within it. This is the case, moreover, for Dona Ana, the commander's daughter, the one whom Don Juan had at the start and who tries to find him again. Even if a woman has counted herself once on the list, she may still consider herself as not belonging to it. In other words, this situates a woman, one who has the myth in her head, as 'minus one': perhaps I am the 'minus one' lacking from the list, the one needed to cover the compact space, in order for him to make me Other. Lacan says, indeed, at the end of Encore, speaking of man: "... the Other cannot be added to the One. The Other only differentiates itself from it. If it does participate in the One in some way, it is not in the sense of an addition".

This is what Lacan has just been telling us, that the Other is not equal to 1 plus 1 plus 1 plus 1 plus...exactly what Achilles assumed: 1 plus 1 plus 1 plus 1 plus steps and perhaps I will get there? Lacan thinks that this is impossible. "Because the Other - as I have already said, but it is not sure that you were listening - is the One-less. It is due to this that in any relation with a woman - the one position of cause (as object a) - will be taken from the perspective of the One-less". And now he refers to the start of the Encore seminar, where he had said that "I already showed you this in relation to Don Juan". That is, a woman situates herself as One-less on the list. What matters is not being in the list, but trying, on the off chance (the same off chance that Lacan discusses in Télévision) to prepare herself to be, perhaps, the last open set needed to cover the compact space of the "embracing one another". This is one way of understanding why Lacan writes $A = (-1)$, that is $S(A)$. Ultimately, the compactification on the side of woman illustrates this very well.

In other words, if a man takes a woman from the perspective of the One-more (*l'Une-en-plus*), thus making her equivalent to phallic jouissance, (what he always, in a sense, does, since he follows the example of Achilles), he has ruined everything! The only way to take her correctly is to manage to always leave her in the place of the One-less (the one who is lacking from the list, needed to complete the cover of the compact space), so she will remain Other both for him and for herself.

We could also make a link here between the One-less, this 'logical' feminine 'requirement' - "... the Other which is incarnated, if we can say, as a sexed being (the woman), requires this one by one" (Encore, p. 15) - and the expression used in L'Etourdit where Lacan refers to the requirement "to be the only one". Can we link

these two requirements? I believe so; the One-less is unique, she is specified precisely as being the one who makes the finite equal to the infinite. The finite of the cover of open sets is equivalent, thanks to her, to the infinite of the initial cover represented by compactness, that is, the infinity of the not-all, the continuum. Now, the demand “to be the only one” in L’Etourdit evokes a surplus, on overtaking the Other jouissance in relation to phallic jouissance. And the One-less is not the same as the One-more: there can be many One-mores, but there can only be one One-less.

The interest of this compactness property is thus clear, as it brings the infinite to the finite in an aleatory way and introduces contingency on the woman’s side as something fundamental: the bet on chance of a woman who tries to lend herself to the man’s phantasy. In other words, the not-all is not the infinity at the horizon, it is not the idea of the infinity of Eros as union, universal fusion, it’s next to you, between two doors as Lacan puts it so well in Encore: “Perhaps you noticed - I am speaking here naturally to some semblants of men that I see here and there, luckily for most of them, I don’t know them, thus I am not prejudging anything as regards the others - like this, from time to time, between two doors, that there’s something which gives them a jolt, the women, or which assists them” (p.69). He is playing here on the words *secouer* (to give a jolt, to rouse) and *secourir* (to assist), and clearly the “between two doors” refers to something like the brevity of an encounter, something sudden, improvised, contingent. This really is not the idea of an infinite love on the horizon. It indicates that the infinity of the not-all implies: it is next to you, not in the distance, perhaps, but you do not know it, it is completely contingent. You might, for example, pick open sets at random an infinite number of times and you would never get the right ones. And there are certainly women who put themselves in this situation. If one sees Don Juan as a feminine myth, one may think of a woman’s strategy. One can imagine several variant cases here: those who avoid trying since they are too afraid of being One-less: those for whom all that matters is being One-more to be inscribed in a list and who will never be One-less, even if she collects lists. I want to stress the fact of contingency, which Lacan does not discuss in chapter 1 of Encore, but which is a consequence of the use he makes of compactness.

The ‘Feminine Myth’ of Don Juan

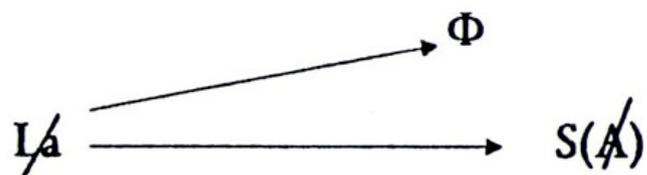
For Lacan, Don Juan is thus a feminine myth, the logic required by the Other. Is he a man? I do not think so, even if Don Juan is provided with the phallic One and incarnates an inextinguishable desire. Lacan often puts man on the side of desire, even if he does grant desire to women - remember the famous sentence where he speaks about a jouissance which has to realise itself in the place of masculine desire (Écrits, p.735) - but for Freud, desire is masculine libido. Don Juan incarnates a desire which is not satisfied, since he is forever continuing the list: from this perspective, he is thus an incarnation of male desire.

But we have seen that the list only counts for the one who doesn’t already include herself there. In other words, one must distinguish Don Juan from what Lacan calls the ‘At-least-one’ of the hysteric, i.e. the man with whom the hysteric identifies in order to approach femininity. This is, for example, Mr. K for Dora, the one in whom she is reflected, the one she always needs as a support. Thus one encounters certain women in the clinic who fall apart when they don’t have a man, as they need to have a medium for desire. For these women, desire is desire of the Other and

thus they desire nothing if there is not a man there desiring and who allows them to pose the question of femininity: what am I for you? Or what is she for you?

This shows us, furthermore, that it would be mistaken to interpret Don Juan in the light of the function of the Other Woman in hysteria. There is a delicate relation here between hysteria and femininity. It would be easy to say that the one whose phantasy is to have Don Juan as her man would be a hysteric, since she could only desire when another woman is put in the place of the cause of desire for her (the hysterical triangle). But Lacan does not say that Don Juan is a hysterical myth: he says that it is a feminine myth linked to 'one by one' and not to the At-least-one. What counts in the logic of the story is the 'one by one' - to be the One-less - and not that there exists an At-least-one. The woman is situated here on the side of a minus, whereas the hysteric situates herself rather on the side of the existence of the man, so as to pose the question of femininity through the figure of another woman.

Likewise, we cannot say that Don Juan is the big Other since he is on the side of the One. He is still the one who makes the list, one by one. In fact, we could say that the matheme of Don Juan is that which Lacan gives for the not-all in Encore:



He says that if she is not-all, it is due to her division between Φ and $S(A)$. This shows that the not-all is not equivalent to $S(A)$. The not-all is the "doubling between Φ and $S(A)$ " in terms of jouissance. Hence we cannot situate Don Juan simply on the side of Φ or on that of the Other, even if this is the way that the feminine myth accedes to the Other jouissance (this is how the Other jouissance of a woman could be logicised). Now we understand why Don Juan is a feminine myth. On the one hand, he is on the side of Φ , to the extent that we have the 'one by one', there is a One involved (the One of repetition, of succession), but on the other hand, this 'one by one' only takes on its value due to the One-less [$S(A)$] equivalent to the Other. We could thus write :

- 1) $A = 1 \text{ plus } \dots \infty 0$ (false)
- 2) $A = \infty 1 \text{ minus } 1$ (true)

On the first line, we have a false formula, according to which the Other would be equivalent to 1 plus 1 plus 1 plus ..., the schema of Achilles. On the second line, we have the formula which we deduce from compactness on the woman's side: as an encounter, it is the infinity of compactness represented by -1; (minus 1) being the point where the woman situates herself, the One-less, and also, the matheme of the proposition "The Woman does not exist". Lacan says in Seminar XVII: "privation of the signifier". He refers to privation here, not of the woman but of the privation of the signifier of The Woman.

Let us now turn to the myth of Don Juan in the evolution of Lacan's teaching: in 1957

in the Object Relation seminar, Lacan sees Don Juan as the one searching for the phallic woman: he is thus already looking for The Woman. And, Lacan says, he only finds her in the 'silent guest', that is, the stone guest, the commander, Dona Ana's father, and hence, the dead father, which he says is a beyond of the woman. This reminds us of the 1958 texts on feminine sexuality. He is basically constructing an equivalence between The Woman and the point beyond the woman represented by the stone guest linked to the dead father. It is not exactly the 1958 link between the 'ideal incubus' and feminine jouissance, but almost.

The Stone Guest

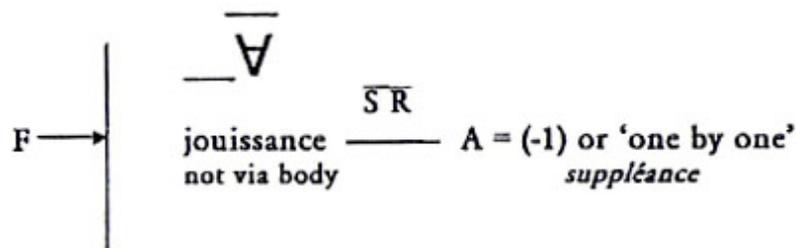
In his seminar on Anxiety, Lacan stresses Rank's idea that there is a link between Don Juan and the priest who deflowers on the wedding night. As Rank says in his 1922 text : "It is inadmissible to consider the Don Juan legend only in the Freudian sense and explain it in terms of the father complex". In other words, he thinks that we are not in the Oedipal register. This is very Lacanian. He sees in Don Juan a superhuman figure who knows neither expiation nor repentance and who doubts God. He then notes the parallel between Don Juan and the spectre who comes to visit the virgin. He refers to a play in which a grave-digger, having disturbed a dead body which had protested, had then, as a joke, invited it to his wedding night: on the day of the marriage, the spectre arrives to enjoy the young woman before he does. This is the same structure as the ideal incubus who arrives before the partner. You see the link with the taboo of virginity here, the idea that one cannot touch a virgin because she is dangerous and hence that someone has to do it first: a deflowering priest, an ideal incubus or sometimes someone sent from God. Rank elaborates this train of thought. He refers to the Book of Tobias in which only someone sent from God, can make a young woman accept a man when she always rejects them. Someone sent from God, someone divine, can come and visit a virgin to make her future sexual relations possible. We find once again, the ambiguous figure of the ideal incubus, not a man but a figure of jouissance which authorises desire. Already in 1958, this point involves an appeal to God and the Other jouissance via the person of Christ. Indeed, we see that this is an ambiguous point situated between Φ and the S(A). Rank also says: "Don Juan's situation in relation to the husband is thus not strictly speaking, that of a rival, but that of a God sure of his victory in relation to the mortal husband". Lacan says that Rank had a good idea here. The divine person comes to give its soul to the virgin (Freud takes this up in the Taboo of Virginity), so that she can transmit it to her child and so that the husband does not lose his own soul. This is amusing, as Rank concludes that the woman plays a very active role in the development of the character of Don Juan. Indeed, at the end of his discussion, he says that Don Juan is a liberator of women! He becomes almost the first feminist in history, since he deflowers women and does them the service of making them women without wishing to keep them for himself: thus he liberates women.

Also interesting here is that the first Don Juan, whom I thought was called *el burlador*, is actually called *el infamador* (he who renders infamous) and Lacan often plays on the word 'defame', '*dit-femme*' etc. We can thus say that Rank puts Don Juan on the side of God, of the soul, of spirituality and that, due to this, he opposes him to the sexual partner whom he puts on the side of pleasure in marriage. This is the very same dichotomy that we find in Lacan's 1958 formulation. To end his discussion. Rank quotes a poet, Lenau, in this very Lacanian passage: "My Don Juan is not a full-blooded man eternally chasing after women. In him there lives the desire to find the unique woman who incarnates the femininity in which he could jouir

with all the women on earth, because he cannot possess them all individually one after another". There is thus the idea that he is searching for The Woman since he cannot possess them all individually one after the other: he did not have the idea of compactness which turns the infinite into the finite.

Given these developments, Lacan remains, in the Anxiety seminar, quite close to what he says in Encore, as there is the idea of someone who incarnates The Woman. Don Juan is a feminine phantasy, he is like a woman since, like her, you cannot take anything away from him (woman because she does not have anything, him because he can always jouir with another woman), he is thus an uncastratable figure.

In the conclusion of this chapter, Lacan links the sexual jouissance of women to the not-all, and what characterises this, in contrast to men, (for whom jouissance passes via the object *a* as jouissance of the body as asexual), is that jouissance does not pass via the body (already in 1958 Lacan constructed a circuit which was not anatomical). And how does the woman make up for the absence of the sexual relation? By means of a logical demand ($A=(-1)$, the demand for 'one by one' or for the One-less) which results from the logic required by the compactness of sexual jouissance due to the presence of the Other. He says elsewhere that a woman has a relation with the unconscious and with the object *a* : one should not exclude her relations to them.



We should point out that psychoanalysis is not very effective in making up for this. This is my personal opinion. Of course it allows Lacan to formulate its structure, but it remains true that to the extent that psychoanalysis affects the unconscious, it works on the phantasy and does not really go far in effecting this essential compensation. This does not mean to say that we can't know anything about it when a woman is in analysis, but it remains rather on the side of something which we can glimpse, between two doors, but which cannot be constructed in the analysis itself.