

MICHAEL FRIEDMAN,
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PSYCHOANALYSIS: TOPOLOGICAL PERSPECTIVES

New Conceptions
of Geometry and Space
in Freud and Lacan

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NEW CONCEPTIONS
OF GEOMETRY AND SPACE
IN FREUD AND LACAN

[transcript] Psychoanalysis

Michael Friedman, Samo Tomšič (eds.)
Psychoanalysis: Topological Perspectives

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Contents

Introduction

That Obscure Space of Thinking

Michael Friedman and Samo Tomšič | 7

PART I

THE SPATIALITY OF THOUGHT

Psychoanalysis and Topology – Four Vignettes

Mai Wegener | 31

Why Topology?

Dominiek Hoens | 53

Voice and Topology: The Tiny Lag

Mladen Dolar | 63

Towards a New Transcendental Aesthetics?

Samo Tomšič | 95

PART II

THE MATERIALITY OF TOPOLOGY

Secret Topology

Lacan's Optical Models and Schemata as a
Combination of Mathematics, Media, and Art

Claudia Blümle | 127

Torus and Identification
The Beginning of Lacanian Mathematics
Michael Friedman | 153

The Unreadable Letter
A Topology of the Image-Knowledge
Renen Amir | 191

The Spatiality of Being
Topology as Ontology in Lacan's Thinking
of the Body
Rona Cohen | 227

List of Figures | 251

Authors | 253

Introduction

That Obscure Space of Thinking

Michael Friedman and Samo Tomšič

1.

Psychoanalysis, whether one likes it or not, represents a deep epistemological break in the history of knowledge. With its invention, modern scientific revolution entered the terrain of human objects and subverted the way we conceive society and subjectivity. By demonstrating that thinking is deprived of stable centre, and consequently by dethroning the conscious ego as the predominant instance of mental life, Freud rigorously showed that thinking is essentially a form of alienation, a conflictual process, which consists of complex spatio-temporal relations. If the discoveries of early modern physics progressively led to the simple yet crucial insight that the universe knows no centre, and evolutionary biology to the recognition that life is a dispersed and non-hierarchical process, then psychoanalysis brought about yet another decentralisation: the space of thinking is no longer understood as rooted in a clear-cut division between the inside and outside, but instead appears paradoxical, curved and traversed with ruptures, folds, gaps, condensations and displacements. Freud from the very outset traced these structural dynamics in the multiplicity of apparently marginal psychological phenomena, such as dreams, slips of tongue, jokes, forgetting,

déjà vu, etc.¹ In doing so, he inverted the standard procedures in explaining the *modus operandi* of human thought: rather than describing it from the perspective of what seems most stable, graspable and even normative, namely the conscious ego, he clarified thought-mechanisms from the perspective of their disturbance or disruption, destabilisation and out-of-jointness. The concept of the unconscious is the concentration of this out-of-jointness in thinking: constitutive rather than accidental, normal rather than abnormal state of mind. Since the invention of psychoanalysis, thinking no longer points toward a consistent substance, which “thinks, therefore it is” (Descartes); it is no longer analysed from the imaginary perspective of solidified consciousness but from the impossible perspective of impersonal disturbances. This shift of perspective essentially defines thinking in terms of constant exposure to errors, for which a rigorous analysis demonstrates that they do not simply come out of the blue, but already point toward a rational network of mental associations, symbolic chains, which intersect, intertwine or short-circuit one another – and thus constitute what we normally understand as thought processes. In a word, this immanent instability and dynamic logic of thinking surely contrasts with the centralised model of mental apparatus, but it also unveils the actual status of consciousness. This is where the topological reference most decisively enters the picture: consciousness is not simply dismissed as something illusory, but instead redefined in terms of surface. In relation to this surface, the unconscious does not stand for some hidden depth of mental life, but rather for an immanent anomaly on the surface of consciousness, its anamorphosis (cf. Lacan 1998: 80–89). In this way, psychoanalysis abolishes

1 | This is Freud's own minimal epistemological account of the modern scientific revolution, which is condensed in the three proper names: Copernicus, Darwin and Freud himself (cf. Freud 2001 [1917]: 139–144).

the standard dichotomies such as “surface and depth”, “inside and outside”, and even “consciousness and the unconscious”.²

In Freud another important insight announces itself, namely that the space of thinking *and* the space of language share the same characteristics and need to be thought together in a specifically materialist way. The question was – and in the light of recent disputes regarding the notion of matter and the conception of materialism, it still remains a question – how to conceive this materialist orientation? It is needless to recall that Freud began his career as a neurologist, and his later, psychoanalytic work remained bound to the ideals of “hard science”, even to the positivist worldview, according to which (to paraphrase Friedrich Kittler) any reference to “spirit” should be exorcised not only from the human sciences (*Geisteswissenschaften*, literally “sciences of spirit”) but from the conception of science in general.³

The persistence of neurological, biological, chemical and thermodynamic metaphors in Freud’s work is overwhelming; and despite the striking evidence of the symbolic character of unconscious formations, there is disappointingly little trace of linguistic references, and none of mathematics, geometry or topology.⁴ In this respect, the implications of Freud’s theories and discoveries were already embedded in

2 | It is well known that Lacan was not satisfied with the term “the unconscious”, claiming that it was misleading due to its negative connotation. As negation of consciousness it still left room for the primacy of consciousness (cf. Lacan 1990: 5).

3 | It is also needless to remark that the technicist epistemology of this peculiar crusade against “spirit” ended up ignoring the speculative dimension of “hard sciences”, promoted an impoverished conception of scientificity and often fell into vulgar technicist reductionism and empiricism.

4 | The linguistic “authorities” are most often poorly chosen, for instance Karl Abel and his speculative theory of primordial words [*Urworte*] and of their antithetical meaning (cf. Freud 2001 [1910]: 155-161). For a broader discussion of Freud’s relation to Abel, cf. (Benveniste 1966: 75-87; Milner 2008: 91-120).

different epistemological constellations and implied other scientific alliances than the father of psychoanalysis could acknowledge. It was with Jacques Lacan's epistemological and linguistic turn in psychoanalysis, his return to Freud based on the structuralist research program (Saussure, Lévi-Strauss and Jakobson) that the psychoanalytic theory and practice obtained their formalist-epistemological grounds. In Lacan's teaching mathematical formalisation, topological models and the method of structural linguistics predominate in the theorisation of human thinking and direct psychoanalysis toward a more counter-empirical notion of materiality than the Freudian biological and energetic materialism.

This does not mean to suggest that Freud did not have any insight into the actual spatial nature of the human mental apparatus, but that his efforts to ground psychoanalysis as a positive science of the mind prevented him from exploring complex epistemological connections, which would more "adequately" visualise and spatialise the processes his clinical work exposed in the human mind. While Freud was still preoccupied with providing a convincing affirmative answer to the pressing question "Is psychoanalysis a science?" this merely testified that he more or less adopted a hegemonic conception of scientificity, precisely the positivistic one, accompanied by a narrow empiricist interpretation of the experimental character of modern science. Ironically, positivistic epistemology could not be more incompatible with psychoanalysis, since it privileges the cognising value of science, the progress of consciousness, and thus perpetuates the correlation of science with the subject of cognition. The "scientific ideology" (Canguilhem) in question reduces the entirety of subjectivity to consciousness, whose historical-conceptual root is sought in the Cartesian cogito, this modern formulation, one could argue, of the philosophical ideal of "identity of thinking and being" (Parmenides). The empiricist and logical-positivist notion of scientificity, which

remains the predominant spontaneous epistemology in the majority of (natural and human) sciences, recentralised scientific practice on the narrow problematic of human cognition, and by renewing the primacy of consciousness in the production of knowledge it effectively re-psychologised science. Let us not forget that the Freudian concept of the unconscious introduced something unprecedented: a form of “knowledge that does not know itself” (Lacan 1999: 96, transl. modified), in other words, a knowledge that does not constitute a stable “corpus”, but is instead traversed by dynamics, instabilities, inconsistencies and disclosure. This form of decentralised and depsychologised knowledge – for the Freudian unconscious is precisely *not* a psychological notion – implies a dialectical conception of scientificity and experimentation. The privileged sign of scientificity consists in the way thinking uncovers, mobilises and theoretically grasps the instability and dynamic of the real, be it physical, biological or (when it comes to society and subjectivity) discursive. Lacan introduced the concept of *pas-tout* (not-all) in order to draw attention to the problematic character of the scientific object, including the object of psychoanalysis.

Freud was rightly concerned that the scientific character of psychoanalysis would not be recognised under the reign of the positivistic worldview, which makes it all the more striking that he persisted in it. Lacan, however, no longer asked the question that tormented Freud. For him, the crucial question was not: “Is psychoanalysis a science,” but rather: “What is a science, which includes psychoanalysis?” (Lacan 2001: 187) This shift sufficiently shows Lacan’s engagement in questioning positivistic epistemology. Moreover, if modern scientific innovations indeed brought about a radical epistemic revolution, also in the sense that they revolutionised both social and subjective reality, then this already suggests that the effects and consequences of science lie well beyond the conscious intentions of apparently neutral human

observers. Such an observer position is inevitably fictitious. Indeed, a more critical, and one should add, dialectical and materialist epistemology is required in order to account not only for positive achievements of various sciences from Galileo via Darwin to Freud and beyond, but also for the immanent conflictuality, deadlocks and failures, which are no less essential components of the structure and logic of scientific discourse. Moreover, while the first two proper names, Galileo and Darwin, still serve as authorities that apparently legitimise the reductionist notion of scientificity, the latecomer Freud introduced a systematic disturbance, an epistemic anomaly. He did this precisely by turning into an object of scientific inquiry only such mental phenomena, which seem to lack meaning and consistency and which therefore appear enigmatic, nonsensical and irregular both to the conscious observer and to the positivistic “man of science”.

Or, did not the displacement, which laid the foundations of modern scientificity, consist in something similar? Did Galileo not strive to explain precisely the irregularities in the movements of celestial bodies that the Ptolomeian and Aristotelian physics failed to account for? He could only do so by ignoring the fact that the universe *appears* to the human observer as a harmonious, totalised and well-ordered reality. In other words, Galileo no longer strove to explain the phenomena and save the world of appearances, but instead dissolved them in his attempt to theorise the anomalies that puzzled the conscious observer and pushed the premodern scientific doctrines into serious dilemmas. Furthermore, did not Darwin's theory of evolution achieve something similar in relation to appearances in the biological world? That is to say, Darwin's achievement went precisely against natural history, philosophy and religion each of which still strove to preserve the human exception by placing it once again at the apex of the hierarchy of beings. The philosophical and

epistemological kernel of biological revolution consisted in the fact that Darwin included among the defining features of life the possibility of error.⁵ Throughout modernity revolutionary sciences on all major levels of experience progressively inverted the premodern paradigm by ceasing to translate physical, biological or any other reality into what human consciousness valued as the perfect form or harmonious order. By contrast, the scientific revolution accomplished the turn from appearances to the real. In this universe, sciences old and new henceforth transform the instabilities, irregularities and negativities that seem to disrupt the world of appearances into epistemic objects.

With Freud, psychoanalysis entered the scene as something like a science of errors *par excellence*, since it demonstrated that the perspective of error could not be exempted from any form of thought, not even the scientific one. Lapsus, failed actions, dreams and jokes, these and other mental phenomena seem to be furthest from the appearances of coherent and logically consistent conscious thought; nevertheless, they are thought in action. Furthermore, these marginal phenomena know complex bodily manifestations, all of which suggest that the materiality of thought is more problematic than neuroscientific monism allows us to think. To paraphrase Lacan, once the unconscious is at stake, we are no longer dealing with one single substance (body), but can also observe that two substances (body and mind) are not yet in question either.⁶ The materiality of thought is rooted in a grey zone between the mental and the neuronal, a zone that every reductionist monism and metaphysical dualism failed to thematise. One should therefore not exorcise the “spirit” too

5 | We can recall the role of error, irregularity and abnormality in Georges Canguilhem's epistemology of biology (cf. notably Canguilhem 2009: 204-205; Foucault 1998: 476-477).

6 | The paraphrased passage from Lacan concerns God (cf. Lacan 1998: 77).

quickly from sciences, since the “spirit” in question stands less for the metaphysical soul or immaterial thinking substance and more for the negativity, conflictuality or tension in the relation between the neurocognitive process of thinking and its objective outside (whether this “outside” is inside or outside the human mind). Psychoanalysis brought about a double rejection: it most decisively rejected the dualism of body and soul (its rejection is engraved in its very name: *analysis of psyché*, dissolution of the soul), and also refused to simply embrace the emerging reductionist monism of the neurosciences.⁷

Psychoanalysis conceives thinking as a material process traversed by negativity, reducible neither to immaterial substance nor to cerebral processes without remainder. This negativity assumes different forms, from the already mentioned discontinuities of conscious intentionality and speech, via the “splitting of the ego in the process of defence” (Freud 2001 [1940]: 275–278) up to the minimal gap between the enunciation and the enunciated in Descartes’ formula of the cogito that Lacan rewrote in the following way: “I think: I am” (cf. Lacan 1998: 36, 140, 224) – whereby the I that is associated with thinking is not throughout identical with or reducible to the I that is linked with existence (the I, whose being provides the content of thought). The physiological materiality of thought is always contaminated by another

7 | A possible meaning or interpretation of Lacan’s question “What is a science, which includes psychoanalysis?” could be the following one: what notion of scientificity follows from the fact that in the modern epistemic horizon various sciences, at a certain level, seem to *emancipate* themselves from the conscious human observer and thus from the ideal of cognition as a centralising-stabilising instance and ultimate point of reference? Thus Lacan’s question implies a struggle for a sophisticated notion of scientificity, which does not understand science as a neutral terrain of continuous progress, but rather as a conflictual space, in which, in the last instance, *ideological* confrontations always-already take place.

materiality, that of alienation, and as Lacan never tired of repeating, the materiality of the signifier;⁸ in other words, what is at stake is the materiality of relations, given that a signifier is nothing but a relation of difference to another signifier. This materiality of relations and its link with the nature of thinking is underlined in another famous Lacanian *bon mot*, according to which “man thinks with his object” (ibid: 62). With this rather enigmatic remark Lacan rejects both the metaphysical association of thinking with the soul and the neuroscientific reduction of thinking to cerebral processes. In both cases we are dealing with essentialism, which misses its object by reducing thought to either immaterial or material substance. Lacan’s remark contains a crucial critical point, which leads to the core of psychoanalytic insights into the nature of thinking, namely that thinking – because it knows no stable and fixed centre – is a constitutively relational process, taking place both inside and outside. Again, what is at stake in this process (whose correct placement is precisely this futile border, this topological grey zone between inside and outside) is not mind-body dualism but a split of materiality. One could say that thought is a loop within matter, a loop, which has been most often misperceived as active sign of a supposedly immaterial substance.

The second crucial aspect of Freud’s discoveries concerns the insight that the alienated nature of thinking is conditioned by nothing other than our most everyday tool – language. The linguistic character of the unconscious stands in the foreground of Freud’s founding psychoanalytic works (*Interpretation of Dreams*, *Psychopathology of Everyday*

8 | Not only the phonetic materiality of the signifier or the materiality of writing is at stake here but also and above all what Freud’s early work examined under the problematic of conversion of the psychological into the physiological. This conversion testifies that the symbolic networks, the networks of signifiers are endowed with the power to produce effects in physiological materiality simply through their associative connections.

Life, Jokes and Their Relation to the Unconscious), where the discovery of what Lacan at some point called “the causality of the signifier” is directly confronted – the fact that thought is the affect that language causes in the living body.⁹ Consequently, the materiality of language, too, can be thought in two ways: the reductionist neuro-linguistic way, which conceives it exclusively as tool of communication developed through the evolution of the human brain; and the psychoanalytic way, which reveals in language the materiality of relations, whose consequences escape the traditional conception of language as communicative *organon*.

2.

Hence, the problematic that Lacan rediscovers in his return to Freud is exactly how to conceptualise language as constitutive alienation, as thinking with object. This conception avoids both reducing language to an organ and to a collection of fixed signifiers in the form of geometric, unsplittable points. What is sought is a crossing of this scientific reduction, a crossing that shows the always-already embroiled, instigated and interlaced relations between man and his objects, between body and mind, between the mind and his organs. Following Freud and Lacan, psychoanalysis deals with the constant subversion of the inside-outside relations that the above-mentioned reduction hints towards. Why constant? Because despite the epistemic revolutions, whose consequences also reach the space of thinking (e.g. Kepler’s mathematisation of elliptic movement) – man continues to think in a spherical space, a space that ancient and medieval science valued as

9 | “Thought is not a category. I would almost say it is an affect. Although, this is not to say that it is at its most fundamental under the aspect of affect. There is only one affect.” (Lacan 2006c: 150)

conforming to the ideal of perfection (cf. Lacan 1999: 43). To reshape science or scientificity in such a way that it would include psychoanalysis means to insert an intrusive element into science itself, an element that would be constantly disruptive. In so doing, scientific language would emerge as what makes man think with objects – and this is indeed *objective* thinking in the strongest possible sense, thinking *qua* constitutive form of alienation. What this disturbing, intrusive element signals towards is the contingency of the materiality of relations; at the same time it warns against the meaningful overinvestment or fetishisation of jokes and chuckles, slips of tongue and “random” coughs. Jokes, sniggers, pauses in the middle of the sentence, each point towards what cannot be written in language, towards its object-character. But one should always bear in mind that coughing and chuckling, being other examples of the embroiled relations with language and thought, are not just “new” Freudian mechanisms by which one can simply understand the operation of language. By contrast, they indicate non-writable, unimaginable ruptures in language, thus signalling the shaken, ever-changing and ever-becoming border of language between the inside and outside.

This is where topological thinking becomes the Lacanian Other scene, if one might use this expression. However, by topology we mean not only different ways or strategies for producing topological objects (e.g. different ways of attaching the edges of a flexible square piece of paper in order to obtain a model of a torus, a Möbius strip or a Klein bottle), but rather the various mathematical apparatuses, that show the topological-material dimension of language itself.

It is important to note that mathematics here for several reasons does not constitute a new language or a “metalanguage”. Firstly, metalanguage in the strict sense of term does not exist, because every metalanguage inevitably carries the structural characteristics of any other language,

in relation to which it situates itself as “meta”. One could thus say that there is always something fake in the “meta” status of a language. In addition, one could also say that every language is a metalanguage, or differently, that there is nothing but metalanguage, since there is no other option of speaking of a language than to assume the position of another language, be it formal or natural.¹⁰ Secondly, mathematics does not attempt to reinstate a position of one language, as with the reductionism of the body-mind dyad to an instance of simple materialism, where everything is grounded and founded on how one atom relates to another and how one neuron transmits its signals. In short, a mathematics is not at all the mathematics. And thirdly, a reduction to an axiomatic approach beckons again toward a separation of inside and outside, i.e. toward a “natural” basis that is always-already written and might be known, which exists once the subject is inaugurated. This basis may be covered by the habitual layers of language, “clean” from chuckles and coughing, where from time to time, slips of tongue, jokes and the forgetting of words may indicate its founding structures. Presenting the linguistic phenomena in that way, where a key – here by way of language – might be retroactively discovered in order to decode the mysteries of language and hence the being of the subject, would reintroduce in the foreground the mere isolation of special instances of language. The emphasis and isolation of these instances would constitute singular anchoring points, just as the axioms are singular sentences of an axiomatic system, such as in geometry, where they constitute the entire system, but have no justification of their own other than the fact that they “successfully” function, regardless of the definition of “success”. In short, even while in the modern

10 | It comes as no surprise that Lacan saw in translation an activity that deals precisely with this double character of metalanguage: its simultaneous inexistence and omnipresence.

conception of axiomatic method emphasis was given to the constituting relations, from which different elements and their characteristics are derived, these relations, although decentralising, are still stabilising. But why does this establish an inner-outer relationship? This is since epistemologically, seen in that way, these anchoring points are always-already fixed, in a fixed zone, where they constitute an inside. This is despite the fact that from them new and surprising results and instances of the subject's being may pop up, long after the discussed domain has been predominantly considered both mechanised and exhausted.¹¹ This zone could be seen as an inner domain once an overinvestment of these "quilting points" (Lacan) is accomplished, leaving them untouched. By seeing these anchoring points in that way, one might assume it is the key to explain outer symptoms and behaviour in general, i.e. what takes place outside. Hence, the effects of these inner anchoring points could be considered as an outside, an outer zone. However, the effects and the results of this 'inner' structure are to be seen on the surface and what is written on it (in terms of symptoms, for example). Thus it is exactly the problematics of this surface that ought to be called into question, and not its 'inner' singular points. More precisely – not only is there nothing inner to these anchoring points, which is obvious from the topological understanding of the unconscious, but also that these singular points are always decentralised and not at all fixed.

With topology Lacan emphasises another interlacing of mathematics into the non-Parmenidean dyad of non-being and non-thinking, and by that he repeatedly decomposes and rewrites, as we noted before, the Cartesian formula "I

11 | This is to be compared to Morley's Theorem in geometry, discovered in 1899, where already in 1837 Chasles remarked that everyone can prove a theorem in geometry and the genius (or the mathematician) that proves is redundant (cf. Bourbaki 1994: 135).

think therefore I am”.¹² Mathematics should be regarded neither as some sort of fiction, nor as a production of social constructs. It should also not be regarded as a science, where the epistemological status of its objects always vacillates between developing the old, creating the new and unveiling what was already there but exists only due to the activity of the mathematician. Another conception can be found in Lacan’s unpublished *Seminar XIII* on the object of psychoanalysis (Lacan 1965-66: 15.06.66), where he talks about what really interested Freud: the *Umschreibung*, being either mannerism or a constant rewriting of what cannot be written. By this Lacan refers to a series of numbers, 1,2,3,4,5 asking what is the “smallest whole number that is not written on the board”. One might think that this number should be either 0 or 6, but in fact, Lacan already indicates that no matter how we formulise the axioms of whole numbers, or different systems of mathematics, or even follow Bourbaki’s methods, this object cannot be written without preface or text, that is, mathematics is always in a process of rewriting itself. Lacan’s remark on Bourbaki is not at all a lapsus. In his famous manifesto “The Architecture of Mathematics” (1950), Bourbaki commented that the structures of mathematics “are by no means finished edifices” (ibid: 11) and that mathematics is “like a big city, whose outlying districts and suburbs encroach incessantly, and in a somewhat chaotic manner, on the surrounding country, while the center is rebuilt from time to time” (ibid).

12 | This disintegration is a recurrent theme in Lacan’s writings, and he uses different mathematical dispositifs to demonstrate it. For example, by associating the loops on the torus with the neologism *pensêtrer* (combination of *penser* – think, and *être* – to be) and the verb *s’empêtrer* (during Seminar IX on identification, [1961-62: 22.11.61]) in order to indicate the non-tautology between thinking and being, or by thinking the infinite converging series $1/(1+1/(1+1/(1+...)))$ as what signals that it is the “I am” – including all the different aspects of being – that enables the “I think” even to be written (Lacan 2006c: 154-157).

The metaphor of architecture is in fact not a metaphor at all, but rather points both towards the structure of mathematics and the structure of the unconscious. Mathematics always rewrites itself, its centres are being rebuilt – i.e. it always goes through a process of decentralisation and it is certainly not a model providing certainty. If according to Bourbaki, “tearing down the old sections with their labyrinths of alleys [...]” gives space to “more commodious [avenues]” (ibid), for Lacan, tearing down the old labyrinths gives rise to the possibility of new labyrinths.

This already sheds some light on Lacan’s different attempts to mathematise the subject and language, or rather to subjectivise mathematics. What is being transmitted with the endless mathematical masquerade during the different stages of Lacan’s teaching? The list of references is indeed without end: it consists of the analysis of purloined letter with formal languages and automata; the different topological terms (compactness, fundamental group) and constellations: torus, Möbius strip, cross-cap, projective plane, knot theory, where knots and links interplay with each other; and the different articulations of mathemes as what can fully transmit knowledge. This partial list always points towards the impossibility of being able to transmit fully anything about the human subject. To emphasise, this impossibility can be conceptualised through mathematics, not through the “mathematical monsters” that operate against intuition, such as Antoine’s Necklace or Peano curve,¹³ but rather as the failure of mathematics to re-centralise itself. This failure, at the core of psychoanalytical subject, is what carries both language and the subject towards yet another but different mathematical problematisation of being.

13 | Cf. (Dieudonné 1975: 42). Note that the cross-cap and Klein bottle can certainly be put under this category as well.

This is what is at the heart of Lacan's use of mathematics: it points towards the dissolution of the immediacy of the dyad being-thinking, a dyad which is presumably always (in the immediate) present, in the immediacy of what in analytical philosophy might be called the basic condition of the mathematical, the $I=I$. Against this dissolution Lacan posits throughout his teaching a different, uncanny pair: the mathematical-mathematisable. Against the immediate present that thinking and being share, the dyad mathematical-mathematisable calls attention to a unique temporality at the intersection of mathematics and the subject of the unconscious. The strange temporality is of course already present in Freud's treatment of traumatic events, which obtain their traumatic status retroactively, and in general, with his handling of the phenomenon of *Nachträglichkeit*. This temporality is conceptualised topologically, when for example the subject is characterised as anticipation, in line with Lacan's famous matheme: "the signifier represents a subject to another signifier". The chain of signifiers is composed endlessly of signifiers that point to following signifiers, in a chain that does not come to a stop, where the subject is to be found in the constant anticipation of "another signifier", which would always, in its turn, point towards yet another signifier. And while this insight hints towards a future project, where the future inconsistencies of language call for a mathematisation that is meant to conceptualise this slipping remainder, in a form of interminable analysis, producing – as in Freud's analysis – the impossibility of coming to a stop, one can hardly overlook that this chain of signifiers already has a spatial-mathematical structure (for example, of the Klein bottle; cf. Lacan 2006a: 58-61). This is affected by *Nachträglichkeit*, where the signification of "another signifier" changes the spatial relations between the first signifier, which has already appeared, and the future signifiers, which will-have-been-signified, i.e. the signifiers-

to-be. This chain is therefore already a mathematical structure, which organises what lets itself be written. However, this already-mathematical leaves a non-writable remainder, opening “a horizon of mathematicity” (Badiou 2001: 128). But to reformulate Badiou,¹⁴ un-clarity is the only thing that this topological horizon opens up; it calls for a further becoming of structure, a becoming which is temporalised and mathematised in terms of the infamous Lacanian use of *futur antérieur*. The topological clash, between what the subject is and what it will have been, comprises the “*caput mortuum* of the signifier” (Lacan 2006b: 38) and calls for the re-appearance of the real, its rewriting.

The real is the mathematical impasse; it “can only be inscribed on the basis of an impasse of formalization” (Lacan 1999: 93). The real is to be found where one encounters the impossible while enforcing formalisation, or rather where there is a resistance to symbolisation. This is not to say, however, that topology resists symbolisation at all costs, which can be easily seen in the field of algebraic topology.¹⁵ To repeat, what should be emphasised here is that the real itself, while encountering this impasse, also has its historicity, its being always re-written. Therefore events in mathematics change the space of thinking, and with it, how the real and its impasses of formalisation emerge. Indeed, in encountering this impasse, it cannot be said that no one can write or inscribe it, but rather that it is always re-written by a *no-one*, by an unconscious, by what is “in charge” of lapsus, symptoms, dreams and daydreaming, i.e. by a constant crossing and

14 | Here is the complete citation from Badiou: “every time we examine something that is presented, from the strict point of view of its objective presentation, we will have a horizon of mathematicity, which is, in my opinion, *the only thing that can be clear*” (emphasis added). The first author thanks Angelika Seppi for fruitful conversations on Badiou and mathematics.

15 | Cf. also (Epple 1999) regarding the origins of knot theory and the early attempts to formalise it.

problematism of the inside-and-outside, of body-and-mind or past-and-future relation. Lacan's persistent use of mathematics shows the necessity of reemphasising the obscurity of the topological space of thinking, its structure and decentralisation. This necessity derives from the confrontation with lapsus and involuntary silences. Instead of surrendering to the famous Wittgensteinian thesis ("whereof one cannot speak, thereof one must be silent"), Lacan shows how one should observe that where one is silent there a subject – both de-individualised and decentralised – speaks topologically. This constant topological decentralisation is necessary before the no-one – concisely, the unconscious – is ossified into the one who thinks (and hence exists), before re-writing a non-written number would be possible; in short, before psychoanalysis itself would emerge from obscureness into "the clearing" (Heidegger); in short, before it would become an organon.

3.

The present volume unites eight interventions, which focus on the general role of topology in Freudian and Lacanian psychoanalysis, as well as on specific contexts, in which this epistemological reference provides insight into the nature of mental apparatus, language and knowledge. The first part is dedicated to the background and the philosophical relevance of the "topological condition" of psychoanalysis. In her contribution, Mai Wegener thus maps the problem from a bird's eye view, following the passage from Freud's spatialisations of the mental apparatus to the main topological models in Lacan's structuralist re-interpretation of Freud's discoveries: the mirror-scheme (the imaginary), the Möbius strip (the symbolic) and finally the Borromean knot (the real). Dominiek Hoens's intervention then continues the exploration

of Lacan's use of topology, drawing attention notably to its contribution to the Lacanian theory of the subject *qua* subject of the unconscious. The subject remains one of the main critical points, around which psychoanalysis articulates its most significant philosophical implications. The texts by Mladen Dolar and Samo Tomšič pursue this philosophical perspective. Dolar turns toward the spatiality of language and addresses one of the most curious linguistic phenomena, inner speech, which can be considered as the privileged entry point of what Lacan conceptualised under the expression "the big Other". Tomšič then directs the debate toward Lacan's critique of philosophy and contextualises the role of topology in Lacan's attempt to construct a materialist transcendental aesthetics, which corresponds to the conception of space and structure in modern topology and non-Euclidian geometries.

This general perspective is followed by the second part, which comprises four specific case-studies. These contributions examine in length the topological *dispositifs* that guided Lacan in his epistemological endeavours. Inspecting various works of art and their distortion of Euclidean space, Claudia Blümle shows how Lacan broke with the imaginary dimension and the perspectival space while formulating his theory of the image. The texts of Michael Friedman and Renen Amir then thematise two topological apparatuses, which emphasise the uniqueness of Lacan's approach to topology. Friedman presents a thorough investigation of Lacan's *Seminar IX* (1961-62), dedicated to the topic of identification. Being the first seminar that deals extensively with topology, Friedman presents how the operation of identification and the torus are knotted together. Amir's contribution, on the other hand, picks upon a problematic from the later phase of Lacan's teaching (*Seminar XVIII* (1970)), the topology of the *littoral* and its subversion of the inside-outside relation. While the various known topological apparatuses proposed by Lacan problematise the above-mentioned relations, the

littoral collapses the ability to even relate to this distinction. The last contribution of Rona Cohen turns to one of the most enigmatic topological objects of psychoanalysis: the body. Examining the spatial structure of the speaking body, Cohen shows the complicated relations between the subject's body, the space that envelops it and its non-specular objects.

BIBLIOGRAPHY

- Badiou, Alain (2001): *Ethics: An Essay on the Understanding of Evil*, trans. Peter Hallward, London/New-York: Verso.
- Benveniste, Émile (1966): *Problèmes de linguistique générale*, Paris: Gallimard.
- Bourbaki, Nicolas (1950): "The Architecture of Mathematics." In: *The American Mathematical Monthly*, Vol. 57, 4, pp. 221-232.
- Bourbaki, Nicolas (1994): *Elements of the History of Mathematics*, trans. John Meldrum, Berlin: Springer.
- Canguilhem, Georges (2002): *La connaissance de la vie*, Paris: Vrin.
- Dieudonné, Jean (1975): "L'abstraction et l'intuition mathématique." In: *Dialectica* 29, pp. 39-54.
- Epple, Moritz (1999): *Die Entstehung der Knotentheorie. Kontexte und Konstruktionen einer modernen mathematischen Theorie*, Braunschweig/Wiesbaden: Vieweg.
- Foucault, Michel (1998): *Aesthetics, Method, and Epistemology*, ed. James D. Faubion, New York: The New Press.
- Freud, Sigmund (2001 [1910]): "The Antithetical Meaning of Primal Words." In: id., *The Standard Edition of Complete Psychological Works of Sigmund Freud*, vol. XI, trans. James Strachey, London: Vintage Press, pp. 155-161.
- Freud, Sigmund (2001 [1917]): "A Difficulty in the Path of Psycho-analysis." In: id., *The Standard Edition of Complete*

- Psychological Works of Sigmund Freud, vol. XVII, trans. James Strachey, London: Vintage Press, pp. 135-144.
- Freud, Sigmund (2001 [1940]): "Splitting of the Ego in the Process of Defence." In: id., The Standard Edition of Complete Psychological Works of Sigmund Freud, vol. XXIII, trans. James Strachey, London: Vintage Press, pp. 275-277.
- Lacan, Jacques (1961-62): Le Séminaire, livre IX, L'identification (unpublished).
- Lacan, Jacques (1965-66): Le Séminaire, livre XIII, L'objet de la psychanalyse (unpublished).
- Lacan, Jacques (1990 [1974]): Television. A Challenge to the Psychoanalytic Establishment, trans. Dennis Hollier, Rosalind Krauss, Annette Michelson, New York: W.W. Norton & Co.
- Lacan, Jacques (1998 [1973]): Seminar, Book XI, The Four Fundamental Concepts of Psychoanalysis, trans. Alan Sheridan, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Lacan, Jacques (1999 [1975]): Seminar, Book XX, On Feminine Sexuality: The Limits of Love and Knowledge (Encore), trans. Bruce Fink, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Lacan, Jacques (2001): Autres écrits, Paris: Éditions du Seuil.
- Lacan, Jacques (2006a): Livre XVI, D'un Autre à l'autre, ed. Jacques-Alain Miller, Paris: Éditions du Seuil.
- Lacan, Jacques (2006b): Écrits, trans. Bruce Fink, New York: W.W. Norton & Co.
- Lacan, Jacques (2006c [1991]): Seminar, Book XVII, The Other Side of Psychoanalysis, trans. Russell Grigg, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Milner, Jean-Claude (2008): Le périple structural, Paris: Verdier.

PART I
THE SPATIALITY OF THOUGHT

Psychoanalysis and Topology – Four Vignettes

Mai Wegener

In my contribution I would like to propose four vignettes concerning the adoption of topology in psychoanalysis, in particular in Jacques Lacan's teaching. The first one begins in medias res: it initially outlines different possibilities to relate the inside to the outside and then finally arrives at the topological figure of the Möbius strip, where this relation becomes inoperative. The second departs from Freud's developments on "psychic locality" and the "Other scene", before introducing Lacan's construction of models. The third marks the difference between "topic" and "topology", outlining the psychoanalytic interest in topology in the strict sense. The fourth vignette finally describes Lacan's topological installations as "mathemes" and addresses their ambiguous status in his work.

INSIDE/OUTSIDE

The inside and the outside can relate to each other in different ways. A border is needed, in order to mark the difference, where the inside and outside meet. The conventional representation of their relation can be shown with a figure from the writings of the German physicist and philosopher Gustav Theodor Fechner. Fechner uses it in his *Elements*

of *Psychophysics* (1860) in the context of his introductory developments on the relation between the body and the soul. The doctrine of the bodily world and the doctrine of spirit are, as he says, solidly founded on certain borders. However, one could hardly assume something similar for the doctrine of their relations, which are harder to grasp, since “only one [of the two factors] can be immediately experienced at a time, while the other stays underneath the surface” – “under the spiritual...” or “under the bodily...” (Fechner 1907: 2). This is where he adds an image to his text in order to explicate this representation:

When someone stands inside a circle, its convex side remains for him entirely hidden under the concave ceiling; inversely, when he stands outside, the concave side is under the convex ceiling. Both sides are as inseparable as the spiritual and the bodily side of man, and the latter can be comparably conceived as the inner and the outer side. (ibid)



Fig. 1: Pompeii, ca. 79 AC. Graffiti on a house (after Kern 1999).

Another figure for relating the inside to the outside would be the Labyrinth of the Minotaur. Its main feature consists in the detour between the centre and the outside. In order to reach the most inner, we need to walk the entire surface of the labyrinth path. The reason lies in the course of the path. In addition, the path confuses the orientation of the person erring in the labyrinth; it confuses the sense of orientation

and causes a rocking march.¹ A person cannot get lost in the Cretan labyrinth; there is only one, meandering path, without any ways splitting off of it as in a maze. Should we then not reformulate the question of Ariadne's clue? Why is Ariadne's clue at all necessary, if we cannot get lost in the first place?

The mythical labyrinth might emblemise Freud's way of mediating the inside and outside. From the psychoanalytic perspective, we can read Ariadne's clue as something that links the subject with the unconscious as the "Other scene". It would be the same as the reel in the famous *fort-da*-game described by Freud in *Beyond the Pleasure Principle*: Freud's grandson threw the reel repeatedly in the veiled bed, accompanying the disappearance with a long o-o-o-o, and then greeting the reappearance of reel, which remained attached to the thread, with a joyful *da* (cf. Freud 2001 [1920]: 14-15). According to the psychoanalytic interpretation, with this game the small boy entered the rhythm of presence and absence, which is foundational for every symbolisation, the articulation of desire.² Rolling or throwing out the reel was thus an attempt to mediate the outside and the inside, or *fort* and *da*. The reel in the boy's game thereby doubles the vocal articulation and strives to bridge the gap, opened up in *fort*, while the Ariadne's clue in the myth comes over as a redoubling of the narrative thread, an analogy of the myth itself, which weaves a relation between the inside and outside by telling a story – whose core is that (non-)being inhabiting the labyrinth, the Minotaur, who, half bull half man, equally embodies a border, the border between animal and man, nature and culture.³

1| Certain researchers assume that the Cretan labyrinth reproduces the choreography of a dance formation (cf. Kern 1999: 49).

2| I rely here on Lacan's interpretation (cf. Lacan 1998: 62).

3| The Parisian surrealists attributed to this figure a privileged position, when they named their journal *Le Minotaure*. Lacan published some of his early texts there.

In his early works, Freud did not refer to the labyrinth and the Minotaur myth. Yet, if the myth can still be emblematic for Freudian topology, it is because the labyrinth is an image supporting a topological reading, while still evoking the myth, from which it was adopted. Freud's theory offers various points, to which topological reflections can be associated, but his work leaves these points unelaborated, in contrast to the mythological references (Oedipus, Narcissus), which are extensively theorised.

It was Lacan, and not Freud, who systematically introduced topology into psychoanalysis. His work provides us with the third figure, adopted straight from topological textbooks.

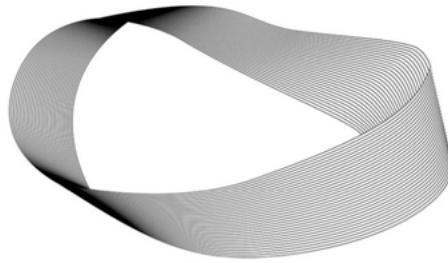


Fig. 2: The Möbius Strip.

The Möbius strip, first described in 1850's by the German mathematicians August Ferdinand Möbius and Johann Benedict Listing, can be easily made: all we need to do is half-twist a paper strip and connect both ends. Its unique feature is the continuous and thus unnoticeable passage (without a break) between the inside and the outside. The figure has one continuous border, a "border, which, so to speak, borders itself" (Hombach 1986: 41). Mathematically speaking, we are dealing with a non-orientable surface. A disorientation in the figurative sense is at stake here as well: in MC Escher's portrayal of the Möbius strip, which meanwhile illustrates

the cover of Lacan's seminar on anxiety (Lacan 2014), ants run along the strip, making it evident, from which perspective the question of orientation becomes pertinent. We need to – at least in mind – move on the surface of Möbius strip, in order to grasp the torsion of the inside and outside. The figure dissolves the conventional dichotomy between the inside and outside; mathematically speaking, it is one-sided. It is not as if it confirms at any local point the impression that there is a reverse, inaccessible flipside, as this depends on our own position, interpreted as inside or outside, as the "Other side".

The figure of the Möbius strip produces a sudden break with conventional presentation the moment it is grasped by the observer. It works without narrative, without myth, like a knot – and in Lacan's text also like a surprise effect, which undermines the reader's adopted representations of space. By means of this and other topological figures, which he imported into psychoanalysis, Lacan developed a new "topology of the subject".⁴ The Möbius strip is the simplest figure, with which Lacan rejected every "depth-psychology". The unconscious should not be sought in some presumable depth; the unconscious is not a subconscious – a term that Freud already rejected "as incorrect and misleading" (Freud 2001 [1915]: 164).⁵ The unconscious should be traced on the surface, that is, in the subject's speech. At some point, Lacan said the "discourse of the unconscious [...] is outside" (Lacan 1998: 131)⁶ – it forms the flipside of discourse, which is comparable to the "other side" of the Möbius strip. It is only apparently there. A temporal movement can help us grasp this problem. The discourse must come back to itself, whereby the temporal form of retroactivity is crucial. In other words,

4 | Lacan 1998: 155. – The formulation relates to the "internal eight".

5 | However, Freud allowed the expression "depth-psychology".

6 | Here we equally find the formula, "the unconscious is the discourse of the Other" (Lacan 1998: 131). Lacan also says of the object *a* that it is "outside" or "extimate" (Lacan 2014: 102).

should the subject grasp something unconscious, it must follow the movement of speech and come back to it, namely to the speech – just as we need to encircle the entire Möbius strip (that means two loops) in order to become aware that we did not change the side in this process.⁷

TOPICS: THE SO-CALLED “OPTICAL MODELS”

The formulation “Other scene”, which meanwhile became synonymous with the unconscious, can be found in Freud’s *Interpretation of Dreams*. He claims that the expression was adopted from Fechner: “In the course of a short discussion on the topic of dreams, the great Fechner (1889: 2, 520-1) puts forward the idea that the scene of action of dreams is other from that of waking ideational life. This is the only hypothesis that makes the special peculiarities of dreamlife intelligible.” (Freud 2001 [1900]: 536, trans. modified) Yet, unlike Fechner, Freud attributed to this Other scene a fundamental status. Already before every elaboration of his later psychic topic (cf. Freud 2001 [1923]: 12-67), Freud took the spatial character of this representation seriously. The famous passage in *The Interpretation of Dreams* (which should, in passing, reject the potential impression that Freud’s theoretical construction anchors only in myth, in difference to Lacan) runs as follows:

What is presented to us in these words is the idea of psychical locality. I shall entirely disregard the fact that the mental apparatus with which we are here concerned is also known to us in the form of an anatomical preparation, and I shall carefully avoid the temptation to determine psychical locality in any anatomical fashion. I shall remain upon psychological

7 | Marx Kleiner describes this “figure of return of the enunciated to its own place of enunciation” (2002: 92).

ground, and I propose simply to follow the suggestion that we should picture the instrument which carries out our mental functions as resembling a compound microscope or a photographic apparatus, or something of the kind. On that basis, psychical locality will correspond to a point inside the apparatus at which one of the preliminary stages of an image comes into being. In the microscope and telescope, as we know, these occur in part at ideal points, regions in which no tangible component of the apparatus is situated. (Freud 2001 [1900]: 536)⁸

Freud represents the psychic as a locality, as a part of an instrument. However, such locations are, as he admits, partly ideal, that is, grounded on an idea or thought. The appearance and the location remain futile or impalpable. The situation is comparable to the following anecdote: someone arrives on a glade and wants to know if this is where the Duke of Wellington pronounced his famous phrase. The person then receives the following answer: “Yes, this is it, only that the Duke never said the phrase.”⁹ Or shorter still: the situation could be compared to Lichtenberg’s “knife without handle, on which the blade is missing”.¹⁰ Indeed, psychoanalysis constantly deals with such futile material – the “dregs, one might say, of the world of phenomena” (Freud 2001 [1916-1917]: 27) – that it depends on a good geometry of locations (*analysis situs*, as the old name

8 | Freud follows this thought a bit further and warns, “do not mistake the scaffolding for the building” (*ibid*). He then directs the attention from spatial structure to temporal succession, in which the systems are traversed. After this prelude, he presents his “most general schematic picture of the psychical apparatus” (*ibid*: 537) with a graphic that accentuates particularly the various memory layers (M, M', M"...) between the perception and the motoric.

9 | Edith Seifert mentions this anecdote (cf. Seifert 1987).

10 | Norbert Haas once used this quote in relation to the structure of psychoanalytic interpretation.

for topology has it)¹¹ in order to determine some ruptures in these futile networks in order to finally encounter structures.



Fig. 3: Microscope.

In his description of the psychic apparatus, Freud refers to an optical instrument. The reference to optics in the quoted passage from *The Interpretation of Dreams* can be easily explained with the concern to locate dream images, representations, memory images and unconscious fantasies. The psychic apparatus is an apparatus that produces representations or images. Psychoanalysis is concerned with their analysis (decomposition), or to put it with Lacan, with the decomposition of the imaginary.

¹¹ | Leibniz used this term in 1693.

Yet the emphasis is not so much on the imaginary, but rather on the apparatus that produces it, to which the imaginary owes its appearance and placement. Again, in Lacan's terms, attention concerns the framework of symbolic articulation – which is futile enough –, in which the images circulate, insist or dissolve.

So where is the Other scene? It is neither in the images that are generated on ideal locations, nor in these locations themselves. The Other scene, understood strictly as the unconscious, remains outside. It is the place where the unconscious laws would find their cause. At this point, Freud occasionally turns mythical and speaks of the “primal scene” (Freud 2001 [1918]: 29), which is a spatial term set in a mythical time. Lacan chose a different path. By including topology in his theory, he tries to approach the Other scene by less mythical means: the un-scene, one could say. He does this in order to accentuate that this scene exists only in the form of negation. Lacan's concept of the object *a* – or “object cause of desire”,¹² the core element of his theory – is an attempt to circumscribe this lost cause.

While Freud mentioned the optical instruments almost in passing, Lacan proposed an elaborate optical model – the mirror model, also known as the “model of the inverted bouquet”. As in Freud's case, Lacan's model, too, is not about vision. It is about places, relations, configurations, the extension of the mental space and what in this space appears or does not appear for the subject. Unlike Freud, Lacan's model does not apply intrapsychically. This difference may be the reason for the greater development of modelling in Lacan. His models are not conceived on the basis of individual psyche, but assume from the very outset the place of the Other as constitutive of the psychic apparatus and are therefore more in accordance with the psychoanalytic constitution of the subject.

¹² | For the conception of object *a* as cause of desire, (cf. Lacan 2014: 100).

Lacan's optical model consists of two mirrors – a concave and a plane one – arranged in a way that a vase, hanging upside down in a box and hidden from direct gaze, appears above the arrangement of mirrors, as if it would include a bouquet placed on the box. In this arrangement Lacan marks the place of the object a .¹³

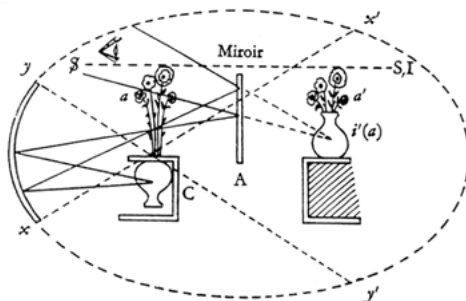


Fig. 4: Lacan's Mirror-Scheme.

Lacan thereby refers to a model of mirrors in order to situate an object, for which he emphasises that it has no mirror image. This insight becomes all the more evident precisely from this model: the object a appears as “this remainder, this residue, this object whose status escapes the status of the object derived from the specular image, that is, the laws of transcendental aesthetics” (Lacan 2014: 40). Still, the model for presenting this object remains unsatisfactory: “The ambiguity is due to the fact that we can’t do otherwise than to imagine it in the specular register. It’s precisely a matter of establishing another type of imaginization here, if I may express myself in this way, whereby this object may be defined.” (ibid) Lacan

13 | (Cf. ibid: 49). Lacan introduced the mirror-model in 1958 (cf. Lacan 2006: 543-574, and for the scheme, 570). Lacan had used it in his seminar since 1954.

inquires about other ways of “imaginarization”, and he finds one option (among others) in the cross-cap, a topological figure colloquially described as a Möbius strip without board, i.e., a Möbius strip whose edge would be connected to itself so that a closed surface results. Like the Möbius strip proper, this surface knows no inside/outside distinction. It is a single closed surface. If we divide the cross-cap with a cut, which needs to contain one privileged point (denoted as Φ), we obtain a Möbius strip and an abnormal surface (which is in fact a disc) whose edge is a so-called internal eight.

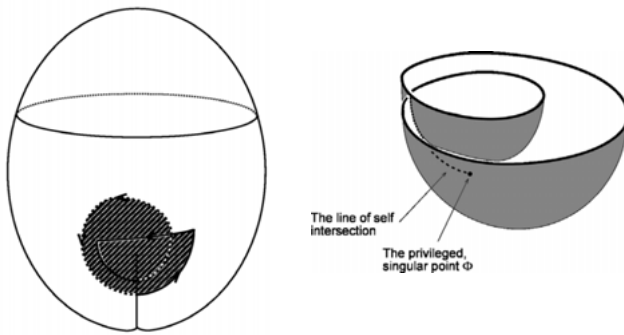


Fig. 5 and 6: Cross-cap and abnormal surface with internal eight.¹⁴

14 | The pictorial representations of these figures are always mere approximations, since their image is two-dimensional. Cross-cap can be seen as a three-dimensional figure, which, however, needs a fourth dimension in order to be actualised without any self-intersections. We are used to “seeing” the third dimension in perspectival, two-dimensional space, because we know it from the perception of the three-dimensional space. This is not the case for the fourth or higher dimension. These representations are not adopted from Lacan’s writings, but from introductions to topology. – Here, I would like to thank Gerhard Herrgott, who assured certain mathematical precisions in this text.

Lacan is particularly interested in this cut and its result because the object *a* is also constituted by a cut. Of the internal eight – emerging from the cut and corresponding to the object *a* – we can actually say that it has no specular image. Like the Möbius strip, it is a surface with only one side, “if you turn it over, it will still be identical to itself. This is what I call not having a specular image” (ibid: 96).¹⁵ In a pathetic moment of his seminar, Lacan actually presented this internal eight as object *a* – whereby the corresponding priestly tone indicates a momentary fall-back into the cult register (the imaginary phallus, psychoanalytically speaking) that sets in when we believe to possess the object *a*:

This is the residual part, here. I've constructed it for you and I'll pass it around. It does hold a little interest because, let me tell you, this is the *a*. I give it to you much as one might administer the Host, because you'll make use of it afterwards. The *a* is put together like that. (ibid: 97)

Working with Lacan's models requires a two-sided approach: from within and from without, one might say, that is, from the physical optics (in the case of mirror-model) or topology and from psychoanalysis, the logic of the unconscious. To be familiar with the mathematical or physical use of these models, to see the installation or hold the surfaces,¹⁶ strips and knots in hand,¹⁷ supports such a reading. However, only the text, in which they are embedded, gives them their specific movement

15 | This is to be contrasted with the inversed glove, which is thus transformed from the left-hand to the right-hand glove, and vice versa.

16 | Lacan based his mirror-model on Bouasse's physical model (cf. Blümle/von der Heiden 2005: 17). The model was constructed in 1990 for the Vienna exhibition *daedalus* (cf. Fischer 1990: 281 [http://www.liturerre.org/illetterisme_et_topologie-Lacan_Soury_Vappereau_Thome.htm]).

17 | Some Lacanians collaborated in the translation of a topological textbook (Barr 1987) containing instructions for making topological models.

and brings them to speak in the framework of psychoanalysis. The figures constitute knots or enigmas within the text and are therefore essential to it: the text carries them, they bring the text to the point. All the changes of representation of topological objects with regard to the textbooks, all the details follow analytical considerations – and not the mathematical or physical ones.¹⁸ In different contexts Lacan thus provides them with different commentaries – in this way their sense remains mobile, undetermined and under construction.

The topological figures generate and require their own kind of reading. The reader must assume that there is an enigma for him to be solved; something must push him to the work of deciphering. This fact does not differentiate them from other complex writings, but it does become most evident in their case: without transference, without the subject supposed to know nothing happens, the figures remain silent.¹⁹ The flipside of this requirement is the easiness, with which Lacan's topological models, as well as his mathemes more generally, provide the ground for a master's discourse, whenever someone acts as if he could be the master of the riddle.

18 | This hybrid position was the catalyst for Sokal and Bricmont's attack (cf. Sokal/Bricmont 1999). For a detailed response to their criticisms (cf. Wegener 2004b: 62-66).

19 | Lacan introduced *Sujet supposé savoir* in his theory of transference. It could be translated as "the subject that should know", or more literally "the subject supposed to know". There is another possible reading, according to which both the subject and knowledge are supposed. This double reading is crucial here.

“TOPOLOGY” – A DEFINITION FOR PSYCHOANALYSIS

Strictly speaking, Lacan's mirror model is a contribution to topic and not to topology. In fact, it is not always clearly distinguished, which one of Lacan's models falls under topology and which not. If we look at two classical works on Lacan's use of topology, we notice that they grasp entirely different things. In his *Essais sur la topologie lacanienne* (1990), Marc Darmon included the mirror model among topological examinations, and he also wrote a chapter on Scheme L, the graphs, etc., that is, he labelled “topology” more than what would be mathematically correct. As he states in his introduction, he targets Lacan's formalistic tendencies in the broader sense.

Jeanne Granon-Lafont has a more precise take on the mathematical notion of topology. Her work *Topologie ordinaire de Jacques Lacan* (Granon-Lafont 1985; cf. also Granon-Lafont 1990) begins with the question of space and structure, and then moves on to the Möbius strip, the torus, projective plane or the cross-cap, to a section entitled “From specular to non-specular: the Klein bottle”, and finally: “From surfaces to knots”. In this way she actually gathers the most important topological figures that preoccupied Lacan in his work.

Granon-Lafont introduces her book on Lacanian topology with a small topological manoeuvre: take a spoon that is attached on strip, which is fixed at its upper end. “This strip,” she writes, “materializes the connection of the spoon, the object of our experience, to the space” (Granon-Lafont 1985: 13). If we turn the spoon around its vertical axis, until it reaches the starting position, this movement leaves a trace in the strip: torsion. More generally, the number of rotations reflects in the number of torsions. We can make other movements with the object, whereby the traces can become either more complex or disappear. The crucial thing is that

the space itself appears by means of the strip: “It’s all about describing the space given the invariability of the object.” (ibid. 14) The interest of topology concerns the description of space and its properties. Only the strip,²⁰ which stands for the intervention of topology – the Ariadne’s thread for topologists, so to speak – visualises that which our perception would otherwise miss: space as such. “All space is flat”,²¹ says Lacan in his seminar R.S.I. Granon-Lafont comments on the sentence by confirming its topological relevance and notes that space as such is not the depth, which includes the so-called “third dimension”, but – and this displacement is indeed crucial – that it is defined by the perception of depth. Let us recall the ant on the Möbius strip: once it begins moving along the surface, the depth appears to it as a horizon – and that horizon is constantly displaced. Topology thus does not only provide new figures, but it also draws new attention to the perception of space, which goes well beyond these figures.

Psychoanalysis deals with the psychic space, and if we adopt this conception of spatial depth or of its flatness, topology once again turns out to be the antidote against “depth-psychology”, which would interpret the depth (of the unconscious, of the soul, etc.) in a substantialist way: “For a topologist, the study of [the] depths [of the soul] raises merely the question of crossing a space.” (Granon-Lafont 1985: 19)²² In this respect, the psychoanalyst should indeed be a topologist according to Lacan.

Topology removes a large number of properties, which define a figure in space in Euclidean geometrical terms, notably in terms of metric and projective invariants. In topology the decisive criterion for the equivalence of two figures

20 | Mathematically this “strip” should be thought of as surface without “thickness”.

21 | (Lacan 1974–75: 14.01.75), quoted in (Granon-Lafont 1985: 14).

22 | Lacan was interested in combinatory and not in algebraic topology.

(the possible transformation of one figure into another) is homeomorphism, while in Euclidean geometry such criterion is congruence: “We can imagine a homeomorphism in terms of such projection of one set onto another that contains no cracks or junctures” (Boltjanskij and Efremovi 1986: 17), the textbook states, or more mathematically precise: a bijective function, which is continuous and its inverse function also continuous. Colloquially speaking: the entire attention is on the cracks or breaks and junctures or adhesions. Here, too, we find a close relation with the practice of psychoanalysis: registering the cracks or continuities, determining the junctures and points of decomposition are two tasks that the psychoanalyst shares with the topologist.²³ The psychoanalyst, too, works with a structure (the discourse of the unconscious), the properties of which he must hear in the subject’s speech.

THE STATUS OF LACAN’S TOPOLOGICAL INSTALLATIONS

Mathematics is contaminated by the ancient idea of being a science of quantity – this is a double mistake, because mathematics is neither a science, nor is it necessarily more concerned with quantity than with anything else. It is an exercise and comparable to dance. The question is to speak and write a conventional language, the rules of which are stricter than those of everyday language. (Valéry 1992: 311)

Lacan’s mathemes, including all the topological figures, have repeatedly caused irritation: How should they be read? What is their status in the text? Do they have the weight of

23 | The point of decomposition is a topological invariant. It marks a point, the removal of which decomposes the figure to several unconnected parts. The abovementioned “privileged point Φ ” is such a point of decomposition.

demonstrations, are they natural scientifically valid? Are they, on the contrary, pure illustrations, even bragging? In what way are they about representation, exercise or practice?

The word “matheme” is Lacan’s neologism. It is formed by merging the Greek expression *mathemata* with the word “mytheme”, created by Lévi-Strauss – in line with the linguistic “phoneme” – in order to describe the constitutive elements of myth. *Mathemata* are the “matters of learning”; Pythagoreans listed four of them: arithmetic, geometry, astronomy and harmony, yet the concept was by no means restricted to these objects of teaching (cf. Metzger 1979/80: 18):

Manthanein, mathein, known from “mathematics”, whose old name was simply *ta mathemata*. We translate it with “learning”, namely somewhat more intense, more fundamental learning than the mere “let oneself be instructed”, *didaskesthai*. [...] *Mathemata* are the “matters of learning”, the objects of such learning. (Schadewald 1978: 177)

According to this remark, Lacan’s mathemes are the psychoanalytic matter of learning, elementary building blocks of transmission of psychoanalytic theory. In his seminar from 1955, even before he coined the term “matheme”, Lacan attributed them a maieutic function:

Models are very important. Not that they mean anything – they mean nothing. But that’s the way we are – that’s our animal weakness – we need images. And sometimes, for lack of images, some symbols don’t see the light of day. (Lacan 1991: 88)

Lacan was not a teacher in topological matters; rather, he had his consultants. Since 1951 he worked in a group with the mathematician Georges Th. Guilbaud (cf. Wegener 2004a),

with whom he remained friends until his death. The exchange with Guilbaud extends from an interest in cybernetics (1954/55 in Seminar II), over the period of topological surfaces (since 1962 in Seminar IX) to the Borromean knot (introduced for the first time in 1972 in Seminar XIX). A historical analysis of this and other collaborations still needs to be made.²⁴ More known are the topologists Pierre Soury and Michel Thomé, with whom Lacan engaged in an intense exchange.²⁵ Lacan's letters to Soury, which were partially published, show an obsession that recalls Clérambault's passion for the veils of Moroccan women.²⁶ This is not the speech of a master of topology, but of someone who is caught in his knots, the main topic of correspondence. "This morning, February 21, 1978, I was at your place in order to establish something. You were not there. At least I assumed that: for I have long knocked at your door. This story makes me furious".²⁷

My suggestion is to understand topology – dealing with different surfaces and the notorious Borromean knot – in psychoanalysis as a practice, an exercise, just like Lacan advised his listeners: "Solve crosswords". "Practice topology", that is, direct your attention to the cracks and junctures in your material, draw the movements of the subject in the psychic space. Or even, consider your interpretations as scansions, as an act that – when it takes place – transforms a structure.

24 | I have previously attempted to provide some analysis of the relation between cybernetics and psychoanalysis (cf. Wegener 2004b: 28-42, 74-80).

25 | (Cf. Soury 1988; Thomé 1990b).

26 | (Cf. Thomé 1990a). On the photographs by the French psychiatrist Gatian Gaëtan Clérambault of veiled women in Morocco, (cf. *ibid*: 277-280).

27 | (Cf. Fischer 1990: 290) who has reproduced and translated Lacan's letter.
– The specific context is not evident.

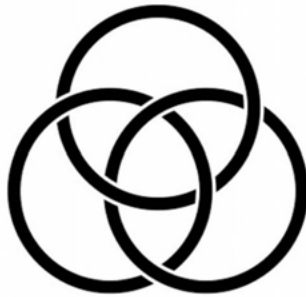


Fig. 7: Borromean Knot.

The topological models cannot be simply associated with one of the three Lacanian registers: the symbolic (S), the imaginary (I) and the real (R). They are neither purely imaginary, that is, pure illustrations or illusions; nor do they prove psychoanalysis in the real in the sense of the natural-scientific ideal; nevertheless they exceed the symbolic toward the real, inasmuch as they expose what is lost in the symbolic: that which cannot be uttered. The three rings of the Borromean knot stand for the link between the three registers (S, I, R) – this, too, is one of Lacan’s adopted topological figures. Its specific feature consists in the fact that the rings fall apart once one of them is cut.²⁸

What is crucial is not to use topology as purification or logification of psychoanalysis: its position is highly ambiguous and precisely it is worth working with this ambiguity. It is in this that the specific contribution of psychoanalysis resides. Topological models do not consolidate psychoanalytic theory; they move it and put it to work. In this movement the figures can indeed have the function of cuts or knots that hold something. “Topology resists”, Lacan noted in 1978,

28 | (Cf. Kleiner 2002: 94). Kleiner elaborates the way, in which the knot formalises the link between the three registers. He tends to privilege the “real of the knot” (ibid: 100).

but he also drew attention to the “correspondence between topology and practice”.²⁹

BIBLIOGRAPHY

- Barr, Stephen (1987 [1964]): *Expériences de Topologie*, trans. René Lew/Guy Trobas/Jean-Michel Vappereau, Paris: Lysimaque.
- Boltjanskij, Vladimir G./Efremovi, Vadim H. (1986): *Anschauliche kombinatorische Topologie*, Braunschweig: Vieweg.
- Blümle, Claudia/von der Heiden, Anne (2005): “Einleitung.” In: Claudia Blümle/Anne von der Heiden (eds.), *Blickzähmung und Augentäuschung*, Zurich/Berlin: Diaphanes, pp. 7-42.
- Darmon, Marc (1990): *Essais sur la Topologie lacanienne*, Ussel: Editions de l'Association Freudienne.
- Fischer, Gerhard (ed.) (1990): *Daedalus: Die Erfindung der Gegenwart*, Basel/ Frankfurt am Main: Stroemfeld/Roter Stern.
- Fechner, Gustav Theodor (1907 [1860]): *Elemente der Psychophysik*, vol. 1, Leipzig: Breitkopf & Härtel.
- Freud, Sigmund (2001 [1900]): “The Interpretation of Dreams.” In: id., *The Standard Edition of the Complete Psychological Works*, vol. IV-V, trans. James Strachey, London: Vintage.
- Freud, Sigmund (2001 [1915]): “The Unconscious.” In: id., *The Standard Edition of the Complete Psychological Works*, vol. XIV, trans. James Strachey, London: Vintage, pp. 161-215.
- Freud, Sigmund (2001 [1916-1917]): “Introductory Lessons to Psychoanalysis.” In: id., *The Standard Edition of the*

29 | Cf. Fischer 2002: 300 who has reproduced and translated Lacan's note from November 21, 1978.

- Complete Psychological Works, vol. XV, trans. James Strachey, London: Vintage.
- Freud, Sigmund (2001 [1918]): "From the History of an Infantile Neurosis." In: id., The Standard Edition of the Complete Psychological Works, vol. XVII, trans. James Strachey, London: Vintage, pp. 5-121.
- Freud, Sigmund (2001 [1920]): "Beyond the Pleasure Principle." In: id., The Standard Edition of the Complete Psychological Works, vol. XVIII, trans. James Strachey, London: Vintage, pp. 7-65.
- Freud, Sigmund (2001 [1923]): "The Ego and the Id." In: id., The Standard Edition of the Complete Psychological Works, vol. XIX, trans. James Strachey, London: Vintage, pp. 12-67.
- Granon-Lafont, Jeanne (1985): *Topologie ordinaire de Jacques Lacan*, Paris: Point Hors Ligne.
- Granon-Lafont, Jeanne (1990): *Topologie lacanienne et clinique analytique*, Paris: Point Hors Ligne.
- Hombach, Dieter (1986): "Freuds Traum." In: *Der Wunderblock* 14, pp. 21-44.
- Hermann Kern (1999 [1982]): *Labyrinth: Erscheinungsformen und Deutungen. 5000 Jahre Gegenwart eines Urbildes*, München: Prestel.
- Kleiner, Marx (2002): "Der borromäische Knoten und andere Figuren des Realen." In: *RISS* 53, pp. 87-105.
- Lacan, Jacques (1991 [1978]): *Seminar, Book II, The Ego in Freud's Theory and in the Technique of Psychoanalysis*, trans. by Sylvanna Tomaselli, New York and London: W.W Norton & Company.
- Lacan, Jacques (1998 [1973]): *Seminar, Book XI, The Four Fundamental Concepts of Psychoanalysis*, trans. by Alan Sheridan, New York and London: W.W Norton & Company.
- Lacan, Jacques (2006): *Écrits*, trans. Bruce Fink, New York and London: W.W Norton & Company.
- Lacan, Jacques (2014 [2004]): *Seminar, Book X: Anxiety*, trans. Adrian R. Price, Cambridge: Polity Press.

- Metzger, Hans-Joachim (1979/80): "Play it again, Sam!." In: Der Wunderblock 4, pp. 3-34.
- Schadewald, Wolfgang (1978): Die Anfänge der Philosophie bei den Griechen, Frankfurt am Main: Suhrkamp.
- Seifert, Edith (1987): Was will das Weib? Zu Begehren und Lust bei Freud und Lacan, Weinheim/Berlin: Quadriga.
- Sokal, Alan/Bricmont, Jean (1999): Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science, New York: Picador.
- Soury, Pierre (1988): Chaînes et noeuds, 3 Vols., ed. Michel Thomé/Christian Léger, Paris: Thomé/Léger.
- Thomé, Michel (1990a): "Der Briefwechsel Lacans mit Soury und Thomé." In: Gerhard Fischer (ed.), Daedalus: Die Erfindung der Gegenwart, Basel/Frankfurt am Main: Stroemfeld/Roter Stern, pp. 286-291.
- Thomé, Michel (1990b): "Knoten, Flächen, Ketten von Pierre Soury." In: Gerhard Fischer (ed.), Daedalus: Die Erfindung der Gegenwart, Basel/Frankfurt am Main: Stroemfeld/Roter Stern, pp. 302-304.
- Valéry, Paul (1992): Cahiers/Hefte, vol. 5, Frankfurt am Main: Fischer.
- Wegener, Mai (2004a): "An der Straßenkreuzung: der Mathematiker Georges Théodule Guilbaud. Kybernetik und Strukturalismus." In: Archiv für Mediengeschichte - 1950, Weimar: Bauhaus, pp. 167-174.
- Wegener, Mai (2004b): Neuronen und Neurosen: Der psychische Apparat bei Freud und Lacan: Ein historisch-theoretischer Versuch zu Freuds Entwurf von 1895, München: Fink.

Why Topology?

Dominiek Hoens

Currently psychoanalysis is often defended by Lacanians as one or the only form of therapeutic engagement with psychic suffering that does not objectify the patient or reduce him to a diagnostic label entailing a step-by-step plan that will lead to the disappearance of the symptom(s) and should allow for a productive and happy life. According to this view psychoanalysis does not focus on the observable disorder, but on the subject and is at odds with the contemporary ideal of a successful, symptom-free life. This reference to the subject also resonates with an anti-scientistic and sometimes even anti-scientific tendency discernible in some post-Lacanian elaborations. For does not science reduce the subject to an object and is not science only possible on the basis of a primordial exclusion of any subjective dimension?

Subject is indeed the crucial notion Lacan put forward in the largest part of his work. Roughly put one can qualify his 'return to Freud' as a structuralism *with* a subject. This subject, however, is neither an ego, the seat of personal feelings, volitions and thoughts, nor an unconscious, hidden or repressed self. The subject is a subject of the unconscious, that is a supposed 'support' or 'bearer' (cf. the Latin *subjectum*) of an unconsciously operating machine. The material elements of this machine are signifiers and it was Lacan's ambition to discover the laws according to which they relate to each other.

This ambition was fuelled by three basic premises: 1. the unconscious as a hypothesis, 2. the psychoanalytic clinic and 3. a conception of scientificity that grants a central place to formalisation.

1. The epistemological and ontological status of the unconscious in Freud's works is not without ambiguity. Yet Lacan could clearly draw inspiration from those passages in which Freud directly deals with the question of the unconscious and its nature. Here Freud took up a Kantian position, in the sense that the symptoms and problems his patients suffer from force him to refer to an unconscious mental life, an 'other scene' (*anderer Schauplatz*), however without knowing what it is. In this respect the unconscious is an unknown thing or an *x* whose existence we can think, yet cannot know.¹ For Freud the unconscious is a hypothesis one adds to the basic clinical situation of a patient addressing his complaint to a physician, and which allows for a different way of listening and, eventually, treating the problem. Whereas Freud expressed the hope and did not refrain from speculating on the (neuro)biological underpinning of the unconscious, Lacan took in a more sober and realistic position: psychoanalysis is that kind of science which can only exist and be operative *with* a hypothesis, the unconscious.

2. The psychoanalytic clinic operates within a scene in which one person is talking and another one is listening, and therefore the material produced and available for interpretation consists of words. On this point clearly inspired by structuralist linguistics, Lacan thought that the consciously controlled production of meaningful statements is only made possible because of a given yet unconscious system of signifiers, the Other. If the psychoanalytic treatment aims at the appearance of the subject – instead of the

1 | This Kantianism reminds one of the formula Freud put forward to characterise the melancholic: he knows *that*, but not *what* he has lost.

conscious ego – the analyst should not focus on the meaning (intended or not by the patient), but on the meaningless, somehow ‘stupid’ elements with which meaning is produced. So, instead of hiding a deeper meaning to the narration of a dream, a story or a slip, the Other is first and foremost discovered as a set of signifiers governed by a logic that is different from common, intersubjectively shared rules such as coherence or non-contradiction. This almost exclusive focus on signifiers is at odds with general psychology that includes motivation, emotion, cognitive capacities, etcetera. Psychoanalysis does not deny the existence of, e.g., emotions or the fact that people may feel them, but it was Lacan’s idea that psychoanalysis was a science of the subject, and as the subject of signifiers, the latter can only be approached in the medium of the spoken word.²

3. Trying to ground psychoanalysis as a science, Lacan entertained some specific ideas regarding scientificity. Inspired by Alexandre Koyré, among others, he took the modernity of modern science as residing in its approach of nature as a book written in mathematical formulae. The influence of this idea on the close connection between science and mathematics is clearly discernible in Lacan’s teaching. In a relatively early text (written in 1957) like ‘The Instance of the Letter in the Unconscious, or Reason since Freud’ (Lacan 2006: 412–441) Lacan puts forward the Saussurean distinction between signifier and signified as an ‘algorithm’ – a term with obvious arithmetical connotations³ – and the title to the text includes the ‘letter’ whereas one might have expected

2 | “Whether it wishes to be an agent of healing, training, or sounding the depths, psychoanalysis has but one medium: the patient’s speech. The obviousness of this fact is no excuse for ignoring it.” (Lacan 2006: 206)

3 | Saussure did not qualify his sign – which is the combination of a signifier with a signified – as an algorithm, yet he occasionally also used algebraic notions in order to establish linguistics as an (autonomous) science (cf. Saussure 1995: 168, 222) – I owe these references to Michael Friedman.

the signifier. At that moment of his teaching the notion of the letter is equivalent with the signifier, yet with 'letter', much like a mathematical variable, the emphasis is rather on its non-signifying dimension, than on the role it plays in the production of signification. In the last sentence of the famous, contemporaneous text, 'Seminar on *The Purloined Letter*' (1955) as well, it is a letter that "always arrives at its destination", which again indicates a dimension beyond the multitude of significations produced by signifiers, namely the determinate place of letters in a mathematical formula (cf. Lacan 2006: 30).

These three points taken together provide us with the necessary background to understand Lacan's predilection for mathematics throughout his oeuvre. This is most obvious in the construction and discussion of 'mathemes' like the formula of the phantasm ($\$ \diamond a$), but also in the use of arithmetical notions such as fractions, imaginary numbers, the Fibonacci sequence and its golden ratio.

As much as the mathemes and the 'calculation' of the subject testify to Lacan's attempt at mathematically formalising the analytic experience – which, within the context of his teaching, would allow for an integral transmission of knowledge⁴ – we still need to determine the place of topology. Sometimes one seems to imply that topology belongs to the later period(s) of Lacan's theorising. This is true if one limits topology to the knots presented in the series of notoriously difficult seminars starting with *Encore* (1972–73). Yet the first references to topological notions already occur in the early seminars and texts written in the fifties. For example in the foundational text of 1953, 'The Function and Field of Speech and Language in Psychoanalysis', contains a reference to the torus which serves better than the "[...] spatialization of

4 | (Cf. Nobus 2003: 65). Or as Lacan puts it in a later seminar: "There is no teaching but a mathematical one, the rest is pleasantries." (Lacan 2011a: 27).

the circumference or sphere with which some people like to schematize the limits of the living being and its environment [...] insofar as a torus' peripheral exteriority and central exteriority constitute but one single region" (Lacan 2006: 263-4).⁵ From this quote we can deduce that topology is needed to visualise the structure within which the subject is situated and that in order to think the complexities of it one needs non-spherical surfaces such as the torus. The complexities are mainly related to the idea of a subject without an interior. Because of the mutual intertwinement of subject and Other, the former is divided in such a way that the most intimate of the subject is outside of it and *vice versa*. This is not the mere outcome of some dialectical speculation on behalf of Lacan, for it can be related to psychoanalysis as a clinical scene whose principle is transference love. This love indeed concerns the analyst as a 'subject supposed to know', but also the unconscious as a supposed subject to the symptoms, slips, dreams that occupy the patient's mental life. Therefore transference love concerns two poles that could be understood as an internal (unconscious) and an external one (the analyst). Yet, the point is that the (external) analyst occupies the place of the intimate object of desire and the (internal) unconscious is gradually grasped for what it is, not a hidden core-self, but as the cracks, hesitations, deflections within the superficial exteriority of the signifier.

A similar problem already occurred in Freud's attempt to grasp the double inscription of the trauma. Chronologically speaking, an event at one moment (T1) only gets a causal traumatic effect once activated at later moment (T2). This is what Freud called *Nachträglichkeit* and eventually inspired

5 | All of the texts in *Écrits* are (sometimes drastically) edited versions of earlier published material, often to make them converge with Lacan's thinking of the sixties. Nonetheless this reference to the torus was already included in the original version.

Lacan to introduce a *logical* time, different from the more common, objectified depiction of time as one-directional arrow. This retroactive effect of an event – that creates from the future its own ‘ground’ or cause situated in the past – raises the similar issue of *one* trace that is located at *two* places.⁶

These interrelated issues of the not so obvious divide between exterior and interior, and of time as a fourth dimension, eventually leading to a break with an Euclidean three-dimensional conception of space, find their first topological treatment in the so-called graph of desire, developed by Lacan in the seminars of 1957-58 and 1958-59. This graph consists of nodes and vectors. Detailed commentaries can be read elsewhere,⁷ but for our argument it is interesting to note that subject and Other, logically put, mutually imply each other and, topologically speaking, do not relate to each other as separate instances. Equally important is that the vectors follow opposite directions, which is a way of visualising ‘time’, that is the mechanisms of anticipation and retroaction (*Nachträglichkeit*).

The second sort of topological objects used by Lacan are surfaces, such as the Moebius strip, the aforementioned torus, the Klein bottle and the cross-cap. Each of these figures defy the usual distinction between in- and outside and the latter in particular seems of interest to Lacan for it allows him to question the status of the object *a*.⁸ This object, as the cause

6 | That is why Lacan preferred Kepler over Copernicus: the problem is not what is located at the center (earth or sun), but the course celestial bodies follow, namely an elliptical one with two foci instead of a mono-centred circle (cf. Friedman/Tomšič 2015).

7 | For example Van Haute (2002).

8 | This object *a* is qualified by Lacan as his sole invention, as the one thing he added to a structuralist ‘return to Freud’, but, also according to Lacan, it finds its precursor in Freud’s depiction of the object in melancholia as ‘a shadow’ (cf. Lacan 1973-74: 09.04.74; and Lacan 1981: 11).

of desire, entails two problems which can be dealt with by topology. The first one is related to Lacan's repeated and explicit call for a revision of Kantian transcendental aesthetics, for this object is non-specular and is qualified as real (cf. Lacan 2006: 544). Because of its non-specularity it escapes the grasp of the imaginary and cannot be situated within the coordinates of a Kantian three-dimensional space. This space is for Lacan nothing but a projection of our imaginary bodily experience onto the world, an operation to be questioned and for which topology is required. Another obvious difference with Kant concerns the qualification of the object as a *real* cause, instead of locating it, as Kant did, within the category of causal relationality. The second issue concerns the negativity at work with the object, which is different from the subject's. The subject is a mere effect of signifiers, which turns it into an absent, negative link between one and another signifier – hence the notation \$, which indicates a lack of signifier. The object *a* is not the object which comes to (temporarily) fill this lack and quench desire, but the object which causes the lack of being of the subject. Here again we encounter the double logic of what could be considered as one negativity situating itself at two places. The additional problem Lacan explores with the cross-cap is how to conceive of a negativity that is not a mere void or an effect of the signifying operation, but (retroactively) precedes and causes this 'symbolic' lack. Simply put how to think a negativity that is not the negation of a (virtual) positivity, but rather the positivity of a negation?⁹

Even if the relation with the analytic experience – Lacan's preferred way to refer to the psychoanalytic clinic – is not always obvious and the use of mathematics can be

9 | A similar problem arises with the notorious 'there is no sexual relationship', which is not about the absence of relation between two sexes, but the presence of a non-relationship. To make this non-relationship present, to demonstrate its 'reality', one needs, according to Lacan, the Borromean knot.

debated, the initial aim is clear: to situate psychoanalysis, both clinically and theoretically, as dealing with a dimension beyond the realm of psychological signification. This realm is neither the symbolic, nor the imaginary, but the real. Hence it is not surprising to find in one of the earliest definitions of the real the suggestion of a similar regularity and lawfulness: “The real is something one always finds in the same place” (Lacan 1988: 297). And despite the fact Lacan would try out many different and opposed definitions of the real, the former was never completely rejected. Reflecting on it later, Lacan states that the real “discovers its place”, yet that it is hard to determine this place in an imaginary way and therefore topology is needed (Lacan 2011b: 19).

As it has been argued in the paragraphs above, the problem of space, place and time are central to Lacan’s psychoanalytic conception of subject and object. Therefore Jacques-Alain Miller is right when he states that “topology cannot be extracted from the teaching of Lacan” and that “it is a simplification that frees us from 600 pages of rhetoric such as Sartre’s in *Being and Nothingness*” (Miller 2004: 29, 44). Topology does not only provide us with precise applications, those may also save us lengthy and complex explanations in a natural, i.e. non-formalised language with the inevitable diversity of significations. An additional and more important question, however, does not relate to the quantitative argument in favour of topology, namely its more precise and economical way of showing (and teaching) things. Although the quantitative argument was clearly endorsed by Lacan, there was also another motive to turn to topology. In brief, if for the later and last Lacan psychoanalysis is the clinic of the real, this clinic implies the use of the Borromean knot. The latter is not so much a necessary detour for didactic purposes, as a writing of the real it further develops his earlier conceptions of psychoanalysis on a theoretical and practical level. Space and competence lack the possibility

for discussing what such a writing of the real amounts to, but it can be argued that the construction of Borromean knot refers to writing in at least two ways. First of all, with the Borromean knot the idea of an autonomy pertaining to mathematics is pushed to an extreme, for it avoids any (implicit) idea of adequacy underlying the use mathematical formulae. Borromean knots do not express, model or formalise in a more or less satisfying way an existing reality – as one may still be tempted to think about mathemes –, it is rather an object that needs to be constructed and in the process of construction one encounters what is possible, excluded, or impossible. In this sense the fact that mathematics is done through *writing* – underlined by Lacan from early on, cf. the difference between a signifier and a letter – is taken to its concrete consequences. Another aspect of writing pertains to the effect of the signifier *qua* letter on the subject. In the earlier stage of Lacan's teaching the signifier is what produces the subject as a lack of being, as what gets represented by signifiers, yet remains absent from this primordial order of representation. With the idea of a signifier *qua* written letter the status of the subject changes too. The subject then is no longer a mere void or a lacking signifier, but is marked by the signifying operation. One signifier coincides with the subject, not as a positive trait (one characteristic feature, something I 'am'), but as the stitch that indicates that some operation was needed to sew the subject into the order of signifiers. This can be qualified as the real of the subject; not some terrifying bodily jouissance one needs to find defences against, but the necessity of a writing, a weaving together of three rings into a consistent knot.¹⁰

10 | More often than not, this requires a fourth ring, the so-called sinthome.

BIBLIOGRAPHY

- Friedman, Michael/Tomšič, Samo (2015): "Harmonie Déformée: Kepler, Lacan et les questions ouvertes du structuralisme", March 25, 2016 (<http://www.implications-philosophiques.org/actualite/une/harmonie-deformee-kepler-lacan-et-les-questions-ouvertes-du-structuralisme-12/>).
- Lacan, Jacques (1973-74): *Le Séminaire, livre XXI, Les non-dupes errent*, (unpublished).
- Lacan, Jacques (1981): "La mort est du domaine de la foi." In: *Quarto 3*, pp. 5-20.
- Lacan, Jacques (1988): *Seminar, Book II, The Ego in Freud's Theory and in the Technique of Psychoanalysis*, Cambridge: Cambridge University Press.
- Lacan, Jacques (2006): *Écrits*, trans. Bruce Fink, New York: W.W. Norton and Co.
- Lacan, Jacques (2011a [1971-1972]): *Le Séminaire, livre XIX, ... ou pire*, Paris: Seuil.
- Lacan, Jacques (2011b): "La troisième." In: *La Cause freudienne* 79, pp. 11-33.
- Miller, Jacques-Alain (2004): "Mathemes: Topology in the Teaching of Lacan." In: Ellie Ragland and Dragan Milovanovic (eds.), *Lacan: Topologically Speaking*, New York: Other Press, pp. 28-48.
- Nobus, Dany (2003): "Lacan's Science of the Subject: Between Linguistics and Topology." In: Jean-Michel Rabaté (ed.), *The Cambridge Companion to Lacan*, Cambridge: Cambridge University Press, pp. 50-68.
- Saussure, Ferdinand de (1995 [1916]): *Cours de Linguistique Générale*, ed. Charles Bally/Albert Sechehaye, Paris: Payot.
- Van Haute, Philippe (2002): *Against Adaptation: Lacan's Subversion of the Subject*, New York: Other Press.

Voice and Topology: The Tiny Lag

Mladen Dolar

I will start with perhaps the most famous philosophical statement regarding the borders of language. This is of course Wittgenstein's notorious thesis from his *Tractatus* (2002 [1921]), one of the most influential books of modern philosophy: "The limits of my language are the limits of my world." (ibid: 5.6)¹ I will not pursue any scholarly exegesis of Wittgenstein, but this sentence nevertheless provides a necessary and unavoidable point of reference. Whatever particular content we might give to the notions of 'language' and 'world', which remain undetermined and hazy in this very frequently quoted adage, the statement immediately confronts us with the idea that the experience of language imposes a limit, it limits our experience while at the same time structuring it and thus making it accessible in the first place. At the minimal, if we follow this logic, language imposes a constraint which is both enabling and disabling. It enables our access to the world by providing its mapping, structuring it, while limiting this access by its own configuration, and for whatever does not fit this configuration there stands a warning 'access denied'. Our world appears as limited, and its limit is our language, the very tool that opens up a world for us. To be sure, the statement tacitly assumes a number of suppositions, and first

1 | The quotes from Wittgenstein are given in the generally accepted form, following his own numerical notation.

of all that 'language' and 'the world' stand in a relation of one to one mapping. Language refers to the world, and the world is what language refers to, nothing less and nothing more. This stands in line with Wittgenstein's concept of language where a proposition is ultimately, to make it quick, a picture of reality (ibid: 4.01, '*Der Satz ist ein Bild der Wirklichkeit*'), or more precisely, our thought consists in making pictures of facts, of the 'states of affairs' which form the world, and thought can only be expressed and articulated in language. This statement further stands in line with two basic theses which summarise Wittgenstein's endeavour and which he succinctly states from the outset, in the Introduction: "What can be said at all can be said clearly; and whereof one cannot speak, thereof one must be silent." He will repeat this latter thesis in the notorious last sentence of the book, turning it into a proverb.

But if we are to follow this 'picture theory of language', if we are to espouse this one to one mapping between the appropriate use of language and the world, the propositions being mapped on the 'states of affairs' (*Sachverhalte*) which form the world, what would then be beyond the limit that language imposes? Beyond the limits of the world as enforced by language? Can one have an inkling of it? Is there a world beyond the language world, can one traverse its limits? Is there the unspeakable? Wittgenstein has a clear and simple answer to this: "There is by all means the unspeakable [*Unaussprechliches*]. It is what shows itself [*das zeigt sich* – or 'it is what can be shown'], it is the mystical [*das Mystische*]." (ibid: 6.522) So there is a beyond, unstructured, inarticulate, mute, indecipherable, so it pertains to the mystical. All that can be said about it is that nothing can be said about it. Indeed, whereof one cannot speak thereof one must be silent. One can savour it in silence, one can be overwhelmed by its mystical powers. It shows itself, and at the most it can be shown, silently – but is showing a language? Is pointing to it a

proposition, although wordless? Does one make a statement by merely pointing? As an aside, among the philosophers Hegel proposed that showing is indeed a language at its minimal, the mere act of reference, enough for a minimal linguistic structure, it cannot avoid the pitfalls of language by remaining mute, and he will make an astounding analysis of it (in the opening chapter on sense certainty in the *Phenomenology of Spirit*). I can add that Wittgenstein himself, in his later years, will deal with this at length in his book *On certainty* and make an argument in strange and unexpected congruence with Hegel.

This would be the first way of conceiving the borders of language: the strange way that Wittgenstein pits against each other on the one hand the highly structured logical procedures which his book spells out, the complex rules that the logical structure of language must follow in order to make sense – in order that what can be said can be said clearly, and only what can be said clearly can raise a claim to truth – and on the other hand the mystical experience of which one cannot possibly speak, at least not in a meaningful and coherent way, not clearly, and what is not stated clearly cannot possibly pretend to have a truth value. And for Wittgenstein most problems of traditional philosophy pertain to the improper use of language: things were not said clearly, for if they were then most of these problems would immediately evaporate. This coexistence of two worlds, the one we can speak about and the one we cannot, has been amply and laboriously commented upon by a vast host of scholars. I will not dwell on it. But one can point out that the black abyss of mysticism which opens on the verge of *Tractatus* as the unspeakable stands in obvious opposition with the entire vast tradition of mysticism (les béguines, Hadewijch of Antwerpen, Bernard de Clairvaux, Hildegard of Bingen, Theresa of Avila, St. John of the Cross, etc.) which has not heeded Wittgenstein's advice, anything but. For the common and conspicuous feature of

virtually all mystics is that they would not keep silent at all, they cannot stop talking about their mystical experience, it is something they have to bear witness to, provide a testimony, endlessly, they cannot keep their mouth shut for a moment and savour their communion in silence. They were the arch-anti-Wittgensteinians. The mystical propels endless speech, but certainly not of the kind Wittgenstein had in mind, for it is anything but stated clearly and logically structured. (Lacan, who was very interested in mysticism, despite his firm stance for the Galilean science, says somewhere that these are the best things one can read – to which, he adds in a quip, one should add his own *Écrits*, in the same line.) So the bulk of this tradition, and it is a formidable and voluminous tradition, presents a counterpart to, or a reverse side of, Wittgenstein's prohibition. But this prohibition itself is very paradoxical, for it prohibits something that is stated as impossible – 'whereof one cannot speak': why would one prohibit something that one cannot do anyway? If one cannot speak about it, why banish it? The trouble is that one can, and the mystical tradition is based on the tenet that only what lies beyond the limit of language is worth speaking about. Only what cannot be said logically and clearly has the value of truth, there is a non-linguistic disclosure of truth that relentlessly impels us to speak in vast quantities. This may be seen as the second paradigm, the inverse model of the borders of language – the abyss beyond language propelling speech.

I have googled this sentence, 'The limits of my language ...', and I was astounded to get 38.900.000 hits. There is something perplexing and ironical in this: the statement which proclaims the limits, of language and of the world, actually produces something like a limitless web of virtual singularities. Where are the limits, of both language and world, in this endlessly expanding virtual world we inhabit? One could spend many lifetimes exploring just the receding limits of words and the world that this one statement produces. The unfathomable

39 million points, a quantity that boggles imagination, are like a strange counterpart to a mystical experience 'beyond limit', its modern day version. 39 million stands for boundless, the limitless, the infinite multiplication. Even better, with 'Whereof one cannot speak ...' one gets 111.000.000 hits – what one cannot speak about is obviously the most spoken about topic, testifying to the simple fact that nothing incites more speech than the limits of speech. There is nothing like the unspeakable to make us speak endlessly, *ad nauseam*.

The English version of this famous sentence, 'The limits of my language ...' is technically inaccurate, at least in its common form. The original says: "*Die Grenzen meiner Sprache bedeuten die Grenzen meiner Welt.*" 'The limits of my language mean the limits of my world.' Mean, not are, not the same thing. There is like a cleft between being and meaning that opens up here and seems to be 'lost in translation'. There is again like an abyss which one can put in these terms: does meaning cover being? Is there a being outside meaning? Does one make the same claim, or a stronger or a weaker claim, saying the one or the other? But this ambivalence does not refer to being beyond the limits of language, being to be silently and mystically relished, it refers to the very notion of the limit and the way to conceive it. What does it 'mean' for a limit to be or to mean? One could tentatively say that the very limit of being and meaning either is or means. If it means, it pertains to the logical world as its inner limit; if it is, it could be considered as the outer limit, bordering on the world beyond words which merely is and cannot be said, not meaning anything.

A distinction should be introduced here between a limit and a border. The distinction exists in German between two words, *die Grenze* and *die Schranke*. Wittgenstein says *Grenze*, and let us keep the word 'limit' for it, while *Schranke* can be translated as 'border' for our present purpose (although this goes against the grain of the common German

usage with the trivial thing like the German border, which is *Grenze*, nowadays easily crossed without even noticing). Hegel makes this conceptual distinction in his *Logic*, another notoriously difficult and massively commented book, from which I will quote just a single sentence: “In the very fact of determining something as border, one is already beyond it. [... *darin selbst, das etwas als Schranke bestimmt ist, darüber bereits hinausgegangen ist.*]” (Hegel 1970: 145) So border, *die Schranke*, means that we have already passed the border. If we conceive something as a limit, *die Grenze*, then we conceive it as something that forbids us to pass it, we can only stay on this side, and what is beyond is unfathomable or unreachable. Like in Wittgenstein. While if we conceive something as the border, *die Schranke*, then we have already made a step beyond. Border means trespassing. We have already crossed the border by conceiving it as the border. We have crossed it conceptually even if we have not physically moved. In a further far-reaching extension, for Hegel reason (*die Vernunft*), hence all true thought, consists precisely in constantly passing all borders and limitations. Ultimately, reason is for him the very capacity to conceive every limit as a border – every alterity is the inner alterity of reason, not its outer beyond.² The limit forbids, the border allows. The one cannot be crossed, the other has already been crossed. Limits are external, borders are internal, they border on an outside which lurks within the inside. So there is something to be gained by conceiving the limit as the border, or to try to see border in every limit – but can one? Are the limit and the border two different creatures, or the same creature perceived in a different light, adopting a different perspective? But where could we stand to tell the

2 | Reason is “the universal which is for itself ... beyond all particularity, it is only the going beyond the border” (“... *das Allgemeine, das für sich ... über alle Besonderheit hinaus ist, nur das Hinausgehen über die Schranke ist*”) (Hegel 1970: 146). For reason alone every limit is a border.

difference, to see either the limit or the border? The limit and the border of language, of all things, the entity with the most insecure and blurred limits and borders, an entity out of which we cannot step. But what is it that we find once we have crossed the border of language, if it is not simply a limit? What would be the other of language across the border, if it is not simply the non-linguistic mystical being? Is the grass greener on the other side of the border of language?

Before leaving Wittgenstein let me point out that the so called 'picture theory of language', mapping propositions to the 'states of affairs' (*Sachverhalte*) in the world and doctoring the language to keep it meaningful, is not Wittgenstein's last word on the matter, far from it. There is a long controversy around the question of how many Wittgensteins there are. Is the author who wrote the foundational *Tractatus* at the end of WWI the same person as the one who wrote the equally foundational *Philosophical Investigations* (2008 [1953]) thirty years later? (The book was first published in 1953, two years after his death in 1951.) Are there two souls inhabiting Wittgenstein's breast, like Faust's? For what we find in the *Investigations* is rather the opposite problem to that of *Tractatus*, namely, to put it in a nutshell, the impossibility of establishing the limits of language. The problem he is struggling with here is that language cannot be totalised, it does not form a totality, hence its borders are hazy – do they cease thereby to be limits? Language is no longer tackled through its capacity to present the pictures of the world and its states of affairs, but through an entirely different concept of the language game. Language is not interesting for its truth value or its logical structure – where logic, and the book is called *Tractatus logico-philosophicus*, would serve as a tool to remedy language and bring it in line with the proper usage; logic has always been a language doctor, as it were. Now language is interesting for its pragmatic value, that is, in view of how it is used and what is actually done with it. It is not

its logical or grammatical structure that is at stake, but its capacity to be played as a game. And there are so many games constantly played with language – teaching, threatening, seducing, arguing, imploring, confessing, writing poetry, demonstrating a mathematical axiom, presenting a paper at a conference ... Games have rules, having rules is what defines a game, and Wittgenstein spends a lot of time trying to figure out the implicit rules we constantly use with language games. But – and this is crucial – there is no meta-rule which would regulate all language games, there is no meta-language which could spell out what language is and what would be its limits. Language games form an inconsistent whole, actually not a whole at all, it is rather a non-whole, a not-all (*pas-tout*, to use the Lacanian parlance) whose limits can never be spelled out. Each game borders on other games, in an unruly behaviour which cannot be put quite in order or streamlined. One has to presuppose a rule if one is to use language at all, but there is no rule of rules, no rule of the rule itself. Rules are many and they are constantly broken. But if language cannot form a totality, if therefore one cannot conceive its limits, then neither does the world. It seems that all limits have dissolved into borders, and one is always on the border of the rule and the unruly – but the very border between the rule and the unruly stands at the core of language, it is its driving force. If language has no outer limit, it has its internal border, which is presented, at the extreme point of games and their rules, by the pit of what Wittgenstein calls ‘the private language’, *die Privatsprache*. Private language is a contradiction in terms, since a language with only private rules is no language, a language only privately spoken and understood ceases to be a language – rules, games and language can only be public, always shared by the others.³

3 | One of the justly famous books on Wittgenstein is actually called *On Rules and Private Language* (Kripke 1982).

In this view we would have another, third paradigm of the borders of language: the border between the rule and the unruly in language, the border between the rule and breaking the rule – does breaking a rule establish another rule? Does a seemingly irregular usage follow another rule? How to figure out the language games that our fellow human beings are playing, how to disentangle their rules? This is what constantly torments Wittgenstein – can there be a rule of the unruly in language? What would be a guarantee of a rule which instigates a game? One must presuppose a rule for there to be a (language) game, but one can never quite sustain it, make it simply objectively valid and universal. So the border is now rather conceived as the border between one language game and another, where all games are played on the border of rules they assume and presuppose, but always without a guarantee; and on the other hand as the border between language and private language, an idiolect, a glossolalia, a dissolution of rules. It is the border between what makes and what unmakes the language.

After these three paradigms of conceiving the borders of language let me briefly bring up a fourth one. One need not look very far, at least not in terms of time and space, if not in terms of concepts. Freud shared with Wittgenstein the same period, the same country of Austria and even the same Jewish origin, although there is a lot that sets them apart. The two men knew each other vaguely, and Wittgenstein had both a fascination and an attitude of stark rejection regarding psychoanalysis. There is another border of language spelled out by the Freudian notion of the unconscious. The unconscious clearly presents a border of the common use of language, a border of meaning, for it always appears as something that does not make sense. Meaning slips for a moment, and having slipped it can never be quite recuperated. There is like a break-down of language, its accident, in both senses of the word. The first three inaugural books in which

Freud presented his discovery (*The Interpretation of Dreams* [1900]; *The Psychopathology of Everyday Life* [1901]; *Jokes and their Relation to the Unconscious* [1905]) all have to do with such linguistic accidents: dreams, slips of the tongue, jokes. They all deal with language and its vicissitudes (and Lacan will try to sum this up by his famous adage that 'the unconscious is structured like a language'), with the moments where the language does not quite work, not in the way it was supposed to, not the way that the speaker intended. It does not produce meaning (let alone an accurate picture of the state of affairs), but something recalcitrant to meaning, some points whose meaning escapes, where meaning is displaced, condensed and distorted (and those are the major mechanisms of the unconscious that Freud scrutinises at great length, condensation, displacement, distortion, *Entstellung*). These quirks and slips present an enigma which calls for interpretation, that is, for an analysis which would endow the meaningless with meaning. But there is a simple and crucial point, the only one that I want to make in this vast and convoluted problem: psychoanalysis is not about unearthing a hidden meaning. All hidden meaning that one discovers and works out – and this calls for a strenuous and laborious effort – all this meaning can be recuperated by consciousness, but this does not do away with the breakdown that produced it, it does not heal its crack. Psychoanalysis is not about giving meaning to the points where meaning is opaque, evasive and obscure, rather it endeavours to keep this crack open. It is not that the unconscious is telling us something in a roundabout way and we would have to spell out in straightforward terms what it is saying – the unconscious resides only in this roundabout, in the surplus of distortion which cannot be done away with. It is not a particular content which one would have to dig out, it resides only in the crack and the slip. All that appears in the crack can be recuperated, except for the crack itself. It presents a border of language as

meaningful, as designed to produce meaning, to produce our mapping of the world. And the crack of language it presents evokes the crack of this world itself, a crack in its mapping. If language, at the minimal, refers to the world and its states of affairs, then what does the unconscious refer to? What would be its object, its referent? Or is it a break-down of the very idea that there is a correlation between language and world, between subject and object? Something that the very idea of language is premised on? – I will not pursue this any further, let it suffice that the unconscious presents a fourth paradigm, in our count, of a border of language, an internal border where meaning slips and which cannot be recovered by meaning.

I can briefly examine two further instances of borders of language, both appearing as a border within language itself, at its very core. The first instance is the problem of the voice. At the minimal, the voice is the very medium of language, its vehicle and its home-ground, something that enables the very use of language, yet something that is not reducible to language. To be sure, all the voice elements which enable the voice to signify can be linguistically spelled out, except for the voice itself. It is, in a formula proposed by J.-A. Miller, “that in language which doesn’t contribute to signification” (Miller 1989: 180). The voice is like a left-over of the signifying process, it is condition and it is surplus in one. It can consequently acquire the imaginary value of conveying a higher meaning, something that cannot be expressed by words, and indeed the voice has been a major vehicle of transcendence, both in religious rituals and in aesthetic practices. But to endow it with superior meaning or with aesthetic adulation is perhaps going too fast – it is not a matter of theology or aesthetics, there is something cumbersome and unsettling in the voice precisely because it cannot be ascribed a place nor reduced to making sense, high or low, although we usually domesticate it and pass over it by habit. It is moreover something which

invokes the body, the materiality of the bodily emission, the enjoyment, the affect, thus bringing into language the stain of singularity and enjoyment. The voice is like the human stain of language, but a stain that exceeds language while standing at its core. Yet, if it evokes the body, then this is not simply the firm physical body, made of palpable matter and physiology, for two reasons: first, the voice appears precisely as a dematerialised body, a body sublimated into the mere undulation of the air, the ethereal, the immaterial matter, literally a body vanishing into thin air. And second, it invokes a divided body, a body split precisely into an interior and an exterior, and the voice, stemming from an invisible and unfathomable interior, embodies the very passage between the inner and the outer. The experience of the voice, of both emitting and of hearing a voice, may well be what makes possible the experience of having an interiority at all – a soul, a psyche, a self – as opposed to the exteriority of the external world and its objects, separate and standing at a distance from us. So the voice, on the one hand irreducible to language, is on the other hand equally irreducible to the body, it invokes its split – and the way of its being irreducible to both may well be what, paradoxically, holds the two together, the language and the body.⁴ Thus the voice constitutes the border of language which is constantly enacted with every linguistic utterance, it is put into play with every use of language as its constant drama, the language constantly bordering on its other which is its very native soil and medium.

Another border of language, intimately pertaining to the nature of language, but in a very different, even opposite way than the voice, is the case of writing. If the voice brings into play the interiority – and it has always been associated with spirit, that which transcends the body and forms the medium

4 | This is an argument which I dwelled upon at great length in my book on the voice (Dolar 2006). I cannot pursue this any further here.

of the soul – then writing refers to exteriority, the very opposite of the intimate. It is a medium – the other medium of language apart from the voice, and in stark contrast to it – which provides language with a material existence out there, independent of the mind which conceived language and is practicing it. The voice is the border of language which summons interiority, writing constitutes a border which refers to exteriority, objectivity, materiality of a trace. At the minimal, it makes language independent not only from the mind, but also from the situation of its use, it disentangles language from presence, its rootedness in a particular situation where both the speaker and the addressee are present. It is a telecommunication over spatial distances and over the passage of time. It is a border with something which exceeds speakers, interlocutors, presence, intentions, it gives language an independent body, it turns it into an object existing and circulating in the world. There is a long history of a spontaneous hierarchy between the two, the voice and the writing: the voice was seen as the natural soil of language, it evoked interiority, it evoked spirit, it evoked the living presence; the letter, on the other hand, was the dead letter, something that threatens to kill presence, to thwart it and to erode it. It was generally seen as a secondary supplement to language, an auxiliary, an optional instrument, not pertaining to its essence. And after all, writing appeared late in human history, people could do without it for god knows how many thousands of years, and it appears late in the individual history, one only learns to write after acquiring a proficiency in speech. This spontaneous hierarchy is what Derrida described with the notion of phonocentrism, the allegedly self-evident primacy and supremacy of voice over writing. Yet, and this is the gist of Derrida's argument, what seemed to be so obviously exterior and secondary may well belong to the very essence of language: its capacity of being written, of leaving a trace, is what enables language at all. In this

view writing would be the interior border of language itself, something enabling it – the very inscription and the iterativity of a trace, its capacity to be repeated, is what places the dead letter and the trace at the core of the living presence of voice and speech. This would be the sixth philosophical paradigm of conceiving the borders of language – something in language referring it to the materiality of inscription and trace. The Derridean word for it would be *la différance*, difference with an a, a difference not between more of the same, but spelling out a heterogeneity, the very principle of differing, of setting up borders and undermining them.

The borders of language are myriad, countless and heterogeneous, and one could say that there is nothing else in language but a constant bordering, it only works through addressing its edges, it constantly proceeds on the edge with its other. It can only be itself through its borders, that is, by trespassing. I have no ambition to set up an exhaustive list, but only a series of glimpses into its various borders. Let me stop at the seventh paradigm on my makeshift list.

What I have in mind is not the mystical experience of the unspeakable – for this is something that does not stop speaking; nor bearing testimony to the unspeakable by endless proliferation of speech – for oddly there is if not an absence then a great scarcity of testimonies to this; nor a language game with its rules and breaking the rules – for this is something where no public rules exist, although this is not outside language; nor is it unconscious – this is rather the very stuff of consciousness; nor is it a voice – or at least not an emitted voice that anybody else could hear; nor is it a writing – it is actually as far removed from writing as possible. So what would this creature be? It is not something rare or exotic, quite the opposite, it is something so common, banal and trivial that no one ever bothers to speak about it, or hardly ever. It is the phenomenon of the inner speech.

The inner speech is ubiquitous. If one stops to think about it for a moment, one easily realises that one's life is constantly accompanied by a companion speaking in one's head, keeping us company at all times of our waking life, never ceasing to speak, relentlessly. It looks like this is the very stuff that conditions and perpetuates our consciousness, and given its absolutely general operation, in all heads at all times, there is an astounding silence about it: nobody seems to be talking about it, having conversations about it, expounding about it, boasting about it, mentioning it at all. It just seems too trivial, almost embarrassing, something totally private and slightly tainted with an air of a dirty secret, not fit for disclosure. There is something vaguely shameful about it, as if one was caught in an unseemly homely apparel. What is this phenomenon, so close and so remote? How can one speak about it – for there seems to be a lack of a proper vocabulary and concepts. This is like the most common of all experiences, but completely passed over in silence, not reflected upon in our daily life and very seldom reflected upon in philosophy. There are some exceptions.

In order to approach it, one can perhaps try to state what it is not. First, it is not vocal, not in any usual sense of the word. No voice is being heard outside, not a sound, there are no undulations of the air, nothing can be physically described. Yet, it is an acoustic phenomenon, even if internal one – it does not address any other sense except hearing. And one can easily realise this if one thinks about the melody one can hear in one's head and cannot be rid of. There is an insistent internal hearing, although there is technically nothing to hear. There is a technical literature on this in neurology where this experience can actually be described and observed, with precise instruments, as a particular kind of brain activity. It is not so private as to escape science and measurement, but unless you have an MRI at hand, it is as private as you can get. Second, this is not communication. There are many

illustrious theorists – philosophers, linguists, media theorists etc. – who think that language is basically communication and can be accounted for in communicational terms. One can list two very conspicuous examples of Roman Jakobson and his scheme of six functions of language, and one can invoke the name of Jürgen Habermas, for better or worse. I firmly do not belong to this crowd. Communication is not the most interesting thing about language nor can it account for its effects and ramifications, nor for its borders. Inner speech obviously does not fit into the mould of language as communication, it does not divulge anything to anyone, it does not dispense information, it is uniquely a speech not directed at others, at anyone else, and moreover, a speech not accessible to anyone else. It has the audience of one only, only one privileged listener; it is for his ears only, and not even really for his ears. It is the speech at its most private, but nevertheless this is not Wittgenstein's private language where publicly accessible rules would dissolve into an idiolect – it is a speech just like the normal speech, with the same grammar, syntax and vocabulary. It is just like its rambling paler and dimmer shadow, its incoherent double, a private place where linguistic rules slacken, where they may be fragmented, but definitely not given up. If there is communication, then it is singularly a communication between myself and myself, between the ego and the alter ego – but is there an ego without the inner speech? Is not this the very substance of the ego? Is there an ego without this alter dwelling closest to it, inhabiting the same tiny studio? One can see that immediately high philosophical stakes are raised at this point. Is the very notion of the ego dependent on language? And if on language, then perhaps not on its conspicuous public image, but on this unglamorous fellow-traveller of language, hidden in the cellar, or rather in the attic, indeed 'the madman in the attic'. Third, this is not a madman at all, this is the most strikingly normal phenomenon, boring and tedious in its

normality. This is not the phenomenon of hearing voices, of vocal or verbal hallucination, where people are tormented by intrusive voices stemming from their head, with no outer source, yet compellingly real, more real than any other voices. Hearing voices is spectacular (and can have momentous consequences, think of Socrates and Joan of Arc), but what I want to consider is dreary and dull, it affects everyone. Fourth, this is not the voice of conscience. Notoriously, conscience has a voice which addresses us in second person and tells us what to do or not to do. 'Do your duty', or 'Do not give way as to your desire'. There is a very long tradition linking conscience, ethics and morality with a voice, a voice imposing itself insistently, not giving us rest until it is heard. One can trace its long history from Socrates to Heidegger (as I have tried in my book). But conscience is not consciousness, and in the figure of speech that served as a guideline to the entire ethical tradition one always spoke of the voice of conscience, not of the speech of conscience. The mere voice is enough – witness to this is Heidegger who maintains that this voice says 'strictly speaking nothing' (cf. Heidegger 1973: §56), it is a mere voice of insistence, not even a voice, but a non-sonorous call by which one is merely summoned to one's ownmost potentiality-for-being (ibid: 318; and Being, for Heidegger, is ultimately epitomised by 'the voice of Being'). What we are concerned with here is consciousness, not conscience (although they have the same Latin root and in French, e. g., the same word designates both, *la conscience*), not morality, but something which rather appears not to give a damn about morality. And fifth, this is not the unconscious, it is rather the very stuff that one is constantly conscious of, if vaguely, whether one wants to or not. It lacks the glamour of the unconscious, although some of its tentacles no doubt reach into the unconscious.

If this is what inner speech is not, what is it then? I can draw only a very provisional and haphazard list since the

phenomenon is haphazard by its nature. It is a patchwork, a hodgepodge, a *mélange*, like a rhizome underlying and redoubling consciousness, stretching in all directions.

The first element of it is its quality of a tape-recorder or echo. It is like a device which records various pieces of conversation, words said by other people that one cannot get out of one's mind, one's own words previously uttered, words accidentally overheard, words read. Anything can be recorded, and the inner speech does not have the filing system to sort out recordings by categories or by relevance. One often turns over some words in one's mind which may be quite trivial, contingent, but one cannot be rid of them – something has stuck in one's mind, and there is something in the inner speech that one can designate as 'stuckness', for lack of a better word. Words stick, and the stuck words are being endlessly replayed. This is a tape-recorder with a particularly prominent rewind button. This recording function, one of the key elements of inner speech, is to be distinguished from the function of memory, although memory is no doubt also a major agent in this and the line between the two is blurred. But memories are summoned by an act of conscious will and then perused and scrutinised, either in search of a particular item or information, or else in search of a pleasure value that a memory can provide; or else in the analytical spirit of examining why something occurred and what went wrong. But the recording function of inner speech is perhaps more intimately connected with what Marcel Proust called *la mémoire involontaire*, the involuntary memory, a memory which springs up without being summoned, as an unexpected guest or an intruder. And Proust, who is ultimately the writer of the involuntary memory, starts his monumental novel precisely in the state of falling asleep, when the conscious controls are losing their grip and the involuntary memories flood the mind, building the cathedral of the past, in search of the lost time, between the time lost and found again. It all

happens on the verge of giving up will, almost giving in to slumber, yet firmly persisting on the edge, refusing to fall asleep, that is, refusing to give way as to the edge, persevering at the edge. There is something in Proust that is related to the inner speech, although the convoluted syntactically complex very long sentences in which he tries to capture it are at the extreme opposite end from the loose and fragmented structure of the inner speech. – Things are recorded on this inner tape without one's will being quite able to steer them and sieve them. At the bottom of it, there is the crucial fact that the very function of speech, the acquisition of language, depends on a recording device. One repeats the words heard, there is no other way to learn how to speak, but before repeating them they must linger for a while and simmer in the limbo of inner speech. All future speech comes from past speech, with the hiatus of inner speech in between. Both past speech and future speech are public, but between them there is the private recess of inner speech, for the audience of just one. There is no speech without inner speech.

Second, connected to the recording function there is the function of altering the past, or remedying the past, compensating the past. This is a large slice of inner speech: replaying what one should have said but did not. One failed to give a good answer, to respond adequately to a situation, and one then has to replay the situation endlessly in one's head, phrasing what one should have said or the way one should have acted. And one structurally realises only too late, there is always a delay and retroactivity in realisation and insight, so there is the inner speech which tries to remedy whatever failed, to correct and to fix one's own incapacity to be fully alert and present and adequate and equal to the occasion. And this delay, or this inequality with oneself, is very much what structures consciousness as such, so there is always plenty of work to do for the inner speech. Does one ever fully inhabit one's (self)presence, does one ever say the right thing? There

is a lag which structures consciousness, and the inner speech sneaks into this lag. 'What a fool I was that I did not say this or that, what an idiot to let myself be humiliated in this way, what a fool I made of myself, what must they think of me' and much more along these lines – and one is always structurally an idiot and a fool to be retroactively vindicated by the inner speech. There are many variations to be put under the general rubric of 'Why am I such an idiot?'

If these two functions look backwards, either recording bits of the past or remedying them, then the third crucial function looks forwards. It is the function of anticipation, of rehearsing in one's head what one is going to say, immediately or at a future occasion. One rehearses the possible conversations with a boss, a friend, a lover, a child, one rehearses the paper one is going to write, the lecture one is going to give. It all has to be rehearsed beforehand in one's inner speech before turning into outer speech, before coming out, as it were, coming out into the open, into the open of what is usually understood by language. Language is the creature with two sides, with two faces, one public and one private and hidden. It entirely unfolds itself in the interplay between the inner and the outer speech, the passage of this watershed is crucial for its functioning. There is no outer speech without it being first rehearsed ahead of time – but can one ever make a good rehearsal, a dress rehearsal, as it were, where what comes out is already fully formed in one's head, so that coming out would be a mere repetition? What happens in the passage itself – a mere conversion of the inner into the outer? I will come back to that.

Fourth, what one hears in one's head is not merely speech. One can most insistently hear a melody, a piece of music, and very often a piece that one does not like at all and cannot be rid of, it just repeats itself over and over again, compulsively and tormentingly, against one's will. There is a hodgepodge variety of sounding in one's head intermingled with speech,

particularly music but also other sounds. And in a further extension, the inner speech is not only accompanied by a soundtrack, but also by images and pictures, it is an illustrated magazine; one pictures particular speech situations, faces of particular people involved, the scenery. But this would extend our topic into another direction, equally mysterious, of the inner space of representation, visual imaging, the imaginary. In the case of inner speech this may well be a secondary phenomenon, just as Freud says about dreams that the images, so striking and essential to the dream, are ultimately a diversion, one should keep to the wording if one wants to disentangle the clue. But this is not the whole truth about it; there is a proliferation of inner images that unfolds along with the speech as its counterpart. I will leave aside this line of reflection about the intermingling of the visual and speech in one's private interior. It would lead us to a further and vaster problem, that of representation as such, representation as the inner mental reproduction.

Fifth, there is the function of the running commentary that the inner speech constantly provides. 'Where did I leave my keys? Has someone displaced them or have I? And here is the electricity bill. And I should call my friend, as I promised, I will do it later. Now what was I about to do? Let me have a cup of coffee first.' Etc. One comments on the dreary trivia of one's life, and there is no life so trivial that would not call for a comment in one's head, no occasion so banal that would not deserve one. Living an everyday life and commenting upon it in inner speech are one and the same thing.

Sixth, there is the function of day-dreaming, the function of self-indulgence in wishful scenarios, imagining rather implausible scripts in which one would play the role of a hero, take revenge on some dragon and rescue some gorgeous maiden. Freud gives the example of a frequent and typical scenario where a poor young man imagines rescuing a millionaire from certain death, who then out of gratitude

bestows his millions on the courageous noble young man, and possibly he then goes on to marry his daughter. It is very predictable, there is always a happy ending, Hollywood did not have to invent anything; it merely had to listen to the inner speech for scenarios. Freud spends quite some time pondering on day-dreaming, and he sees the function of fantasy as something which is in a way indifferent to the divide between consciousness and the unconscious, for the same function of fantasy is operative in day-dreaming and night-dreaming. There is a wish-fulfilment at stake that works on both ends, although its fate takes a different turn in the unconscious, where the wishful fantasy can easily turn into a nightmare, and for structural reasons. He further wrote some reflections in his paper "The Creative Writer and Day-Dreaming" (Freud 2001 [1908]) on the relation between fantasies, day-dreaming and literary creation, so this function may be internally linked to artistic creation. There is further the part of sexual fantasies in inner speech (and the inner eye), but I will draw my line there and refrain from giving any picturesque examples that everyone can easily provide on his or her own.

A further variety of the day-dreaming scenarios, and closely connected with the very function of the inner speech, is the constant dialogue with an imaginary interlocutor. One invents a friend, an accomplice, a sparring partner, a confidant, with whom one discusses one's secrets, one's problems, one's dilemmas, one airs one's opinions and imagines arguments. This is a frequent or even regular phenomenon of growing up, and I suppose no childhood ever passes without it. In some cases the person acquires an autonomous existence and this can lead to serious delusions and mental disorders. (I cannot refrain from mentioning Agota Kristof's astounding trilogy of novels, *The Notebook*, *The Proof*, *The Third Lie* (1997), with the function of the real or imaginary twin, something that helps to survive the atrocities of the world war and Stalinist rule.)

And there is no doubt an adult version, where the constant interlocutor may well be a real person, the beloved person, a far away close friend, or someone dead, and one can lead one's entire life in dialogue and in constant discussion with this one person in one's head, justifying one's life in his or her eyes.

Seventh, and last – what of meditation? And I do not mean the spiritual meditation, either of the traditional or of the new-age kind, but rather the Cartesian variety. What of reflection? What of the strenuous endeavours to figure out a difficult philosophical problem, or a mathematical problem, or a problem in computer programming? No doubt this happens in inner speech as the home-ground. One tries to systematically look at all the angles, one considers all possibilities, one invents virtual models, one mentally consults the authorities on the subject, one consults the library in one's head, one follows a certain argument to see where it could lead. Ultimately, and this is the bottom-line – what of thought? Is inner speech, apart from its other functions, also essentially the function of what is called thought? What does one think with, if not with the inner speech?⁵ This of course touches upon the old philosophical problem whether thought as such is something different from speech – is there thought prior and apart from speech, inner or outer, thought to which speech would merely give expression and form? Can thought be formed independently from speech? Is there a 'mentalese', the language of thought different from language, as the cognitive psychology would have it (Fodor, Katz, the idea stemming from Chomsky)? A highly structured mentalese but not quite 'structured like

5 | Lacan, in a famous quip, says that he thinks with his feet, since it is only with his feet that he touches ground. And there is a whole school of thought, the peripatetics, the followers of Aristotle, who introduced this practice, thinking while walking, thinking by walking.

a language'? How does thought happen in the midst of this hodgepodge, springing up phoenix-like from this chaotic sticky mud? How does thought cohabit in this very crowded space with elements which seem to be the very opposite of thought, rather the evasion of thought? E. g. the random self-indulgence of day-dreaming vs. the stringency required to solve a logical problem?

Let me stop here, with the seven functions: recording, remedying/vindicating, rehearsing, soundtrack, running commentary, day-dreaming, thought. Much more can be added. I left out, most conspicuously, the whole problem of the stream of consciousness and its grand fate in modern literature, from Joyce (think of Molly Bloom's 'yes') and Virginia Woolf to Beckett. The very idea of the stream of consciousness was to write down the inner speech, to emulate it and make it available on the page, so that the advent of modern literature utterly depended on taking the inner speech as the clue and the crux. I left out some important reflections on this phenomenon made by William James or Mikhail Bakhtin, two of the very few who devoted their attention to it. Now, if we look at this provisional list, it all looks like a very mixed bag indeed, there is no criterion to sort out this mess, no general principle of division, no good way to label the categories so that they would form some sort of a system. This is a haphazard coexistence of the heterogeneous, all kinds of elements happily or unhappily flocking together. It is a universe of total inconsistency. What renders it consistent, eventually, is the passage from inner speech to outer speech, where one must come up with a word, an utterance, a sentence, a response, a question, something addressing the other, the private suddenly rendered public, stepping into another realm where it exists for others, and hence for what is in Lacanian psychoanalysis called big Other. (But is there a function of the big Other in inner speech? A dimmer and shrunk version of it? Is there the big Other without its paler

shadow, its inner doppelganger?) It must do its coming out and make itself, if not consistent, at least presentable, in some broadest sense. There is something constitutive of the very notion of consciousness, a crucial mechanism which hinges on this passage. All the drama of consciousness is constantly played out on this edge.

What is at stake in inner speech is the double of consciousness without which consciousness would not exist. Can one imagine – and this is very hard to imagine – a situation where the inner speech would fail, where there would be silence in one's head? This would be terrifying to the utmost, I suppose this would be the dissolution of consciousness, a step into madness; it would entail the impossibility of speech. And there is something profoundly troubling if one tries to imagine what goes on inside of the head of an autistic, an aphasic, someone who suffered a stroke, someone with brain lesion, an Alzheimer patient. It is unimaginable, and the effort to imagine it brings up the black corners of one's own mind, one's capacity for blackness and blankness, which is perhaps always but a step away.

Speech is a creature divided into its inner and outer side, and both sides condition each other – it divides into two. Maybe the function of nirvana is precisely striving for a state where one would be rid of the inner speech, but this is then indeed a state beyond consciousness. This double of consciousness is not the unconscious (which is but a crack, a crevice, a split, appearing in a flash and gone again); this is a constant rambling accompanying consciousness, wandering in all directions. There is a strange mixture of freedom and compulsion in it – one is nowhere as free as in one's own head, but one is also strangely ruled by compulsive repetitions, by the essential stuckness, haunted by what refuses to go away or to be steered – the mixture of fancy and stuckness, constantly on the verge of the one turning into the other. One's inner speech is at the same time the birthplace of will

and something that cannot be quite ruled by one's will. There is a strange mixture of incoherent rambling and the attempt at stringency; of giving way to wherever fancy may take us and of refusing to give way, taking a decision of command. What is an ego? What is an ego without an alter ego? How many does it take to be an ego? Is the constant companion talking to us the other of ego, or its core? Talking to us – but who are we apart from our inner speech?⁶ The function of ego-speech is essential to the maintenance of an ego, and ego maintains itself merely by speaking to itself. The most puzzling part, I suppose, is ultimately not the particular content that appears in inner speech, as opposed to the outer, but the very instance of the split into the inner and the outer as constitutive of the function of both speech and ego. It's not that '*Je est un autre*', in Rimbaud's famous adage, it is rather the split of the same, at the core of the very ego identity, the other being merely a dimmer and incoherent shadow of the ego, yet quintessential.

Let me finish with two literary examples. The first one stems from Heinrich von Kleist, his piece called "On the Gradual Production of Thoughts whilst Speaking" ("*Über die allmähliche Verfertigung der Gedanken beim Reden*" [1805]). It is an absolutely wonderful and astounding short piece that deserves to be put on all reading lists. Kleist's problem is closely connected to ours: where and when does thought happen? Do we form it first in our head, rehearse it by inner speech, and then repeat what has been fully shaped in outer speech? His idea is that it never happens this way. Thought actually and necessarily takes form while speaking, so that

6 | In a famous spot in *Grammatology* Derrida says that hearing one's voice, hearing oneself speak, "that undoubtedly is what is called consciousness" (Derrida 1976: 20). Inner speech gives another twist to this. Does one hear oneself speak in inner speech? This is like a diminished version of hearing; it gives another twist to both hearing and consciousness. Hearing is split into inner and outer, along the same dividing line as both consciousness and language.

at the outset we only have a vague, or at least not fully formed, idea or intention of what we are going to say. It is the very passage that forces our hand, so that when the inner becomes outer it is in this very process that something else is produced, something unexpected, a surplus, something not yet there in inner speech. He gives four examples, e. g.: while trying to solve a mathematical problem he is stuck for hours in his head and cannot make any progress, then he decides to talk about it to his sister, who does not know a thing about mathematics, and the moment he tries to explain it to this ignorant interlocutor, the problem is suddenly solved. It is the passage that provided the bonus, as it were. Etc. His major example concerns the French revolution. When the king, on 23 June 1789, sent his messenger to the gathering of the general estates with a clear command that the estates must be disbanded, Mirabeau stood up, no doubt trying to find something to say in his inner speech, but there was no time, he had to start speaking and inventing as he went along – and it was in this process that the thought was formed, he stalled for time, rambling on, until he found it: “But by what right do you give orders here? We are the representatives of the nation. The nation does not take orders. It gives them. And to make myself perfectly plain to you, tell your king we shall not move from here unless forced to by bayonets.’ Whereupon, well content with himself, he sat down.”⁷ If thought is formed while speaking, in the transition from inner speech to the outer, if there is something of a momentous event in that passage, then Kleist’s text offers the whole scale of it, from the smallest and banal everyday occurrence to the biggest imaginable. Indeed, there is a revolution at stake, a revolution in speech and thought, and the best theory of the

7 | Quoted in (Gailus 2006: 5). This book provides an excellent analysis of Kleist’s piece and its vast ramifications. The English translation of Kleist’s text is to be found in (Kleist 1997).

French revolution that I know of is this one: Mirabeau, once he opened his mouth, had to finish the sentence. He was prey to the minimal device of the passage of inner speech into the outer, and look where this has brought us.

I will leave the last word to Samuel Beckett. He is the most suitable man of the last word precisely by his firm belief that there is none, so his last word is famously 'I'll go on', the perfect ending of a perfect novel. I will take just a single quote from *The Unnameable* (1953): "I shall transmit the words as received, by the ear, or roared through a trumpet into the arsehole, in all their purity, and in the same order, as far as possible. This infinitesimal lag, between arrival and departure, this trifling delay in evacuation, is all I have to worry about" (Beckett 1979: 321). This is what speaking is, ultimately: transmitting the words received and recorded. There is, at the minimal, the tiny lag between arrival and departure, and it is in this lag that the inner speech takes its hold. Beckett, as always, tries to bring things to the core, and what one finds at the core is like a machine of re-transmission, with the tiny lag between the input and the output. This does not seem a very flattering or creative account of consciousness, to say the least. Yet, the tiny lag between arrival and departure is a space of both constraint and freedom, and it is precisely at the point where Beckett constrains it to the utmost – transmitting the words in the same order as received – that the lag is an opening. First in the sense which is paramount for Beckett: to find the resource in the maximum constraint, the impediment of movement, the disability of the body, the brink of death – it is always (and only) on the verge that possibility of sense emerges. Second in the sense that even in the extreme situation of a mere repetition, of turning oneself into the perfect echo, the lag nevertheless changes everything, imperceptibly and essentially. There is more in the echo than in the original, the echo has the power over the original, it displaces it and dislocates it; it transforms it

and puts it asunder. But for our purpose, the essential part is that the lag is populated by the inner speech. Inner speech is a *Ding an sich*, by definition unobtainable, irreproducible, for the moment one speaks it out or writes it down, it evaporates, it ceases to be what it is by definition, i.e. inner, it turns into something divulged and presented to the others, fit for the public ear, even if apparently incoherent and rambling. Inner speech can by definition only lead a shadowy existence, in the twilight of everyone's mind, immediately dissipated by the ray of light. It is ubiquitous, but one cannot catch it without destroying it. Yet it is not unknowable, it is a describable entity, one can appeal to the most common experience, one can scrutinise its mechanisms. It dwells precisely in the twilight, neither in full light nor in pitch darkness, so close, yet not quite reachable – too close to be reached. It testifies to the fundamental topology of language, its split into the public and private, the outer and the inner, the clear light of the accessible and the twilight of the elusive which conditions the visible part, although it is cut of the same stuff. Beckett's *The Unnameable* is no doubt the supreme instance of writing down the inner speech, where both the speaker and the addressee of speech remain completely unclear, from the first page to the last – both are not just not named, but remain unnameable. Naming them would map language onto private and public identities and thus suppress the problem. It is entirely situated in the tiny lag, ramblingly repeating the speech heard somewhere some time and retransmitting it, without any ambition of originality or of communicating something, without any worry about the content, which becomes increasingly indifferent. It is not about what is being said, but about the topology of saying. And it is one of the greatest works of literature precisely by not giving up on the tiny lag and keeping at the closest to it.

The inner speech is the minimal and the paramount border of language, constitutive of language as such as well as

of consciousness as such. Can one say, finally: consciousness itself is nothing but the border of language, its tiny lag?

BIBLIOGRAPHY

- Beckett, Samuel (1979): *The Beckett Trilogy*, London: Picador.
- Derrida, Jacques (1976 [1967]): *Grammatology*, trans. G. C. Spivak, Baltimore: Johns Hopkins UP.
- Dolar, Mladen (2006): *A Voice and Nothing More*, Cambridge (Mass.): MIT Press.
- Freud, Sigmund (2001 [1908]): "Creative Writers and Day-Dreaming." In: id., *The Standard Edition of the Collected Works of Sigmund Freud*, vol. IX, trans. James Strachey, London: Vintage Press, pp. 141-154.
- Gailus, Andreas (2006): *Passions of the Sign*, Baltimore: Johns Hopkins UP.
- Hegel, Georg Wilhelm Friedrich (1970): *Theorie Werkausgabe*, vol. 5, *Wissenschaft der Logik I*, Frankfurt am Main: Suhrkamp.
- Heidegger, Martin (1973 [1927]): *Being and Time*, trans. John Macquarrie/Edward Robinson, Oxford: Blackwell.
- Kleist, Heinrich von (1997 [1805]): "On the Gradual Production of Thoughts whilst Speaking." In: id., *Selected Writings*, ed. and trans. David Constantine, London: J. M. Dent, pp. 405-409.
- Kripke, Saul (1982): *Wittgenstein on Rules and Private Language*, Oxford: Blackwell.
- Kristof, Agota (1997): *The Trilogy*, London: Picador.
- Miller, Jacques-Alain (1989): "Jacques Lacan et la voix." In: Fonagy, Ivan et al., *La voix. Actes du colloque d'Ivry*, Paris: La lysimaque, pp. 175-184.
- Wittgenstein, Ludwig (2002 [1921]): *Tractatus Logico-Philosophicus*, trans. C. K. Ogden, London/New York: Routledge.

Wittgenstein, Ludwig (2008 [1953]): *Philosophical Investigations*, trans. G. E. M. Anscombe, Oxford: Blackwell.

Towards a New Transcendental Aesthetics?

Samo Tomšič

LACAN VERSUS KANT

In *L'étourdit*, probably his most opaque and condensed writing, Lacan extensively engages with topology and its epistemological importance for psychoanalysis, bringing his long lasting engagement with this branch of mathematics to a point. At one moment he suddenly turns his discussion to philosophy and poses the following question: “Is topology not this *no'space* [*n'espace*], into which mathematical discourse leads us and which necessitates a revision of Kant's transcendental aesthetics?” (Lacan 2001: 472) Such a straightforward remark might come as a surprise, but it had in fact guided Lacan's teaching from as early as 1961. In his seminar on anxiety (1962–63) we thus read: “[T]here is the *a*, which is this remainder, this residue, this object whose status escapes the status of the object derived from the specular image, that is, the laws of transcendental aesthetics” (Lacan 2014: 40). The object of psychoanalysis is not to be confused with the empirical object as understood by transcendental aesthetics. While Kant's object is derived from the imaginary (specular image, which means also: surface, appearance and sensuality), the object *a* stands for an object without positive, sensual qualities, hence an object without the specular image, and one whose reality manifests as a disturbance,

distortion or violence in appearance. In the Lacanian algebra *a* stands for the object-cause of desire, marked by its ungraspable, metonymic status. Kant's transcendental aesthetics encompasses objects, be they sensual or fictional, to which identity and positive qualities can be attributed. For this reason Kant defines it as a "science of all principals of *a priori* sensuality" (Kant 1998: 156), in other words a science, whose task is to provide a geometrisation of thinking (or of the space of thinking). Object *a*, on the other hand, is marked by a constitutive non-identity and embedded in inconsistent experience, since it operates once as lack, once as surplus – an unstable object *par excellence*, leading to the very heart of the structural dynamics psychoanalysis has been struggling with since its beginnings.¹

It is commonly known that the two objects of transcendental aesthetics are space and time, which, in addition, are not actual objects but subjective conditions of human intuition. Kant calls them *Undinge* – a term translated as "non-entities" (ibid: 166), but colloquially meaning "nonsense" or something impossible. *Unding* is also one of the four types of nothing that Kant distinguishes in his first *Critique*. As non-entities, space and time mix up with *nihil negativum*, the "empty object without concept" (ibid: 383).²

1 | One of the most concise passages describing the status of what would soon thereafter be theorised as object *a* can be found in Seminar VII:

"[D]esire is nothing more than the metonymy of the discourse of demand. It is change as such. I emphasize the following: the properly metonymic relation between one signifier and another that we call desire is not a new object or a previous object, but the change of object in itself." (Lacan 1997: 293). At this point I cannot enter the immense question of the Lacanian object *a*. For its illuminating theoretical discussion and critical contextualisation, cf. (Hoens 2015: 101-110).

2 | As an example of such *Unding* Kant mentions a "rectilinear figure with two sides" (Kant 1998: 382). Yet under a different geometrical paradigm, such an object is anything but impossible. Lacan comments on Kant's example in his seminar on identification (Lacan 1961-62: 28.02.62), where he concludes

Linguistically, the most appropriate translation of *Unding* would be Lacan's neologism *l'achose*, nothing – not simply nothing but nothing accompanied by a thingly effect, nothing-as-something. Hence the confusion, according to which time and space are positive entities, existing outside human intuition, rather than structuring it from within and thus providing an orientation of thinking. They are, as Kant puts it, “nonthings [...], which are there (yet without there being anything real) only in order to comprehend everything real within themselves” (ibid: 166-167, transl. modified). They are the backbone, the ordering factors of what the conscious subject meets as reality. Yet despite this function they are not to be confused with the symbolic (or structure). From the Lacanian perspective, 3D-space and the linear time that Kant's transcendental aesthetics deals with fall in the register of the imaginary, together with the cognising subject and the cognised object that they constitute.

the following: “Kant's transcendental aesthetics is absolutely untenable simply because it is, for him, fundamentally grounded on mathematical argumentation, which holds on to what we could call ‘the geometric epoch of mathematics’. As far as the Euclidian geometry is still unquestioned at the moment when Kant pursues his meditation, he can insist that there are certain intuitive evidences in the spatio-temporal order.” Of course, the fact that Kant could not have been aware of non-Euclidian geometries does not invalidate his entire philosophy. Rather than jumping to such hasty conclusion, Lacan hints that Euclidian geometry contains a certain resistance (to the real) that his teaching will associate with the imaginary: “is the spatio-temporal intuition, in the sense I linked it with what I would call the ‘false geometry of Kant's time’, is this intuition still here? I strongly incline to thinking that it is still here. This ‘false geometry’ is still here, equally stupid, equally idiotic” (ibid) – or, this “false geometry” has also been “corrected” by the elaboration of non-Euclidian geometries. To anticipate the developments of this paper: thinking is presently split between two transcendental aesthetics, the Euclidian space (the space of the idealist “pure” reason, consciousness, centralised thought) and the topological “no'space” (the space of dialectical-materialist reason, the unconscious, decentralised thought).

Object *a* is an object without intuition, and consequently falls out of this transcendental aesthetics, without therefore becoming atemporal or atopic. Along with its object, psychoanalysis, too, falls out of the Kantian frame. No wonder that Lacan indicates as a possible project of his teaching “to reconstitute for ourselves the transcendental aesthetics that fits our experience” (Lacan 2014: 88). The clinical experience is not the experience Kant departed from (experience *qua* form of cognition, deriving from sensual consciousness). Instead, the psychoanalytic clinic brings experience of disturbances, and one could say maladies of transcendental aesthetics, which cannot be positively cognised because they appear only in the form of negativities that disturb and distort the transcendental order – indicating the intrusion of another spatiality and temporality from the ones supporting consciousness. The unconscious temporality is retroactive rather than linear; and its space is not Euclidian, knows multiple rational orders, homologically to the logical options that one may obtain after changing, for example, the Euclidian parallel postulate.³

It should not come as a surprise that the subject of the unconscious, too, finds no place in the transcendental aesthetics:

[O]ur experience posits and establishes that no intuition, no transparency, no *Durchsichtigkeit*, as Freud's term has it, that is founded purely and simply upon the intuition of consciousness can be held to be originative, or valid, and thus it cannot constitute the starting point of any transcendental aesthetics. This is for the simple reason that the subject cannot be situated in any exhaustive way in consciousness since he is first of all, primordially, unconscious, due to the

3 | Cf. footnote 13 for further contextualisation of this issue.

following – we have to maintain the incidence of the signifier as standing prior to his constitution. (ibid: 87)

What needs to be broken, and what psychoanalysis disrupted from the very beginning, is the solidarity between transcendental aesthetics and philosophy of consciousness, the origins of which are commonly traced back to Descartes. Étienne Balibar, however, has convincingly shown that they are anchored in Anglo-Saxon empiricism, concretely in Locke (cf. Balibar 2013). In this respect, Kant's philosophical project only seemingly pursues Descartes'. One crucial difference concerns the nature of subjectivity: *cogito* may be reducible to the geometric perspective, just like the Kantian subject of cognition; but the former is anchored in systematic doubt, which precedes its constitution and from which *cogito* is inseparable: *cogito* and *dubito* are two expressions for one and the same action, which eventually leads to the recognition of the subject's being. The Cartesian subject thus contains an internal dynamic, a drama, which makes it significantly more unstable than the Kantian subject of transcendental aesthetics. The transcendental subject is pure "I think" with no subjective drama of doubt and deception involved. Descartes' subject does not stand still; the Kantian does, while the world of objects turns around it. Hence, the metonymic status of *cogito* still makes it associable with the subject of the unconscious (cf. Lacan 1998: 140-141, and notably Dolar 1998: 11-40). Psychoanalysis is in no way Kantian; it is a radicalised Cartesianism. In the end, could we not read the idea of *tabula rasa*, with which Locke rejected the Cartesian notion of innate ideas, as a peculiar dismissal of the possibility that there is something like an unconscious? Or with Lacan, that the intervention of the signifier precedes the appearance of subjectivity anchored in consciousness, and more fundamentally conditions the constitution of the subject? In this way, a third *Unding* joins space and time: language.

What demands the construction of a new transcendental aesthetics is not language as means of communication, but as apparatus of production. The experience of psychoanalysis evolves around the consequences of the *causality of the signifier*, the power of language to constitute a decentralised unconscious subject, which has hardly anything in common with the figure of subjectivity promoted by the philosophies of consciousness.⁴ Moreover, language brings about an object – object *a*, the object of enjoyment – which has equally little in common with the apparently unproblematic and univocal empirical object. In order to revise transcendental aesthetics, it is necessary to make a consequent move from the philosophy of consciousness that predominated modernity to what Jean Cavaillès (1994: 560) called the “philosophy of concept”.⁵

4 | Incidentally, Lacan defines the subject of the unconscious in reference to Kant’s discussion of nothing: “*Ens rationis, leerer Begriff ohne Gegenstand*, empty concept without object, pure concept of possibility, this is the frame, where *ens privativum* is placed and appears. Kant undoubtedly does not fail to speak ironically of the purely formal use of the apparently evident formula: everything real is possible. Inevitably, who would say the contrary? He takes a step further by telling us that, therefore, something real is possible, but this could also imply that something possible is not real, that there is a possible that is not real. Kant denounces the philosophical abuse that could be made here, but what matters to us is the insight that the possible in question is the subject’s possible. *Only the subject can be this negativised real of a possible, which is not real*” (Lacan 1961-62: 28.02.62, my emphasis). Hence, we obtain a possible definition of the Lacanian subject: a real consequence of linguistic *Unding*, which might be viewed as the flipside of Lacan’s famous saying: “the signifier represents a subject for another signifier”.

5 | We can immediately add that the transcendental aesthetics implied by the move to philosophy of concept must be *materialist* in its character.

SCIENCE OF THE REAL

Lacan's later developments will formulate a sharper critical thesis on the relation between topology (and more broadly mathematics) and modern philosophy. With the discovery of non-Euclidian geometries and algebraic topology in the 19th and early 20th century, scientific discourse decisively entered a space, in which the limits of philosophy became all the more striking. An apparently unbridgeable gap seemed to emerge (or maybe just widen?) between philosophy and science, which necessitated a reorientation, if not reinvention of philosophy. Transcendental aesthetics was elaborated in a different mathematical universe, under different epistemological paradigms and conditions, and one could conclude that Lacan's claim does not simply reject philosophical endeavours to remain up to date with scientific discourse, but more importantly hints at the history of the transcendental, its internal dynamic, which is directly related to or conditioned by the developments in mathematics. History and structure of thought do not exclude each other; rather, one should see in the transcendental a specific structure in becoming, the structure that both determines human thinking and enables scientific discourse to think the real.

The intersection of these two aspects, the subjective and the objective, exposes an ontological scandal of mathematics, for which Frege insisted that it was neither a subjective fiction nor unproblematic empirical real, but the objective within the subjective, the real of reason, which, one could say, throws thinking out of joint:

In arithmetic we are not concerned with objects, which we come to know as something alien from without through the medium of the senses, but with objects given directly to our reason and, as its nearest kin, utterly transparent to it. And yet, or rather for that very reason, these objects are not

subjective fantasies. There is nothing more objective than the laws of arithmetic. (Frege 1960: 115)

The objectivity of mathematical laws surpasses the objectivity and the materiality of sensual objects, the mathematical is more real than the sensual and provides the only solid foundation for scientificity. At the same time this solidity depends entirely on the symbolic register, which is always-already stained with subjectivity, and as such cannot be experienced in nature. In mathematics oppositions meet: the subjective and objective, the inside and outside of thought, but also the inside and outside of the object. Needless to say that for Lacan the entirety of language is such an ambiguous ontological scandal and mathematics is in the last instance a particular form of language. At this point, one should supplement Frege's remark with the (Lacanian) insight that there is nothing more dynamic than the structure of language, and eventually connect the dots by concluding that the objectivity of mathematical (not only arithmetical) laws is the flipside of the linguistic instability, and vice versa.

Frege made another crucial insight, namely that mathematics exposes the non-psychological kernel of thinking:

It is possible, of course, to operate with figures mechanically, just as it is possible to speak like a parrot: but that hardly deserves the name of thought. It only becomes possible at all after the mathematical notation has, as a result of genuine thought, been so developed that it does the thinking for us, so to speak. (ibid: xvi)

These lines are anything but incompatible with what Freud named the unconscious. What appears as the automatic manipulation of mathematical figures (or in the use of language as parrot speech, where words are pronounced without awareness of their meaning) should not seduce us

into believing that there is no thought in this *automaton*. Automatism contains non-subjective (which for Frege means non-psychological) thought, detached from the psychological figure of consciousness. The speculative weight of Frege's formulation should not be underestimated, since it concerns precisely the objectivity and the autonomy of mathematics: its emancipation from consciousness and its resistance to psychologism. Mathematics is "science without consciousness" (Lacan 2001: 453; I shall return to this characterisation further below), the first systematic encounter of thinking with itself as its own otherness, alienation systematised. It is only in this sense that thinking can hold on to something real, including its own real, the real of thinking. And this is the reason why the subject of the unconscious cannot be removed from the picture: mathematics is surely without the psychological subject but not without the form of subjectivity that Freud revealed in unconscious formations and Lacan, by means of structuralism, extended to the structure of language as such.

Lacan's theoretical valorisation of mathematics in general and topology in particular has its epistemological forerunners, notably Alexandre Koyré, who recognised in the shifts that marked the use of mathematics in scientific modernity the foundation of what he called "science of the real" (Koyré 1966: 277). The formulation appears in Koyré's *Galileo Studies*, which outline the main features of his *critical epistemology* and where we read the following formulation of modern epistemic rupture:

[T]he experience does not favour at all this new physics: bodies fall and Earth turns; these are two facts that it cannot explain, and which make it stumble at the beginning [...] the law of inertia does not originate from the experience of common sense and is not a generalisation of this experience, nor is it its idealisation [...] What curious proceeding of thought, in which the question is not to explain the phenomenal given with the

presupposition of an underlying reality [...] nor to analyse this given in its simple elements in order to reconstruct it afterward [...]; strictly speaking, what is at stake is to explain what is with what is not, what never is. And even with what can never be. To explain the real with the impossible. (ibid: 206-207)

This excerpt contains the ground of Lacan's identification of the real with the impossible, and more importantly, it develops the thesis, according to which the use of mathematics in modern physics no longer consists in simply applying the mathematical and geometrical apparatus to natural phenomena⁶ but rather in realising geometry in the physical world. Throughout his work, Koyré consistently speaks of the realisation, incarnation or reification of geometry and mathematics, rather than of their application to the way the real appears to the human observer.⁷ Kant's epistemology is first challenged at this point: modern science can do without sensual experience. "Mathematical experience" (Cavaillès 1994: 601), thought experience without sensual consciousness, in one word *experimentation* is entirely sufficient for grounding scientificity.⁸ This was not the case in premodern science, which was rooted in the experience of common sense and, due to this rootedness, largely remained a science

6 | Incidentally, this is how mathematics and geometry still operates in Kant's transcendental aesthetics.

7 | Cf. for instance, (Koyré 1966: 156, 282-283; Koyré 1968: 42). Koyré's critical epistemology was most openly struggling against the hegemony of logical-positivist and empiricist epistemologies. His affirmation of Platonism can clearly also be read as a rigorous critique of Kant.

8 | Koyré follows Cavaillès in this matter: experimentation should be distinguished from (subjective, in the sense of empirical) experience, just as mathematics needs to be detached from consciousness. This distinction then enables Cavaillès to conclude that mathematics is an experimental science; Lacan's recurrent use of formalism claims the same experimental status for psychoanalysis.

of *appearances* (there is one exception according to Koyré: Archimedes). While the sublunary world was considered non-mathematisable, the superlunary appearances were integrated in complex mathematical and geometrical models, which remained approximate, and the use of mathematics remained in the framework of possible application. By contrast, the realisation of mathematics grounds modern science on an unbridgeable gap between non-mathematisable phenomenal reality and the mathematisable real, and simultaneously exposes inadequacy or non-relation between the human experience of reality and what scientific discourse discovers, formalises and mobilises *in* and *as* the real.⁹

Lacan took Koyré's remark seriously, according to which modern physics explains the real with the impossible, being with non-being, whereby the question remains: What is this non-being? The answer seems to be at hand: It is precisely discourse, language, which has become radically de-psychologised, detached from its human user; language in its absolute autonomy, which is here most openly actualised in mathematics. It is the mobilisation of this autonomy that inaugurates scientific modernity, and not more precise forms of empiric research (as positivist and empiricist epistemologies continue to claim). In the end, scientific experimentation is no less grounded on the detachment of the experimented real from sensual experience. It thus seems more than clear why Lacan allied psychoanalysis with

9 | This gap also implies a temporal relation, which is directly linked to the impossibility of complete mathematisation of the real. Because the mathematical and the real are both disclosed (not-all, as Lacan would say) mathematisation is a virtually infinite task, pointing toward future mathematisation, as well as retroactively transforming the already accomplished mathematisation. In many ways, this comes close to the impossibility of psychoanalytic interpretation – mathematics and analysis, two impossible, interminable professions? Cf. the introduction to the present volume.

Koyré's epistemology: the concept of the unconscious covers precisely a multiplicity of consequences of the autonomy of language in the living body, consequences, which behave to consciousness in the same way as the real to reality in physics and biology (incidentally, Freud placed his work in the same revolutionary line with Kepler and Darwin). The real comes as a disruption of appearances that constitute reality.

Lacan thus adopted Koyré's formulation "science of the real" in order to characterise modern mathematical logic, for instance in the following passage:

I recall that it is through logic that this discourse touches the real in order to encounter it as impossible, and in this respect this discourse brings logic to its ultimate potency: to the science, I have said, of the real. (Lacan 2001: 449)

Lacan here simply attributes the expression "science of the real" to himself, since it obtains a more direct meaning than in Koyré, where the association of the real with the impossible still concerns the inexistence of mathematical and geometrical objects in nature. Lacan thoroughly identifies the real and the impossible, while Koyré sticks to the dichotomy of (mathematical) non-being and (physical) being, next to the phenomenal reality, which concerns only human observers and is excluded from science regardless. To repeat, for Koyré, modern science is characterised by a radical disinterest in the way the real appears to consciousness and by the elaboration of ever new mathematical and technological, hence discursive, means of its mobilisation regardless of conscious experience. But this does not imply that modern science abolishes or rejects every form of subjectivity, on the contrary; it provides the conditions to determine the real subjectivity that inhabits the scientific space of thinking: the subject of the unconscious.

This is the critical value of psychoanalysis, which, by determining the real (of the) subject, brings about a repetition of Kant's critical gesture, with the difference that psychoanalysis departs from the idea that there is a history of logic, which can be thought in terms of transformations of the space of thinking. Let us not forget that the *Critique of Pure Reason* argued that logic had made no progress since Aristotle, and that in this discipline neither progression nor regression was possible (or desired). There is no such thing as history of logic, logic knows no transformative becoming – it simply is:

That from the earliest times *logic* has travelled this secure course can be seen from the fact that since the time of Aristotle it has not had to go a single step backwards, unless we count the abolition of a few dispensable subtleties or the more distinct determination of its presentation, which improvements belong more to the elegance than to the security of that science. What is further remarkable about logic is that until now it has also been unable to take a single step forward, and therefore seems to all appearance to be finished and complete. (Kant 1998: 106)

Logic is marked by an immanent suspension, which does not allow it to take a step back or a leap forward. “The boundaries of logic,” he continues, “are determined quite precisely by the fact that logic is the science that exhaustively presents and strictly proves nothing but the formal rules of all thinking” (ibid: 106–107). Logic is thus conceived as the *science of the symbolic*, its task being solely to determine the stable and invariable laws of human thought, or to paraphrase Wittgenstein, another Aristotelian in logical matters, the limits of logic are the limits of Aristotle's philosophy. This is not the case for Lacan, whose remarks in *L'Étourdit* target precisely the mathematical and logical *events*, which

initiated transformative processes and oriented thinking beyond Aristotle.¹⁰ One could say that every groundbreaking development in logic detached thinking from Aristotle, which naturally does not mean that Aristotle has been left behind for good:

The psychoanalysed syllogizes occasionally, which means that he aristotelizes. In this way, Aristotle perpetuates his mastery. This does not mean that he lives – he survives in his dreams. In every psychoanalysed there is a pupil of Aristotle. (Lacan 1988: 23)

Aristotle is unconscious, in the sense that he provided an *organon*, which serves as the most basic orientation of thinking. Sound reason speaks Aristotelian and is deeply embedded in the Aristotelian logical “geometrisation” of thinking: application of the universal to the particular, syllogistic logic, the principle of non-contradiction, these and other logical rules presuppose a closed world of correctly formed sentences and thoughts, a world that is in the last instance coextensive with the backbone of Aristotle’s philosophy. On the other hand, “bringing logic to its ultimate potency” (the main achievement of mathematical logic, according to Lacan) means that logic becomes something more than mere science of the symbolic that it was for the philosophical tradition from Aristotle to analytic philosophy. As science of structure, logic is supposed to introduce order, demarcate correct and incorrect use of language, the crown examples being philosophy (when it comes to correctness) and sophistry

10 | Badiou’s philosophy contains the most systematic speculative account of these events (which can be associated with familiar proper names: Boole, Dedekind, Frege, Cantor, Peano etc.). As a side remark, not only does Badiou’s system respond most rigorously to the challenge of Lacan’s critique of philosophy but it also elaborates an updated transcendental aesthetics, or topology of the world (cf. Badiou 2006).

(when it comes to incorrectness). Such was Aristotle's view. The sophists misuse language in order to seduce human thinking with false opinions, lies and semblances of knowledge, and in doing so they certainly abolish what seems to be the most basic feature of language: its stable, adequate and univocal relation to being. The language of sophists, by contrast, displays a fundamental *inadequacy* and structural instability, seems furthest from the philosophical *Seinssprache* and closest to the psychoanalytical experience of language. Yet there is logic in this apparently deviating experience, the rationality of the unconscious mechanisms. By hinting that psychoanalysis, too, brings logic to its ultimate potency, Lacan indeed targets a radical transformation not only in logic and in the conception of rationality, but above all in the concept of structure. The latter is no longer thought from the perspective of a stable and fixed order, but from the point of disfunctioning. This is the critical value of Lacan's most famous axiom: "The unconscious is structured like a language".

Freud's founding works (*Interpretation of Dreams*, *Psychopathology of Everyday Life*, *Jokes and Their Relation to the Unconscious*) already drew attention to the persistence of logical and structural features in what seemed to belong to the realm of the irrational, illogical and chaotic. Or, unlike Aristotle, Freud's scientific project strived to elaborate something that one could call the *logic of instability*, in opposition to the *logic of sense*. In this view it should not come as a surprise that Lacan eventually equated structure with the real and the real with the impossible – whereby the ultimate support for thinking and conceptualising this double equation was found in the philosophical value of geometrisation and the mathematisation of non-Euclidian spaces, by means of which the rupture with the restrictive frames of Aristotelian logic and its corresponding conception of normalised rationality could be finally accomplished. The

rupture in question is mirrored in the already mentioned transformation of logic from science of symbolic into science of the real. In this scenario, the geometrisation of thinking with reference to the conceptual apparatus of modern topology and non-Euclidian geometries, at least for Lacan, successfully combines the logical consistency of unconscious mechanisms with what from the epistemic perspective of Euclidian geometry appears to the philosophical eye as non-mathematisable irregularity, rupture or radical instability.

This far-reaching transformation suggests that thinking meanwhile inhabits a different space, more complex and dynamic from the Euclidian space. This is not entirely the case, since it would entail an absurd conclusion according to which premodernity knew no manifestations of the unconscious. What it does imply is that modern developments in mathematics offered the logical tools to access the real of thinking. For Lacan, philosophy needs to alter its methodological and conceptual apparatus, in order to remain an equivalent interlocutor with the sciences that inhabit this modern “no’space”. The neologism should be interpreted as the opposition of Euclidian geometric space and Aristotelian logical space, a negative space, or more properly, a space of negativity.¹¹ Psychoanalysis was invented in this epistemological horizon, where we no longer deal with the homogenous and regular space of symmetries and reflections, but with condensations and displacements, to recall the two basic operations of unconscious work that preoccupied Freud in his foundational works. Both are spatial

11 | “When [...] the space of a lapsus has no range of sense whatsoever, then only one is certain to be in the unconscious.” (Lacan 2001: 571). Differently put, one knows to have encountered the unconscious when one loses the sense of orientation, just like the ant on the surface of a Möbius strip or in a Klein bottle, not knowing, respectively, which side it is on, because there is only one side, or whether it is inside or outside, because there is only the fusion of the two.

operations: condensations and displacements in (and of) the space of thinking. They stand for the structural dynamic and therefore require a materialist transcendental aesthetics,¹² which will seek support in topological objects that can only appear paradoxical from the perspective of idealist transcendental aesthetics: “The knot, the braid, the fibre, the connections, the compactness: all the forms, where the space breaks or accumulates, are made for providing the analyst what he lacks: namely a different support from metaphor in order to sustain metonymy.” (Lacan 2001: 314)

THE CRITICAL VALUE OF TOPOLOGY

Because the topological objects in question are at the interstice of the structure of reason and the structure of the real, Lacan pursued a particular kind of Platonist realism in mathematical matters. An object like the Möbius strip, for instance, is more than a metaphor of structural dynamic; it is structural dynamic, which simultaneously visualises something concrete about the structure of the real and about the real of structure: “A Möbius strip, i.e., the valorisation of the asphere of *non-all*: this is what supports the impossibility of the universe – or to take our formula, what encounters its real [...] Structure is the real that shows itself in language. Of course it has no relation to ‘good form’” (ibid: 474, 476). What matters most in the encounter of discursive structure with the structure of the real; and what requires a materialist and realist take on topological, mathematical and psychoanalytic

12 | Materialism is most certainly a “minoritarian” philosophical tradition, which anticipates or corresponds to the modern epistemic paradigm. It makes perfect sense that *L’Étourdit* concludes with philosophical references such as Democritus and Marx, who here still allude to the link between topology and materialism that Lacan will openly profess in his later seminars. Cf. (Lacan 2001: 494).

objects is their disclosed, not-all character. The “good form” that Lacan denounces here is the sphere, which played the central epistemological role in psychologised cosmologies like Aristotle’s and which served throughout the history as the privileged metaphor of totality, perfection and closure. The sphere entails a mystification, distortion of structure through its idealisation. It provides an epistemic screen, which prevents thinking from holding on to (eventually its own) real: “The sphere [...] is a fiction of surface, in which structure is attired [*la fiction de la surface dont la structure s’habille*]” (ibid: 484). The epistemological presupposition, or condition, of Freud’s theory of the unconscious and of his invention of psychoanalysis in its entirety is the shift from the spherical to the aspherical space, from Euclidian geometry, whose objects are immaterial in that they do not inhibit thinking, to non-Euclidian space, where the materiality of objects consists precisely in their resistance to the totalising tendency of the imaginary;¹³ this suspends the rootedness of thinking in good,

13 | In Seminar XXIV we read: “The trouble I cause to myself in everything I show you here as structure is tied to the sole fact that true geometry is not the one we think, the one depending on pure spirits, but rather the one that has a body. This is what we want to say when we speak about structure.” (Lacan 1979: 10) Slightly earlier in the same lecture, Lacan states: “What is symbolically imaginary is geometry. The famous *mos geometricus*, from which they made such a big thing, is merely a geometry of angels – save writing it does not exist.” (ibid: 9) One could say something similar for Kant’s transcendental aesthetics: it brings about a consequent symbolisation of the imaginary (geometrical and temporal laws), for the well-known price of excluding the real as unattainable (the infamous “thing in itself”), rather than including it as impossible (this is what mathematical formalisation achieves according to Koyré and Lacan). – In addition, what Lacan emphasises in geometry and mathematics is the fact that they produce inhibitions of thinking rooted in the imaginary of correct forms and the Aristotelian logic of sense. Euclidian geometry nevertheless contained a symptomatic point, the parallel axiom, which provoked controversies inside and outside the mathematical community. One could argue that this geometry no less contained an inhibition of thinking, precisely at the point of its “surplus”

correct or ideal forms and enables to conceive structure from the viewpoint of its immanent instability and becoming. Here the Lacanian knot of the imaginary, the symbolic and the real enters the picture, replacing the premodern triad of the beautiful, the good and the true.

The critical value of topology consists in the fact that it forces thinking and stands for a particular kind of epistemic violence within reason.¹⁴ In addition, Lacan most pertinently formulated this critical value, when he distinguished topology from theory, suggesting that what matters is the correspondence between topology and praxis:

My topology is not of a substance, which would be placed beyond the real that motivates a practice. It is not theory. But it has to consider that, among the ruptures of discourse, there are such that modify the structure that it originally obtains [...] Topology is not “made to guide us” in structure. It is this structure – as retroaction of the chain order, of which language consists. Structure is the aspheric, hidden in the linguistic articulation, as far as it is seized by a subjective effect [*en tant qu’un effet de sujet s’en saisit*]. (ibid: 478, 483)

Topology thus does not treat any metaphysical substances, which would be more real from the formalised real (let us not forget that modern science desubstantialised the real long

axiom. The discovery of non-Euclidean geometries and the different statuses of the problematic axiom may have dis-inhibited mathematical thinking, but it also revealed the effective divide of the transcendental space of thinking (and of thinking as such) between two heterogeneous registers, the “Euclidian” imaginary and the “non-Euclidian” symbolic. One could argue that Euclid is the Aristotle of mathematics. For an exhaustive historical account of non-Euclidian geometry, cf. (Rosenfeld 1988).

14 | The term (*forçage, forcer*) appears in Lacan’s later seminars, but without being associated with its mathematical meaning, as it was invented by Cohen and later adopted by Badiou. Cf. (Lacan 1979: 15, 23).

before philosophy abandoned the metaphysical language of substances). Topology is also no science of “divine” truths. Recall that the Greek *theoria* shares its etymological root with *theos* (god). *Theorein* entails an orientation of thinking toward the divine, an interstice of human thinking with divine thinking. Here Aristotle again turns out *the* Theoretician,¹⁵ providing the model of Theory, according to which the highest sphere, the divine immovable mover, encloses all other spheres of generation and corruption and makes of *kosmos* a closed and harmonious totality. Topology is the opposite of theory. As practice and experience of forcing it makes the subject think “with his object” (Lacan 1998: 62). Thinking coincides with alienation, and Lacan took this last quoted remark most seriously, when he obsessively engaged in the manipulation of various topological objects, to the extent that his mathematical practice bewildered his audience. Both his obsession with topology and its association with practice rather than theory find their legitimation in his strict realism, aiming to counteract the exuberance of metaphorical thinking in psychoanalysis: “Reference, which is in no respect metaphorical. I would say: what is at stake is stuff, the stuff of this discourse” (Lacan 2001: 471). As materiality, whose consistency is mathematical, even if they can be fabricated from concrete materials, the topological objects in question confront thinking with something in thinking that resists thinking – with thought’s own impenetrability, to recall the old feature of materiality that Kant referred to as its positive sensual quality. This impenetrability now pertains to the materiality of mathematical relations rather than to the materiality of empirical objects: “No other stuff should be attributed to it than this language of pure matheme, by which I mean what can solely be taught: without recurring to some experience, which is always [...] founded in a discourse”

15 | In *Television* (Lacan 2001: 512) he is mockingly called *le Philosophe*.

(ibid: 472). The psychological subject is once again removed from the centre of thinking and the materiality of structural relations, which includes breaks, cuts, torsions or folds, points toward a dialectical conception of matter

According to Freud, modern scientific revolution caused *Kränkung*, rather than enthusiasm (as Kant has argued for the French revolution). *Kränkung* is an ambiguous term, since beyond its meaning of insult it is also associated with *Krankheit*, illness. Indeed, this association should be taken most literally, when it comes to psychoanalysis. Did not Freud recognise in illness the privileged state, in which the nature of thinking could be most accurately exposed? *Kränkung* of human narcissism means that the Freudian revolution deprived thinking of its centre, and in this respect a topological aspect persists at the core of the Freudian scientific program. By replacing the spherical model that until then served psychology and philosophy with a decentralised one, psychoanalysis initiated a new geometrisation of thinking.¹⁶ Freud injured human narcissism by initiating work on a science, which would look behind the appearances of a strong and conscious ego. The contamination of *cogito* with negativity, the rejection of the subject of cognition as the central instance in the field of knowledge revealed a conflict between the conditions of science and the pleasure principle. Modern science is not grounded on any particular form of love, and more specifically, it does not love the subject in return. Delibidinalisation of knowledge – this was one crucial consequence of the scientific *Kränkung* of the ego. Yet the psychoanalytic discovery of transference, which exposes the link between knowledge and pleasure principle, complicated

16 | The most famous Freudian visualisation of the topology of mental apparatus appears in *The Ego and the Id* (Freud 2001 [1923]: 24). Of course, Freud's engagement with the spatiality of thought did not quite succeed in the geometrisation of the unconscious; it was only Lacan's use of topology and knot-theory that provided the actual epistemic horizon shared by psychoanalysis and mathematics.

the matter by revealing in self-love a systematic resistance against epistemic revolutions. Modernity continues to be marked by a radical tension between the tendencies of the pleasure principle (human narcissism) and revolutionary thought (thought without qualities).¹⁷

One further question follows from Lacan's remark on the critical value of topology, namely what relation between thinking and mathematical structures is at stake here? If we conceive mathematical logic as the science of the real – which, again, means as much as the science that cut its rootedness in transference and in the pleasure principle – then the relation between mathematics and thinking inevitably requires a dialectical-materialist orientation, which will acknowledge that the developments in mathematics always-already affect the general space of thinking, and consequently restructure both subjective and social reality. In other words, mathematics is more than “the most propitious language for the scientific discourse” (Lacan 2001: 453), a tool serving natural sciences to grasp a real that resists the logic of sense and totalisation; it also enables the ranking of the unconscious on the same level as the physical, biological or any other scientific real. The real of thinking appears in its dynamic and conflictual light – and ironically, Kant had an intuition of this dynamic, when he introduced an unprecedented idea of the history of pure reason, which constitutes the diachronic axis of thinking, while the architectonic of pure reason examines its synchronic axis. What Kant's critical project indeed targeted, and eventually missed, is the relation between structure and history of reason, a relation that stands at the very core of the dynamic of the transcendental.

17 | Jean Laplanche described this tension as the perpetuation of the struggle between Ptolemy and Copernicus (cf. Laplanche 1997: III-XXXV), or better, between Ptolemy and Galileo, since Copernicus remained within the Ptolomeian paradigm of the closed and centralised *kosmos*, hence within the premodern epistemic paradigm.

Lacan's polemics with philosophy significantly sharpened in later years, for instance in a short note on the organisation of teaching at the university (Lacan 2001: 313-315). There topology is associated with three other "teachings, for which Freud formulated that the analyst should lean upon in order to accommodate in them what he obtains from his proper analysis: namely, not so much what this analysis was used for but what it itself made use of" (ibid: 313). The disciplines are linguistics, mathematical logic, topology, and – antiphilosophy. The word fell, and the philosophers were outraged. But could not this term of insult be read in line with the perspective of *L'Étourdit*? Antiphilosophy would then stand for more than a mere rejection of philosophy, and certainly for more than a cynical stance toward various philosophical attempts to redefine its contemporaneity. Instead it would designate philosophy reinvented, under the conditions of sciences that support a materialist transcendental aesthetics. Such a perspective is also indicated by Lacan's provisory definition of antiphilosophy: "This is how I would like to name the investigation of what the university discourse owes to its 'educational' assumption. Sadly, the history of ideas will not deal with it" (ibid: 314). One could hardly overlook that a new horizon of philosophical critique, rather than the mere critique of philosophy, is envisaged, whose task is to "evaluate [the university discourse¹⁸] in its indestructible root, in its eternal dream" (ibid: 315). Here, too, the closeness of Lacan's philosophical ambition with Kant's critical turn is striking. Was not Kant's main achievement, according to his own wording, the awakening of philosophy out of its "dogmatic slumber"

18 | For Lacan, the university discourse describes more than the institution of knowledge. It even stands for the capitalist mode of production, and more generally, as the above quote hints at, the tendency of discourse to form an enclosed totality, notably of knowledge (cf. Lacan 2007).

(Kant 2004: 90), precisely out of what Lacan describes here as philosophy's "eternal dream", philosophy's fantasy?

We do not need long detours to determine the root of this fantasy – it has been accompanying philosophy since its beginnings and was most directly formulated by Parmenides: the sameness of thinking and being, as well as their imaginary closure with the sphere serving as the privileged geometrical model for both *psyche* and *kosmos*, the perfect opposition of the "asphere of the *not-all*" Lacan associated with his own concept of structure. Surely, the critical awakening of philosophy took place as Kant's personal awakening from his dogmatic slumber, the fidelity to Leibniz's metaphysics, an awakening initiated by Kant's philosophical encounter with Hume's scepticism (ibid: 10). A curious repetition is at work here. Just as Descartes before him, who successfully transformed the dissolving power of Montaigne's scepticism into a positive method of *systematic* doubt that in one strike grounded modern science and modern philosophy, Kant transformed Hume's scepticism into *critical* method. We find a similar echo in the foundations of systematic philosophy in ancient Greece, for did not Plato's Socrates transform the presumable epistemic and moral relativism, scepticism and pessimism of the sophists into a positive *dialectical* method? And finally, at the other end of philosophy Lacan brought about a transformation of the Freudian scepticism toward philosophy and pessimism in political matters, and even a transformation of probably the greatest modern sceptic, Wittgenstein, into a *materialist* method. This explains once again the inclusion of linguistic, logic and topology in Lacan's *quadrivium*. Unlike Wittgenstein's oscillation between logical tool, language game and philosophical grammar, which all remain within a normalised vision of language, linguistic authors such as Saussure and Jakobson took language seriously, to the extent that they oriented their science of language in accordance with the epistemic horizon of other

modern sciences. By following the lessons of linguistics, logic and topology, philosophy would finally inhabit the same *space* as other sciences, and consequently assume the appearance of antiphilosophy in relation to previous forms and *modus operandi* of philosophical discourse. Hence the main target of antiphilosophy: the reduction of philosophy to the university discourse, this modern form of scholasticism. Hence also the four features of this reinvented philosophy that Lacan's teaching never neglected: system, critique, dialectics and materialism.

It is true that mathematical developments lead to a new conception of space, but Lacan's position in his evaluations of the importance of topology contained an additional turn of the screw. Topology still contains a certain lack – namely, what it does not think is its corresponding form of subjectivity. In this respect, Freud's greatest achievement consisted in the fact that he discovered the “subject of science” (Lacan 2006: 729) without any direct help from the mathematical apparatus. It was Freud alone who confronted philosophy with the form of subjectivity that remained unthought throughout modernity. However, this detail does not diminish the significance of mathematics: “mathematics is science without consciousness that our good Rabelais promised, the one in front of which a philosopher can only remain silent” (Lacan 2001: 453). “Science without consciousness” translates directly into “science without the subject of cognition”, without Kantian subjectivity, de-subjectivised science, but also into “science without the soul”, without Aristotelian subjectivity, de-psychologised science. From this one should not conclude that mathematics eliminates or rejects *all* subjectivity, for Lacan continues: “the gay science joyfully presumed the ruin of the soul. Of course, neurosis survived” (ibid). On the ruins of the premodern theory of the subject, modernity created the conditions of possibility to discover neurosis. But neurosis is not only something that becomes thinkable once the

notion of the soul has been abandoned; it is also the biggest missed opportunity of modern philosophy, something that the introduction of transcendental subjectivity vehemently rejected from philosophy as a deviation of reason.

This is one harsh reproach that Lacan addressed precisely to Kant: he failed to invent the analytic discourse, which means that he failed to encounter the subject of the unconscious, despite his preoccupation and fascination with topics such as the “maladies of the head” or the supposedly delirious character of Emmanuel Swedenborg’s metaphysical system.¹⁹ Rather than treating the visions of the Swedish mystic and self-proclaimed spirit-seer as a case of delirious system, Kant recognised in him above all a charlatan, who writes thick volumes on the spirit world, in order to draw profit from human superstition. In the end, Kant’s reading transformed Swedenborg into a sophist, someone who makes money with false knowledge, profit with fictions. To put it in another way, Kant failed to make of Swedenborg his President Schreber, instead he shifted the debate toward the more conventional question of the limits of cognition and turned metaphysics into “a science of the *limits of human reason*” (Kant 1992: 354) rather than into a science of the real of thinking. For Kant no science could recognise in delirium (or in a symptom like Swedenborg’s hallucinations of the spirit world) a manifestation of the unconscious, so that the constitution of transcendental aesthetics must be preceded by a critical effort of finitising reason through the rejection

19 | “Obviously I am not unaware of the shock that Newton delivered to the discourses of his time, and I know that Kant and his cogitatory follow from that. He almost pushes things to the limit, a limit that is a precursor of analysis, when he uses it to deal with Swedenborg. However, in giving Newton a try, he falls back into the old ruts of philosophy, seeing Newton as only another exemplum of philosophy’s stalemate.” (Lacan 1990b: 36)

of negativity embodied pathologically by Swedenborg and theoretically by Hume.²⁰

In order to stress the importance of his philosophical innovations, Kant later used the metaphor of Copernican revolution. The association of Kant's role in the history of philosophy with Copernicus is more appropriate than it may seem. Despite the criticisms that have been addressed to Kant in the recent past (notably by Quentin Meillassoux), the proximity of Kant and Copernicus lies in the fact that they both introduced radical novelties (respectively in astronomy and in philosophy) without altering the space of thinking. Kant's transcendental aesthetics perpetuates the rootedness of thinking in the imaginary, just as Copernicus' astronomy remains in the closed world of premodern cosmology. Lacan rightly sharpened Koyré's "desublimation" of Copernicus by recalling that Copernicus remained Ptolomeian: heliocentrism may have shaken the Aristotelian science but in the end Copernicus attempted to improve and simplify the Ptolomeian system. The Copernican revolution contains its own counter-revolution: an attempt to calm the crisis that traversed the renaissance and that is intimately linked to the rediscovery of Plato's mathematical realism and materialism. The true revolution begins with Galileo, who gives a deadly coup both to Ptolomeian and Aristotelian foundations of physics, and most definitively abolishes the divide between the non-mathematisable sublunary and mathematisable superlunary physics.

As an essential component of this scientific revolution, Descartes' reduction of the *cogito* to a perspectivist vanishing point revealed the metonymic character of thinking, and by more or less openly thematising the immanent instability of

20 | For an extensive discussion of Kant's confrontation with Swedenborg and its general importance in the genesis of Kant's critical project, cf. (David-Ménard 1990).

thought, this Cartesian reduction contained a revolutionary shift, which would eventually lead to the Freudian revolution. Kant's Copernican turn however lost sight of this instability: while in perspectivism the position of the observer is mobile and circulates around the object, Kant's critical philosophy re-stabilises the subject and, by means of the imaginary framework of transcendental aesthetics, closes the gap between thinking and being, which supported the Cartesian formula of *cogito*. By pushing forward consciousness, identity and the stability of the act of thinking – which, one should not forget, is also an act of enunciation, an act grounded in the function of the signifier as such – Kant forged a modern epistemological myth, which ended up replacing the Greek *nous* with consciousness. Lacan's sobering “desublimation” of Copernicus could be applied to Kant as well: by substituting one centre with another, the metaphysical soul with transcendental subjectivity, he did not bring about the truly groundbreaking revolution that would touch upon the topological *dispositif*, which provides an orientation of thinking. Yet, just like Copernicus in physics, Kant remains a crucial milestone on the critical path, which progressively led to a rigorous materialist theory of the subject. Freud's theory of the unconscious may have accomplished this subversion, Galilean in its character, in the most systematic manner. But he still had two crucial (anti-Kantian) forerunners in Hegel and Marx, as Lacan's return to Freud extensively showed in its most radical philosophical moments.

In the end, Lacan seems to conclude that philosophy does reach some sort of reconciliation with topology. Still, this reconciliation is possible only at the background of a radical critique of Kant. Philosophy should follow the psychoanalytic example and appropriate the apparatus of topology, in order to bring about a consequent materialist orientation in thinking, which will eventually transform the practice of philosophy.

BIBLIOGRAPHY

- Badiou, Alain (2006): *Logiques des mondes*, Paris: Éditions du Seuil.
- Balibar, Étienne (2013): *Identity and Difference: John Locke and the Invention of Consciousness*, trans. Warren Montag, London: Verso.
- Cavaillès, Jean (1994): *Œuvres complètes de philosophie des sciences*, Paris: Hermann.
- David-Ménard, Monique (1990): *La folie dans la raison pure*, Paris: Vrin.
- Dolar, Mladen (1998): "Cogito as the Subject of the Unconscious." In: Slavoj Žižek (ed.), *Cogito and the Unconscious*, Durham: Duke UP, pp. 11-40.
- Frege, Gottlob (1960): *The Foundations of Arithmetic*, trans. J. L. Austin, New York: Harper & Brothers.
- Freud, Sigmund (2001 [1923]): "The Ego and the Id." In: id., *The Standard Edition of the Complete Psychological Works*, vol. XIX, trans. James Strachey, London: Vintage, pp. 12-59.
- Hoens, Dominiek (2015): "Object a and Politics." In: Samo Tomšič and Andreja Zevnik (eds.), *Jacques Lacan Between Psychoanalysis and Politics*, New York: Routledge, pp. 101-112.
- Kant, Immanuel (1992): *Theoretical Philosophy 1755-1770*, trans. and ed. David Walford, Cambridge: Cambridge University Press.
- Kant, Immanuel (1998 [1781]): *Critique of Pure Reason*, trans. and ed. Paul Guyer and Allen W. Wood, Cambridge: Cambridge University Press.
- Kant, Immanuel (2004 [1783]): *Prolegomena to Any Future Metaphysics*, trans. Gary Hatfield, Cambridge: Cambridge University Press.
- Koyré, Alexandre (1966): *Études galiléennes*, Paris: Hermann.
- Koyré, Alexandre (1968): *Études newtoniennes*, Paris: Gallimard.

- Lacan, Jacques (1961-62): *Le Séminaire, Livre IX, L'identification*, (unpublished).
- Lacan, Jacques (1979): "Vers un signifiant nouveau." In: *Ornicar?* 17/18, pp. 7-23.
- Lacan, Jacques (1988): "Le rêve d'Aristote." In: Sinaceur, Mohammed A. (ed.), *Aristote aujourd'hui*, Paris: Érès, pp. 23-24.
- Lacan, Jacques (1990 [1974]): *Television. A Challenge to the Psychoanalytic Establishment*, trans. Dennis Hollier, Rosalind Krauss, Annette Michelson, New York: W.W. Norton & Co.
- Lacan, Jacques (1997 [1986]): *Seminar, Book VII, The Ethics of Psychoanalysis*, trans. Dennis Porter, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Lacan, Jacques (1998 [1973]): *Seminar, Book XI, The Four Fundamental Concepts of Psychoanalysis*, trans. Alan Sheridan, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Lacan, Jacques (2001): *Autres écrits*, Paris: Éditions du Seuil.
- Lacan, Jacques (2006): *Écrits*, trans. Bruce Fink, New York: W.W. Norton & Co.
- Lacan, Jacques (2007 [1991]): *Seminar, Book XVII, The Other Side of Psychoanalysis*, trans. Russell Grigg, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Lacan, Jacques (2014 [2004]): *Seminar, Book X, Anxiety*, trans. Adrian R. Price, ed. Jacques-Alain Miller, Cambridge: Polity Press.
- Laplanche, Jean (1997): *Le primat de l'autre en psychanalyse*, Paris: Flammarion.
- Rosenfeld, Boris A. (1988): *A History of Non-Euclidian Geometry*, New York: Springer.

PART II
THE MATERIALITY OF TOPOLOGY

Secret Topology

Lacan's Optical Models and Schemata as a Combination of Mathematics, Media, and Art

Claudia Blümle

There is “more than one way” (Lacan 1998: 73) to visualize the split between the eye and the gaze. This is how, in 1964, 30 years after his first version of the mirror stage, Jacques Lacan opened one of his seminars. This assertion – that there is more than one way – sheds light on Lacan's specific way of working. His interdisciplinary thought can be understood less in a linear and hermeneutic way than structurally and topologically. This approach allows him to give a visual form to his conceptual figures. When he drew his schemata on the blackboard with his chalk, or when he sketched Möbius strips or Borromean knots with colored pens on paper, Lacan was first of all active as a draughtsman himself.¹ On June 30, 2006, 117 of Lacan's drawings with topological sketches in blue ink, ballpoint pen, and colored felt-tip pen were auctioned like works of art in Paris.² Lacan's fascination for topology³ is documented by his intense correspondence and particularly by the exchange of

1 | Cf. (Seitter 1984: 41-57)

2 | At the time the author downloaded all the drawings offered for sale from the Internet and made them available to the Lacan Archiv, Bregenz (<http://www.bregenznet.at/Lacan-Archiv/>). For the auction a detailed commentary was also put online by Jean-Michel Vappereau, which was written in Buenos Aires on April 15, 2006, and can still be found at: https://www.auction.fr/_fr/vente/jacques-lacan-oeuvres-graphiques-manuscrits-9241?tab=doc#.VuwDecdeJi0.

3 | On topology in Lacan, cf. especially (Granon-Lafont 1986; Granon-Lafont 1990; Soury 1990; Vappereau 1990a; Vappereau 1990b; Vappereau 1997). On topology in art, cf. (Pichler 2009).

drawings with the mathematicians Michel Thomé and Pierre Soury.⁴ Lacan's models and schemata, especially those dealing with vision and the relation between the eye and the gaze, are not only oriented to mathematical visualizations, but also draw on optical media and works of art.⁵ In the following, these references will be traced with a number of exemplary cases in order to show how specific topological schemata were experimentally conceived and developed as a superimposition of mathematical visualizations, optical media, and painting.

I

To understand the different ways in which Lacan, with his structural inversions and topological schemata, presents his ideas in a visual form, it is useful to examine not only the texts to which he refers, but also the models, optical media, and images he makes use of as references. In this way, a number of threads can be isolated from the fabric of his argumentation, which might act as the basis for a reconstruction of the formation and functioning of his models and schemata. Furthermore, a familiarity with the images helps to understand the structural inversions carried out by Lacan on positions in the philosophy of language and the philosophy of the subject, which likewise often have an experimental, model-based, and visual character themselves. Thus, on the blackboard of the seminar room, in front of his students, he inverts the schema from the *Cours de linguistique générale* by Ferdinand de Saussure, and thereby turns the theory of the sign presented there on its head. With the argument that a signifier (*signifiant*) can

4 | The drawings and the correspondence were exhibited for the first time in 1988 at Galerie Faber in Vienna and are reproduced in (Fischer 1990: 295–304).

5 | Cf. especially (Seitter 1984; Jay 1994; Žižek 1998; Borch-Jacobsen 1999; Cremonini 2003; Ruhs 2003; Olin 2003; Blümle 2005).

indeed get by without a signified (*signifié*), but not the reverse, Lacan established the primacy of the signifier. Moreover, the unity of the sign, which Saussure visualizes with a circle around the algebraic formula, and which can be related to the inseparability of the two sides of a sheet of paper, is removed by Lacan in order to draw attention to the bar (*barre*) that emphasizes the separation between signified (s) and signifier (S).

Lacan's structural inversions work to seduce the reader into understanding him in a strictly systematic way; however, this is repeatedly frustrated by his discourse itself. In his seminars, Lacan often raises questions or announces theses that are not immediately taken up. Instead, he leads the discussion in different directions, and from here develops new considerations. Eight pages or two years later, to the annoyance of the forgetful, the promised answers and theses suddenly appear – just when no one was expecting it, or when one no longer had the particular line of questioning in mind. In a non-hierarchical, non-systematic, non-linear way, connections are thought and developed that constantly evolve in an entangled process of development. Here, Lacan works intentionally with artificially produced disappointments, leaving the reader or listener alone, so that he or she is forced to understand the schemata and formulae of Lacanian algebra as relational models.⁶

Over the decades the topological models, drawings, and schemata acquired an ever-greater importance for Lacan. Against this background, a particular example sheds light on the transition from structural inversion to topology, which, in addition, is introduced with an optical experiment using the medium of a mirror.⁷ This is Lacan's optical model with a vase, in which the real image of a hidden bouquet appears spectrally

6 | On Lacanian algebra, cf. (Evans 2006: 7-9).

7 | Cf. (Vappereau 1990a).

superimposed in a vase (fig. 1).⁸ Here, the psychoanalyst takes up the physical distinction between a real and a virtual image, which is described on the basis of the experiment taken from the physics and optics of Henri Bouasse in his book *Optique et photométrie dites géométriques* from 1934 (fig. 2).⁹ In contrast to a virtual image that occurs in a plane mirror, a concave mirror at a precise point generates real images that float in space, and which can be caught on a screen – for example, on a white sheet of paper (fig. 3).

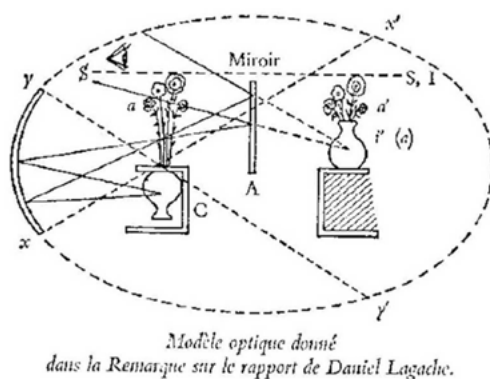


Fig. 1: (Lacan 1973: 132)

8 | Cf. (Bouasse 1934: 84). Lacan draws on an edition from 1947, as becomes evident in (Lacan 1996: 564). See also the remarks on the optical model in (ibid: 563-572).

9 | Cf. (Bouasse 1934: 84).

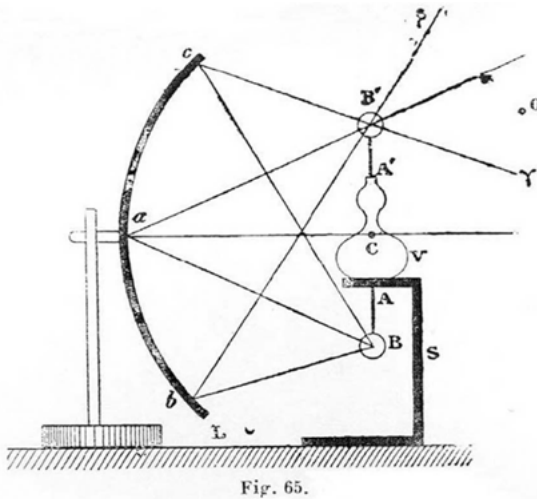


Fig. 2: (Bouasse 1934: 87, fig. 65)

The history of the concave mirror is addressed in the book *Le miroir: Essai sur une légende scientifique: Révélation, science-fiction et fallacies* by the Paris-based Lithuanian art historian Jurgis Baltrušaitis (1978).¹⁰ Lacan refers to Baltrušaitis on a number of occasions in his work.¹¹ The problem of the real image, which can be demonstrated experimentally with the help of the optical medium of the mirror, was specially calculated and drawn for Baltrušaitis by the engineer and optician Jean-Claude Chastang (fig. 4). Clearly recognizable is the point *s* at which the real image appears. What is important here is that real images occur outside the mirror – thus, in

10 | Cf. on Baltrušaitis's biography: (Kauffmann 1956; Daujotyte 1974; Chevrier 1989).

11 | Lacan refers to Baltrušaitis especially in his considerations on anamorphosis, as will be presented in more detail.

the same space in which the objects are located, in contrast to virtual images, which let things appear where they are not. Lacan subsequently introduces into Bouasse's vase experiment a plane mirror, which allows the real image of a vase to appear virtually in one image with the bouquet of flowers (fig. 1).¹² In this way it become clear,

HYPOTHÈSES FONDAMENTALES. MIROIRS PLANS 47
2^e. — Ayant ainsi produit un cône convergent A', recevons-le

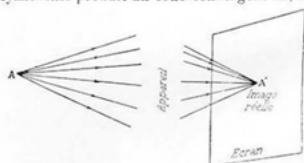


Fig. 25.

sur un miroir plan S, placé avant le sommet A' (fig. 26). Il l'arrête et le réfléchit : pour rappeler que le cône des rayons *incidents*

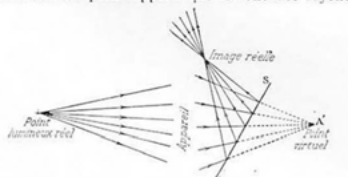


Fig. 26.

sur le miroir a son sommet en A', nous disons que A' est *point lumineux*; comme ce point n'existe pas en tant que source

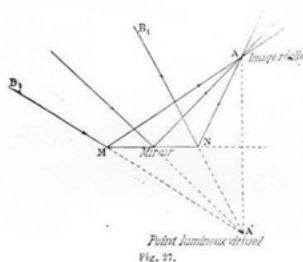


Fig. 27.

Fig. 3: (ibid: 47, figs. 25-27)

12 | Cf. the texts by Samo Tomšič and Michael Friedman in this volume.

that where the subject sees himself, namely, where that real, inverted image of his own body that is given in the schema of the ego is forged, it is not from there that he looks at himself. But, certainly, it is in the space of the Other that he sees himself and the point from which he looks at himself is also in that space. (Lacan 1998: 144)

The experiment with the concave mirror developed by Bouasse, and the catching of real images with the help of a screen form the starting point for the optical model that Lacan drew on paper as well as on the blackboard in his seminars (2004: 140), and which was printed in his writings. The comparison of his sketches, drawings, and illustrations in his writings shows how he gradually gets closer to a topological schema (fig. 5). Lacan continues the play with the drawings and optical models, which are transformed without vase and flowers into a reduced schema (fig. 6). As Lacan states: "I therefore reverse the topology of the traditional imagery by presenting to you the following schema" (1998: 144). If one takes another look at Lacan's drawing with the concave mirror and the vase, it becomes clear how he changes the experimental setup over a number of lines, stretching it into a loop and bracketing the flower vase, $i(a)$ and a .

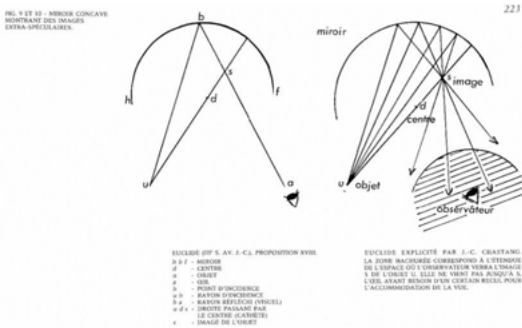


Fig. 4: (Baltrušaitis 1978: 223, figs. 9 and 10)



Fig. 5: (Lacan 2004: 140)



Schéma de la nasse

131

Fig. 6: (Lacan 1973: 131)

At the end of the seminar with the discussion of this optical model and its topological transformations, Dr Rosolato asks whether the schema of the “hoop net,” whose orifice is fitted with the *objet petit a*, is intended to resemble an eye, and whether the *objet petit a* is intended to play the role of a lens. Lacan finds this remark amusing, but he insists:

In everything concerning topology one must always be very careful to avoid attributing it with any kind of Gestalt

function. [...] It is certainly very odd that the structure of the eye presents us with a general form that so easily springs to mind whenever we try to figure chronologically the relations of the subject with the world. This is probably no accident. (ibid: 147-148)

In the discussion with Dr Rosolato, Lacan makes clear that it is solely by means of topology that he is able to elucidate his concept of the unconscious:

It is certain that it is only these considerations [of topological configurations] that can provide us with the appropriate image when it is a question of something inside that is also outside. This is why such considerations are particularly necessary when it is a question of the unconscious, which I represent to you as that which is inside the subject, but which can be realized only outside, that is to say, in that locus of the Other. (ibid: 147)

With the drawn models and mathematical schemata, Lacan sets out a theory of the image that breaks with the imaginary dimension of representation. Here, the Möbius strip is paradigmatic for a structure that cannot be presented spatially as a geometrical image, but only through the motion of the hand following the surface of the strip. If one travels with the tip of one's finger like an ant over the surface of a paper Möbius strip, one eventually ends up with one's arm entwined in a place that cannot be represented. Rather, this experiment with the fingertip shows how inside and outside are connected in a loop. Lacan attempts to capture this situation in a multitude of drawings and sketches whose degree of abstraction outdoes our powers of representation.

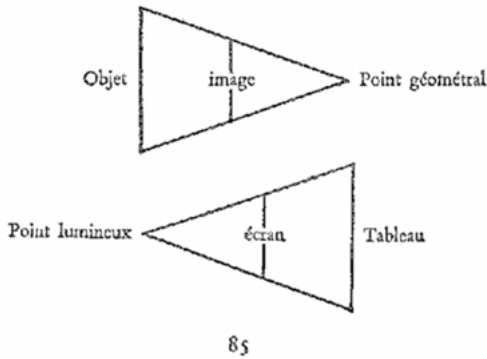
II

In Seminar XI, Lacan develops three schemata that show a structural split between the eye and the gaze (figs. 8 and 9). Here, eye and gaze, as the lower schema shows, only come into play topologically when the two upper triangles are superimposed and linked (fig. 9). In an analytical sense, Lacan divides the schema into its separate parts to show how the eye and the gaze are structured by an interlocking chiasmus. At the same time, this chiasmus is characterized in turn by the primacy of the gaze over the eye. To illustrate this, Lacan draws on a number of visual techniques and works of art. For example, he begins with the idea of a vision, from where an eye looks through an image – whether a window, a mirror, or a Düreresque lattice – to take in an object.¹³ Here, an analogy is made to the first triangle and the visual technique of perspective (fig. 7). The eye point is equated with the geometral point, and the section through the visual pyramid can be understood as an image. If one chooses this way, every perspectively constructed painting can be understood in the sense of an image, and that means as imaginary representation.



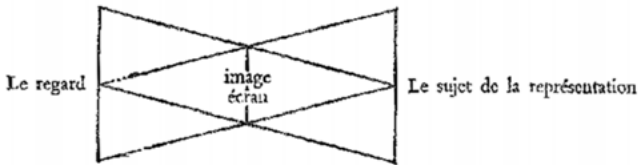
Fig. 7: Dürer, Albrecht: *Der Zeichner des liegenden Weibes*, 1538, woodcut, *Kupferstichkabinett* (museum of Paints and Drawings), Berlin, in: (Knappe 1964: 373)

13 | Cf. (Vinguarea 2005; Vogl 2005).



85

Fig. 8: (Lacan 1973: 85)



97

Fig. 9: (Lacan 1973: 97)

For Lacan, the optical medium of anamorphosis on the other hand, which is examined by the art historian Baltrušaitis in his book *Anamorphoses: Ou perspectives curieuses* (1955), a book that Lacan refers to, represents the inversion of perspective. With the example of Hans Holbein's *The Ambassadors* in the National Gallery in London, it becomes clear that Lacan connects painting with optical media and visual techniques. Here, the superimposition of the techniques of perspective

and anamorphosis in one and the same painting becomes a demonstration object. The gaze corresponds to the unexpected image of the anamorphically rectified skull in Holbein's *The Ambassadors*, which had previously remained unperceived as a floating, elongated, and stain-like form in the painting. The shift in the viewer's position in front of the painting, which brings one or the other visual technique to the fore, discloses this form, which now looks back at us as a skull. Hence, this is not simply an "anamorphic ghost"; rather, it suggests to the viewer "the gaze as such," appearing here "in its pulsatile, dazzling and spread out function" (Lacan 1998: 89). The anamorphosis of the skull as the "display of the domain of appearance" (ibid: 88)¹⁴ disturbs the frontal contemplation of the painting and cannot automatically be integrated into the picture as a whole. Moreover, this floating object in the form of a skull reflects "our own nothingness" (ibid: 92). It refers in the sense of a *memento mori* to the representation of a *vanitas* with the depicted paraphernalia of the exact, measuring and counting sciences.

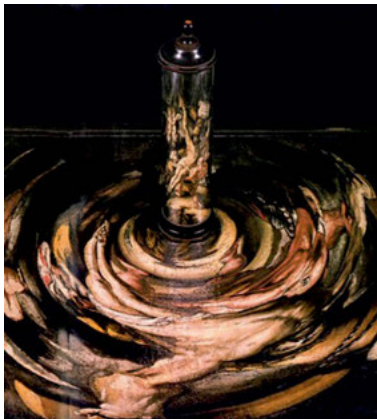


Fig. 10: Anamorphose cylindrique, Crucifixion, painting on wood, École hollandaise, c. 1640, Naarden, Coll. Korteweg, in: (Baltrušaitis 1969: 137)

14 | Lacan also speaks of a "cuttlebone" (Lacan 1998: 88).



Fig. 11: Rouault, Georges: *Planche XLVI du Miserere*, in: (Bouleau 1963a: 233)



Fig. 12: (Lacan 1973: 99)

Already five years earlier, in Seminar VII, Lacan had brought along the optical medium of a cylindrical anamorphosis (fig. 10), about which he says: “When you stand at a certain angle,

you see the image concerned emerge in the cylindrical mirror; in this case it is a beautiful anamorphosis of a painting of the crucifixion copied from Rubens.” (1992: 135) And the first sentence of the following seminar is: “Why is this example of anamorphosis on this table? It is here to illustrate my ideas.” (ibid: 139) Visual techniques and works of art do not merely illustrate Lacan’s ideas; they also stand for his structuralist and topological theory of the image.

Lacan makes reference in different ways to images – paintings, photographs, and scientific illustrations, which he finds in books, magazines, and on book covers – in order to make use of them in his discourse. He brings them along to his seminars, indicates the location of the original, and occasionally darkens the auditorium to project slides.¹⁵ The indication of a loan of the slides from the Louvre was explicitly mentioned for example in the seminar of May 11, 1966, part of Seminar XIII (Lacan 2006). Hans Holbein’s *The Ambassadors* was shown in Seminar XI in 1964 with the help of a slide projector, and thus as one would expect to see it in an art history institute. The anamorphosis in this painting is staged using the technique of slide projection, thereby heightening the effect. At the end of a seminar, Lacan invited his audience to turn round in order to see the becoming-visible contradiction in the projected image of the painting: “Begin by walking out of the room in which no doubt it has long held your attention. It is then that, turning round as you leave [...] you apprehend in this form... What? A skull.” (1998: 88) Only by turning away, by exiting the domain of appearance, is it

15 | The new French edition of *L'angoisse: Le séminaire livre X* contains for the first time a selection of the images discussed in the text: two paintings by Francisco de Zurbarán, a drawing of the patient Isabella, and a photograph of the great Buddha in the Tōdai-ji temple in Japan (Lacan 2004: 200-201). Previously, the reproduction of images in the texts of Lacan editions (the various seminars and *Écrits*) had been limited to his own schemata. In addition, a few artworks have been reproduced on the covers of his books.

possible to see the anamorphosis of the skull, which appears in the foreground of the picture as a curious stain.

Thus, the seminar audience encounters these images in their threatening, uncanny, and decentering function. Accordingly, they do not simply act as illustrations, but bring into play what Lacan calls the gaze, which is to say, something that both eludes and concerns the subject. Both the anamorphosis seen from the side and the perspectival view seen from the front present objects in an image. At the same time, they both constitute the position of an eye in front of the image (the geometral point), as is visualized by Lacan in his schema.

Lacan's keen interest in art is also evident in his friendships with Pablo Picasso, Paul Éluard, Salvador Dalí, Hans Bellmer, Georges Bataille, and André Masson.¹⁶ Through the art dealer Daniel-Henry Kahnweiler, he purchased works by Balthus, Masson, Picasso, and Zao Wou-Ki (Roudinesco 1997: 139). In 1955, Lacan acquired the picture *L'Origine du monde* by Gustave Courbet, which he initially hid behind a curtain and later behind a drawing by Masson.¹⁷ The game of exposure and concealment that Lacan stages here with this "true (and indiscreet) gem" (Doetzler 2000: 383) already points to the field in which art and psychoanalysis are able to meet. Instead of remaining at a disinterested distance, the seeing and

16 | Lacan knew Bellmer and André Breton personally. They were co-residents at the villa Bel Air between 1940-41. Lacan was personally linked to Bataille inasmuch as his second marriage was to Bataille's former wife, Sylvia. The marriage to Sylvia is also relevant for the history of Seminar XI, since the daughter of Sylvia and Jacques Lacan – Judith – married Jacques-Alain Miller, the editor of the Seminar. In July 1929, Lacan made the acquaintance of André Masson, whose picture *Le Fil d'Ariane* (Ariadne's thread) he bought through Daniel Henry Kahnweiler. Many other works followed, including portraits of Jacques and Sylvia Lacan. Cf. (Roudinesco 1997: 139, 164).

17 | Cf. (Damisch 1997; Metken 1997).

desiring subject is strongly affected by images. The idea that one can talk about images without looking at them profoundly contradicts Lacan's thought; indeed, Lacan developed his theory of the image on the basis of numerous works of art. Most prominent among these are *The Ambassadors* by Hans Holbein, *Las Meninas* by Velázquez, *The Persistence of Memory* by Salvador Dalí, and *The Ecstasy of Saint Teresa* by Gian Lorenzo Bernini.¹⁸ His considerations circle repeatedly around the painting of Paul Cézanne and the Surrealists.¹⁹ The long list of named painters comprises among others Francisco de Zurbarán, Francisco Goya, Peter Paul Rubens, André Masson, Hieronymus Bosch, Giuseppe Arcimboldo, Paolo Uccello, Michelangelo Merisi da Caravaggio, Albrecht Dürer, Henri Matisse, Vincent van Gogh, Edvard Munch, and James Ensor.²⁰ Lacan does not allow the works of art he discusses to disappear behind an interpretation, but, just like his models and schemata, presents them first of all as an enigma whose visual language the viewer is required to examine.

III

A full list of the images shown and discussed by Lacan in his seminars is still pending. One particular difficulty here is that Lacan's texts often only refer to these works with sparse allusions.²¹ A typical example is plate XLVI of the *Miserere*

18 | This paper refers in particular to the optical model and *Las Meninas* in Lacan's seminar on the phantasm. Cf. (Bergande 2000).

19 | Cf. (Suthor 2005).

20 | Cf. (Siegert 2005).

21 | Lacan's work, which consists essentially in the spoken lectures of the Seminar presented over a period of 30 years, is still far from being published in its entirety. In 1953, Lacan employed a stenotypist to transcribe his seminar, which beginning in 1962 became possible on the basis of tape

cycle by Georges Rouault.²² Seminar XI only mentions “a picture” by this painter, who is subjected to an analysis in a book by the artist Charles Bouleau,²³ which in turn serves Lacan as the starting point for his considerations. According to Lacan:

[R]ediscovering in the picture what is, strictly speaking, composition, the lines dividing the surfaces created by the painter, vanishing traces, lines of force, frames (*bâtis*) in which the image finds its status is a fascinating game – but I am astonished that in one very remarkable book they are called frameworks (*charpentes*) [...] By a sort of irony, on the back of this book, there nevertheless figures, as being more exemplary than any other, a picture by Rouault. (Lacan 1998: 108)²⁴

The book being referred to here is Charles Bouleau's *Charpentes: La géométrie secrète des peintres*²⁵ (Bouleau 1963a), published in Paris in 1963, one year before Seminar XI.²⁶ This “secret geometry” is the subject of a history of art in which a broad range of artworks – from medieval illuminated

recordings. In 1972, his son-in-law Jacques-Alain Miller took on the task of editing the Seminar. On the history of the Seminar and why a critical apparatus is missing, cf. (Roudinesco 1997: 413-427).

22 | On the *Miserere* cycle, cf. (Courthion 1980; Bibelgesellschaft 1987; Bahr 1996; Heuser 1998).

23 | Many thanks to Moustapha Safouan (Paris).

24 | Original emphasis.

25 | Interestingly, in the Italian and English translations (there is still no German version) a translation of “*Charpentes*” (framework) was not included in the respective titles of the books. Cf. (Bouleau 1963b; Lacan 1998: 108; Bouleau 1988).

26 | Lacan's editor François Wahl is mentioned by Bouleau in his acknowledgements as a “defender and attentive critic of this book”: “Nous remercions [...] en particulier François Wahl, défenseur et critique vigilant de ce livre.” (Bouleau 1963a: 6)

manuscripts, via ornamental Baroque murals, to modern abstract paintings – are examined with regard to their composition, divided up into separate parts, and covered with a fine mesh of lines – as is Rouault's work from his *Miserere* cycle. It is precisely this work with its compositional schema that Lacan refers to in Seminar XI, and which, as Moustapha Safouan recalls, he held up as a book in the lecture (fig. 11). As Bouleau writes, this picture transfers perspectival space to a two dimensional surface, and in this way allows it to coincide with the symmetrical schema (Bouleau 1963b: 232) that can be characterized as follows:

The two axes governing the composition of this plate are the verticals drawn from the corners of the small central square formed by the diagonals of the two overlapping squares. A large circle has its circumference running through the points where these diagonals and these verticals intersect. (ibid: 233)

What Lacan found in Bouleau's book was a way of describing pictures that abstained entirely from a discussion of their iconography and mimetic spatiality in order to examine "one of the features that scarcely seems to have been noticed in pictorial creation" (Lacan 1998: 108). According to Lacan, in the abstract armature that Bouleau places over Rouault's painting, "a circular line" (fig. 12) is emphasized "to enable us to grasp the main point [in painting]" (ibid: 108). The creation of pictures generates visibilities in which it is not a question of an equation with perception in nature, or even of a visual realism, as he underlines in Seminar VII:

Of course, works of art imitate the objects they represent, but their end is certainly not to represent them. In offering the imitation of an object, they make something different out of that object. Thus they only pretend to imitate. The object

is established in a certain relationship to the Thing and is intended to encircle and to render both present and absent. (Lacan 1992: 141)

In physiological terms vision functions by means of the focus, which is to say, there is only one point where, via accommodation, it is at its sharpest.²⁷ In painting, however, this point can only be absent and replaced by a hole, “behind which is situated the gaze. Consequently, and in as much as the picture enters into a relation to desire, the place of a central screen is always marked” (Lacan 1998: 108). For this reason, according to Lacan, “the picture does not come into play in the field of representation.” Bouleau’s armatures or skeletons – as one might also translate *charpentes* alongside “frameworks” (ibid: 108) – makes visible a pictorial structure that should enable the investigation of non-spatial geometric forms, their proportional relations, and their distribution over the picture plane. The combination of diverse shapes such as circles, quarter circles, triangles, rectangles and squares, diagonals, S-lines, pentagons, and octagons opens up a geometric network of relations, which Bouleau elucidates, also historically, in relation to the respective mathematical knowledge, and translates into algebraic formulae. Accordingly, he relates the work of Leonardo da Vinci to the treatise *De divina proportione* by the Franciscan friar and mathematician Luca Pacioli from 1498, whose irrational proportions and golden ratio are translated by Bouleau into modern algebra (Bouleau 1963b: 73–79).

These pictures result from a kind of geometric schematism that operates so discreetly that “sometimes, indeed, it makes one forget its existence” (ibid: 9). *Charpentes* “is a study of

27 | On Lacan’s references to the accommodation of the gaze and the physiological experiments on the screen, cf. especially (Berz 2005; von Hilgers 2005).

the internal construction of works of art, a search for the formulae that have guided, over the centuries, the distribution of the various plastic elements.” (ibid: 9) “Construction on the armature,” as Charles Bouleau writes, “give the composition its life” (ibid: 141), which, consequently, is no longer expressed on the surface as such, in contrast to the preliminary composition sketches, which Bouleau also reproduces in his book. Finally the compositions of Kandinsky are printed in Bouleau’s book without the secret armature, that is, without a drawn schematization, since in these works the composition has itself become the subject. In this sense, the history of art is considered and analyzed from the perspective of modernist abstraction. Abstraction, which Bouleau, who completed his studies at the École des Beaux-Arts under Ernest Laurent and Paul Baudouin, championed himself in his painting, abandoned *historia* and replaced it with a pictorial “texture” (ibid: 233) that organizes the construction of the image as a mute order.

With his structural and topological schemata, Jacques Lacan opens up a research field that assigns a key function to questions about the schema, the model, and the image. The subsequent remarks on the divergence between the eye and the gaze shows Lacan’s specific way of working, which develops its arguments in dialogue with disciplines as wide ranging as mathematics, physics, optics, gestalt psychology, sensory physiology, phenomenology, ethnology, zoology, and not least the history of art. Here, Lacan takes up Freud’s attempt to make productive use of the tension between the sciences and the humanities in order to be able to develop his own psychoanalytical discourse. He achieved this not least through a recourse to Freud’s use of the microscope, telescope, and camera to sketch out his optical schema in the interpretation of dreams.²⁸ In Lacan’s seminars and

28 | Cf. (Vappereau 1990a).

Écrits one finds countless references to mathematical forms of visualization, physical models, optical media, visual techniques, and works of art which, in a playful manner, are staged, superimposed, and topologically linked, both explicitly and clandestinely, as a bait between withdrawal and disclosure.²⁹

Translation: Benjamin Carter

BIBLIOGRAPHY

- Bahr, Carolin (1996): *Religiöse Malerei im 20. Jahrhundert: Am Beispiel der religiösen Bildauffassung im gemalten Werk von Georges Rouault (1871-1958)*, Stuttgart: Katholisches Bibelwerk.
- Baltrušaitis, Jurgis (1955): *Anamorphoses: Ou perspectives curieuses*, Olivier Perrin: Paris.
- Baltrušaitis, Jurgis (1969): *Anamorphoses ou magie artificielle des effets merveilleuse*, Olivier Perrin: Paris.
- Baltrušaitis, Jurgis (1978): *Le miroir: Essai sur une légende scientifique: Révélations, science-fiction et fallacies*, Paris: Seuil.
- Bergande, Wolfram (2000): "Lacan, Kojève und Las meninas von Velázquez." In: *Riss: Zeitschrift für Psychoanalyse: Freud – Lacan* 48/2, pp. 53-86.
- Berz, Peter (2005): "Die vier Verschiebungen des Blicks." In: *Blümle, Claudia/von der Heiden, Anne (eds.), Blickzähmung und Augentäuschung: Zu Jacques Lacans Bildtheorie*, Berlin/Zurich: Diaphanes, pp. 183-216.

29 | The author would like to thank the editor Michael Friedman for the constructive exchange, Benjamin Carter for his felicitous translation, Lia Bertram for picture research in the original editions, and Cynthia Klinghammer for her general assistance.

- Bibelgesellschaft in Württemberg (ed.) (1987): *Miserere*. Georges Rouault, 175 Jahre Bibelgesellschaft in Württemberg, exhib. cat., 2 September – 15 October 1987 Württemberg, Stuttgart: Landesgirokasse.
- Blümle, Claudia/von der Heiden, Anne (eds.) (2005): *Blickzähmung und Augentäuschung: Zu Jacques Lacans Bildtheorie*, Berlin/Zurich: Diaphanes.
- Borch-Jacobsen, Mikkel (1999): *Lacan: Der absolute Herr und Meister*, Munich: Wilhelm Fink.
- Bouasse, Henri (1934): *Optique et photométrie dites géométriques*, Paris: Delagrave.
- Bouleau, Charles (1963a): *Charpentés: La géométrie secrète des peintres*, Paris: Seuil.
- Bouleau, Charles (1963b): *The Painter's Secret Geometry: A Study of Composition in Art*, trans. Jonathan Griffin, London: Thames and Hudson.
- Bouleau, Charles (1988): *La geometria segreta dei pittori*, Milan: Electa.
- Chevrier, Jean (1989): *Portrait de Jurgis Baltrušaitis*, Paris: Flammarion.
- Courthion, Pierre (1980): *Georges Rouault*, Cologne: DuMont.
- Cremonini, Andreas (2003): *Die Durchquerung des Cogito: Lacan contra Sartre*, Munich: Wilhelm Fink.
- Damisch, Hubert (1997): *Le jugement de Pâris*, Paris: Flammarion.
- Daujotyte, Viktorija (1974): *Jurgis Baltrušaitis: Monografija*, Vilnius: Vaga.
- Dotzler, Bernhard (2000): "Rezension: Günter Metken, Gustave Courbet: Der Ursprung der Welt. Ein Lust-Stück." In: Barbara Büscher/Susanne Bax/Bernhard Dotzler (eds.), *Körperinformation* 384, *Kaleidoskopien* 3, Leipzig: Inst. für Buchkunst, p. 383.
- Evans, Dylan (2006): *An Introductory Dictionary of Lacanian Psychoanalysis*, London/New York: Routledge.

- Fischer, Gerhard/Gruber, Klemens/Martin, Nora/Rappl, Werner (eds.) (1990): *Die Erfindung der Gegenwart*, Basel/Frankfurt am Main/Vienna: Stroemfeld.
- Granon-Lafont, Jeanne (1986): *La topologie ordinaire de Jacques Lacan*, Paris: Point Hors Ligne.
- Granon-Lafont, Jeanne (1990): *Topologie lacanienne et clinique analytique*, Paris: Point Hors Ligne.
- Heuser, August/Renn, Wendelin (eds.) (1998): *Georges Rouault: Miserere*, exhib. cat., 5 December 1998 - 31 January 1999, Städtische Galerie Villingen-Schwenningen et al., Ostfildern: Gerd Hatje.
- Jay, Martin (1994): *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, Berkeley/Los Angeles/London: The University of California Press.
- Kauffmann, Georg (1956): "Jurgis Baltrušaitis." In: *Kunstchronik*, 9/12, pp. 366-369.
- Knappe, Karl-Adolf (1964): *Dürer. Das graphische Werk*, Vienna/Munich: Schroll.
- Lacan, Jacques (1973): *Le Séminaire, livre XI, Les quatre concepts fondamentaux de la psychanalyse*, ed. Jacques-Alain Miller, Paris: Seuil.
- Lacan, Jacques (1992 [1986]): *Seminar, Book VII, The Ethics of Psychoanalysis*, trans. Dennis Porter, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Lacan, Jacques (1996): "Remarks on Daniel Lagache's Presentation: 'Psychoanalysis and Personality Structure.'" In: id., *Écrits*, trans. Bruce Fink, New York/London: W.W. Norton & Co., pp. 543-574.
- Lacan, Jacques (1998 [1973]): *Seminar, Book XI, The Four Fundamental Concepts of Psychoanalysis*, trans. Alan Sheridan, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Lacan, Jacques (2004): *L'angoisse. Le séminaire, livre X*, ed. Jacques-Alain Miller, Paris: Seuil.

- Lacan, Jacques (2006): *L'objet de la psychanalyse. Le séminaire, livre XIII*, ed. Jacques-Alain Miller, Paris: Michel Roussan.
- Metken, Günther (1997): *Der Ursprung der Welt: Ein Lust Stück*, Munich: Prestel.
- Olin, Margaret (2003): "Gaze." In: Nelson, Robert S./Shiff, Richard (eds.), *Critical Terms for Art History*, Chicago: The University of Chicago Press, pp. 208-219.
- Pichler, Wolfram/Ubl, Ralph (eds.) (2009): *Falten, Knoten, Netze, Stülpungen in Kunst und Theorie*, Vienna: Turia + Kant.
- Roudinesco, Elisabeth (1997): *Jacques Lacan: An Outline of a Life and a History of a System of Thought*, trans. Barbara Bray, Cambridge/Malden, MA: Polity Press.
- Ruhs, August (2003): *Der Vorhang des Parrhasios: Schriften zur Kulturtheorie der Psychoanalyse*, Vienna: Sonderzahl.
- Seitter, Walter (1984): *Jacques Lacan und*, Berlin: Merve.
- Siegert, Bernhard (2005): "Der Blick als Bild-Störung: Zwischen Mimesis und Mimikry." In: Blümle, Claudia/von der Heiden, Anne (eds.), *Blickzähmung und Augentäuschung: Zu Jacques Lacans Bildtheorie*, Berlin/Zurich: Diaphanes, pp. 103-126.
- Soury, Pierre (1990): "Michel Thomé: Knoten, Ketten, Flächen." In: Gerhard Fischer/Klemens Gruber/Nora Martin/Werner Rappl (eds.), *Die Erfindung der Gegenwart*, Basel/Frankfurt am Main/Vienna: Stroemfeld, pp. 302-304.
- Suthor, Nicola (2005): "Triumph, über das Auge, des Blicks: Der opake Schleier in Jacques Lacans Bildtheorie." In: Johannes Endres/Barbara Wittmann/Gerhard Wolf (eds.), *Ikonologie des Zwischenraums: Der Schleier als Medium und Metapher*, Munich: Wilhelm Fink, pp. 35-58.
- Vappereau, Jean-Michel (1990a): "Von der Optik Lacans zu seiner Topologie." In: Gerhard Fischer/Klemens Gruber/Nora Martin/Werner Rappl (eds.), *Die Erfindung der Gegenwart*, Basel/Frankfurt am Main/Vienna: Stroemfeld, pp. 282-285.

- Vappereau, Jean-Michel (1990b): "Die Topologie Lacans: Kleine Chronik des Generalisierten Borromäischen Knotens." In: Gerhard Fischer/Klemens Gruber/Nora Martin/Werner Rappl (eds.), *Die Erfindung der Gegenwart*, Basel/Frankfurt am Main/Vienna: Stroemfeld, pp. 295-301.
- Vappereau, Jean-Michel (1997): *La théorie du noeud esquissée par J. Lacan*, Paris: Topologie En Extension.
- Vinguarea, Rose-Paul (2005): "Das Gemälde, der Blick und das Phantasma." In: Blümle, Claudia/von der Heiden, Anne (eds.), *Blickzähmung und Augentäuschung: Zu Jacques Lacans Bildtheorie*, Berlin/Zurich: Diaphanes, pp. 45-49.
- Vogl, Joseph (2005): "Lovebirds," in: Blümle, Claudia/von der Heiden, Anne (eds.), *Blickzähmung und Augentäuschung: Zu Jacques Lacans Bildtheorie*, Berlin/Zurich: Diaphanes, pp. 51-63.
- von Hilgers, Philipp (2005): "Die Diskursanalysemaschine: Heimsuchung des blinden Flecks," in: Blümle, Claudia und von der Heiden, Anne (eds.), *Blickzähmung und Augentäuschung: Zu Jacques Lacans Bildtheorie*, Berlin/Zurich: Diaphanes, pp. 127-144.
- Žižek, Slavoj et al. (1998): *Ein Triumph des Blicks über das Auge: Psychoanalyse bei Hitchcock*, trans. Isolde Charim/Thomas Hübel/Robert Pfaller/Michael Wiesmüller, Vienna: Turia + Kant.

Torus and Identification

The Beginning of Lacanian Mathematics

Michael Friedman

Seminar IX of Lacan, *L'Identification* (1961–62), is one of his most important seminars, as in this seminar the topological structures that accompanied him throughout of his work appear for the first time. And though the literature on Lacanian mathematics, and on Lacan's involvement with these topological structures in particular, is abundant, it seems that the number of works dealing specifically with this seminar is exiguous.¹ In this seminar, what appears through topology is knowledge that cannot be inherently transferred to the written medium; hence Lacan proposes that one cannot separate the appearance of these structures from what they try to convey. It is therefore crucial to concentrate on the emergence of these topological structures, and especially the torus and the loops on it, before any attempt to verbalise and literalise them is made. Thus a question regarding the origin of this emergence ought to be posed: was it Lacan's involvement with these topological structures that led to the materialisation of a knowledge that cannot be written, or rather did the emergence of what cannot be written in psychoanalysis lead Lacan towards a horizon of topological structures?

1 | Cf. (Granon-Lafont 1985; 1990; Darmon 1990; Chaiesia 2006; Pluth 2006; Moncayo 2012).

Here I would like to deal with this obscure origin of the reason for the topological structures in Seminar IX. This obscurity should not necessarily be clarified, as this clarity itself may simply make the problem 'literal', that is, to a demonstration of the problems with words, which would be to disregard the evidence showing that there is something that cannot be written. Particularly, the topological structures at this seminar, before being extensively explained and before being replaced by other models (such as the Borromean link and the various knots) may show us a possibility to circumvent the dispute between *démontrer* and *montrer*, i.e. to show the presence of what is beyond the need of demonstrating images with words or showing words with images. The goal of this chapter is eventually to not only to explain the background and the implications of the unique emergence of the torus in Lacanian psychoanalysis regarding identification, but also to try to answer what Lacan implicitly poses: what should be the essence of mathematics so that it would be able to give a proper account with respect to the being called man?

IDENTIFICATION: BEFORE SEMINAR IX

The seminar on identification, being held between the 15th of November 1961 and 27th of June 1962, deals, as expected, with the extent and validity of the allegedly axiomatic formula $I=I$. Simply put, the operation of identity, as realised in identification, is what determines and reflects at the same moment how the subject is positioned inside the array of familial, social and linguistic relations.

For Lacan, before these years when the seminar took place, there are two types of identification: the imaginary one, based on the identification with the image, with what is subject to the order of the same; and the symbolic one, based on the identification with the signifier. But before dealing

with Lacan's concept of identification, we have to review shortly Freud's views on this topic and Lacan's earlier views on identification.

Freud's main treatment on the topic of identification, though not the only one, is to be found in chapter 7 of his manuscript "Group Psychology and the Analysis of the Ego". Immediately at the beginning Freud states that identification "is known to psychoanalysis as the earliest expression of an emotional tie with another person" (2001 [1921]: 104). According to Freud, the main, primal identification is the identification with the father (or with one of the parents, as Freud later adds (*ibid*: 109)), alongside with the introjection of the object, as exemplified in the libidinal introjection of the mother's breasts (i.e. of the nutritive object). Thus the child leans on the mother's breast, as an object, which takes care of him, and identifies with the father, as an object of admiration. But from a certain point, these two processes confront each other: the father blocks the child's way to his mother and is now regarded as an obstacle. From the beginning the relation to the father is bivalent: the primal identification is composed from the narcissistic side of identifying the *I* in the other and from the hostile side of identifying the other as the one who is standing in (and in the way to) the desirable place. This essential struggle Freud called the Oedipus complex.

Replacing the introjection of the object by secondary identifications dissolves this complex, as Freud describes in his paper "The Dissolution of the Oedipus Complex" (Freud 2001 [1924]). Freud suggests that the dissolution of the Oedipus complex happens due to the encounter with the difference between the sexes. Indeed, the complex suggests either to be instead of the mother and be loved by the father, but to be actually castrated; or to be instead of the father but then to be permanently threatened by castration, i.e. a threat on the wholeness of the self-image. The appearance of the difference

causes the loss of the penis to be imaginable.² Hence, only when the child recognises that there is a difference between the sexes, or better to say, between the different positions in his family, then a solution is forced upon the child. The solution is to abandon the libidinal introjection of the object and to internalise the imaginary figure to the ego, creating a kernel of the super-ego, which represents the law and the interdiction and which should be pleased. This unconscious choice, of whether to please the super-ego or not, that is, the position that is taken in front of the law and inside society, is being manifested through secondary identifications.

Freud is describing secondary identification as a partial identification with a single trait, borrowed from the person with whom we are identifying: "It must also strike us that in both cases the identification is a partial and extremely limited one and only borrows a single trait [*einzigem Zug*] from the person who is its object." (2001 [1921]: 106)

Freud gives two examples: the little girl, who imitates her mother's cough; and Dora,³ who imitates her father's cough (ibid: 105). This trait is "borrowed" (but in no way consciously) from another person, in order to regulate the relations with this person, i.e. it represents the acceptance of difference, and eventually, of the law. This is since every regulation of a relation with another person is based on the recognition that there is a difference between the subject and that other person: were we the same, one would not have to regulate anything.

As can be seen, the single, unary trait has an affinity to the place the child is taking inside the family, and therefore

2 | "The observation which finally breaks down his unbelief is the sight of the female genitals [...]. With this, the loss of his own penis becomes imaginable." (Freud 2001 [1924]: 175-6)

3 | Dora (whose true name was Ida Bauer [1882-1945]) was one of his famous patients, whose case study was published at *Fragment of an Analysis of a Case of Hysteria* (Freud 2001 [1905]).

inside society. The little girl wants to replace her mother and Dora is placing herself in a position in front of or in lieu of her father. The identification with this trait is a regression of the lost object, turning into identification; hence, it is always with respect to the first identification and its loss that the secondary identification happens.

Let us now turn to Lacan's earlier views on this subject. Lacan starts to deal with the subject of identification with his famous paper "The mirror stage" (2006 [1936]), where the formation of the subject is based on identification with the image. As the baby, who does not completely control his limbs, sees his unified image at the mirror, he identifies with this image, in order to overcome his lack of control. But this identification causes alienation, as the baby has to turn to an object, which is located outside of him. The subject is caught "in the lure of spatial identification" (ibid: 78), constituting the subject as a split one, alienated from itself. The effect of being caught in that lure is the ego, as an effect of the imaginary identification with the totality of the body, with the image. It is a rigid mould, which looks for the similar when searching for a contact with other objects and subjects. But this mould does not include in itself the unconscious, the place of repression, where something does not respond to the rigidity of this mould.

As the teaching of Lacan advances, an emphasis is given to what maintains the integrity and wholeness of the image: language, law and the gaze of the other. Indeed, the one who is looking at me from the mirror is not only the complete image but also my image as the other sees me. The encounter with this image at the field of the other gives rise to a demand for recognition as a unified, rather than split, human being. This recognition carries a promise for a belonging to the species (i.e. to the family, to society), but it must be supported by a symbolic order, an order of social connections through

law and language; and this support may be embodied in an approving look or a gesture of the holding person.

The symbolic order is an order of law and language: the world of rules, interdictions and taboos, what may and may not be said, an order the child encounters when entering society. As far as the subject is concerned, the symbolic is not prior to the subject, but it emerges the moment the subject is taking a position in front of it, the moment the subject realises that the image does not represent all of it. The symbolic order is coming from the outside and is being forced on the subject. This is a compulsion that the subject cannot resist to it. The formation of the subject must be forged via the “symbolic matrix” (ibid: 76), i.e. via the rules and the language of the Other (which is not another person, who can be interpreted as an imaginary other, but a complete otherness, being totally indifferent to the subject): it is hence that the acceptance of the image in the mirror necessitates regularity dictated from a sheer exteriority.

Lacan is relating the identification with the image to Freud’s primary identification and the identification with a symbolic element, i.e. the signifier, with the secondary identifications, which emerge during the dissolution of the Oedipus complex. But one has to note that it is the presence of the look of the Other on which the structure of the identification with the image is dependent. It is this look that is not registered in the image but is necessary for it, for the relation between the subject and its image. The look of the parent allegedly gives birth not only to the imaginary identification but also, in parallel, to the child as a symbolic subject. The parent stands in the place of the Other; she or he does not stand in the place of the other, as confirming the demands of the imaginary, ideal I, but in the place which interferes with the imaginary relations. The confirming look of the parent is at the same time the look that cannot be deciphered – leaving a doubt

whether the image was indeed seen or rather the recognition did not occur.

While Lacan has reshaped the status of Freud's two types of identification, two terms: the *unary trait* and the *object* are missing in his description of identification. Moreover, two questions remain without an answer: what enables the symbolic identification and what realises the presence of the element of difference in the subject's life? It is in Seminar IX where these terms and questions are treated.

IDENTIFICATION: SEMINAR IX

Whereas in the earlier stages of his teaching, a considerable place was given to imaginary identification, in Seminar IX Lacan leaves aside almost completely the description of identification in terms of the imaginary register; hence identification is regarded mainly as symbolic. In order that the baby's place in the symbolic order will be fixed, be that either in the family cell or as being recognised by language and law, there is a need for another process to occur, which is the identification with the signifier, being based on the second type of identification described by Freud: the identification with an unary trait, a trait which belongs to the one with whom we are identifying with.

Lacan describes the symbolic order using the terms of de Saussure, where the differences between the signifiers create the signified; thus the signifiers have a logical priority over the signified, and the signifier by itself never carries a whole and complete meaning of the signified. One should note that language here, as the system of signifiers, is not composed only from words, but it is a differential collection of elements, where the value of every element is defined via its relations with the other elements, i.e. via its difference. Thus identification with the signifier can be identification with a cough, a stomach pain or a movement of a hand – all of these are elements that get

their significance retroactively and enable a positioning in the symbolic system.

In Seminar IX Lacan gives this type of identification a more theoretical structure. Indeed, symbolic identification enables entrance in the symbolic order by supporting the identification with the image, support which is necessary to cover the split and ramified being, a split initiated by the traumatic encounter with language and law, which the image was unable to cover. Language is located in the Other, and thus symbolic identification is identification with what is subtracted from our being and is located there. The fact that under the symbolic identification the subject identifies itself as such, and as result emerges not only as a by-product of the treasure of signifiers but also as one who has place in the family and under the law, hides the split created by these signifiers. Hence what is the role of the unary trait in symbolic identification?

While Freud is claiming that the trait is a mark borrowed from another person, resulting in identification with him, in Lacan's writings, the unary trait receives a more fundamental place, being now what enables identification with the signifier. How does this take place?

The discussion of the unary trait in Lacan's Seminar IX starts by examining Descartes' explanation for the inauguration of the subject. The thought "I think therefore I am" is an imaginary one, it is self-validating as it presents us as transparent to ourselves. But the unconscious, as the place that evades the saying "I think", proves that this thought is delusional: we cannot turn to ourselves as the grounding point, saying "I exist", claiming that everything rests on our consciousness. But what saves Descartes from vanishing completely in the imaginary is his turn to God – or more specifically, to a guarantor of the truth: this is a turn from

the imaginary “I think” towards the symbolic order.⁴ This entrance is supported by the unary trait – it is what “we find at the limit of the Cartesian experience” (Lacan 1961-62: 22.11.61).⁵

The trait may be called the guarantor of the signifier. It is, according to Lacan, what all the signifiers have in common; it supports them. This trait is the support of identification, what is sufficient for a minimal signification. Since the signifier is defined according to its difference from the other signifiers and the unary trait is what is common to all of them, the trait is the support of the difference. In order to explain this support, Lacan now turns to an inquiry of the formula $A=A$. He dismisses the possibility that it is tautology or an axiom; hence there is an element that does not function as expected in this formula. Along these lines, Lacan claims that “the extended use of the signifier in Mathematics” (ibid: 29.11.61) may indicate to us what does not function in the formula $A=A$, when we advance in the field of identification.⁶

Giving as an example the saying “my grandfather is my grandfather”, Lacan is proposing that the person who is written in the books of the ministry of interior as the father of the father of Lacan is in fact the same petit bourgeois, horrible person that belonged to the family by the power of kinship and not of bureaucracy. Thus, exactly in the interval

4 | Lacan has described this turn differently in other essays and lectures. For example, one can find in his lecture “Science and Truth” (Lacan 2006 [1966]) a description of this turn as a vain attempt to suture knowledge and truth together; however we will follow what is described in seminar IX.

5 | We shall return to the concept of the limit later.

6 | “[...] l’analyse linguistique est corrélative à l’avènement d’un autre âge, marque de corrélations techniques précises parmi lesquelles est l’avènement mathématique, je veux dire dans les mathématiques, d’un usage étendu du signifiant. Nous pouvons nous apercevoir que si c’est dans la mesure où le A est A doit être mis en question, que nous pouvons faire avancer le problème de l’identification.” (Lacan 1961-62: 29.11.61)

between the repetitions of what seems to be identical, the fecundity of the signifier is folded, and results from the impossibility of the self-identity of the signifier. What is not inscribed in the repetition of “my grandfather” is what necessitates the appearance of the copula, the “is”. Another example that Lacan gives is the inscription of a mark: | , done by a prehistoric hunter on a bone. This is an inscription meant to minimally denote an event that happened, i.e. the killing of the animal. Lacan indicates that “here we see arising something which [is] distinguished from what can be designated as qualitative difference [...] signifying difference” (ibid: 6.12.62). This is a difference referring to what cannot be signified in the repetition itself.

While on the plane of the image, the formula “A is A” is indeed a tautology, for the subject the status of this formula – not found on the plane of tautology or falsehood, as can be seen from the gap, the interval, designated by the “is” or by the interval between the inscriptions – already folds in it a missed encounter with the unsignifiable.

Going back to Freud’s original example of the unary trait (Dora’s cough) and to Lacan’s markings on the bone, we see that the unary trait is the reduction of the contingent circumstances of the event, which is symbolised by the trait, while it preserves the particularity of the event, its uniqueness. The engraving on the bone does not tell us anything with respect to which animal was killed or how; Dora’s repetitive cough does not refer to the causes of the illness of her father, and in fact any other trait could have been adopted – a stomach pain, for example.⁷ In this passage, occurring with the repetition of the trait, between the annulation of the contingency and the appearance of the trait as necessary, the entrance to the symbolic order is enabled and enforced. However, it is important to emphasise here that the subject is

7 | Cf. (Freud 2001 [1905]: 38) and footnote 8.

always-already in the symbolic order, and thus its positioning in a particular position (designated by the particularity of the trait) has always-already occurred. Thus, the question – why does *this* specific trait repeat itself? – is meaningless, as it is equivalent to the question – what is determining my position in the symbolic order?

The function of the engraved trait is not to reach unity, a unified subject, as may be implied from the Cartesian way of thinking. The trait neither affirms the unity of the subject nor a proper position in front of the law and the language. According to Descartes, the subject, who is able to think of a unifying unity, is therefore unique. Lacan rejects this view – it is because the trait enables and forces a unique position in the symbolic order, that the subject is able to perceive itself as unified and say, “I is I”. Hence, as we will see later, the Cartesian logic is the result of another process.

THE TORUS IN SEMINAR IX

As was already seen, the trait emerges from an act of negation: by effacing and erasing the contingent attributes of what is signified, uniqueness emerges and is retained. But the trait appears on the scene not only from erasing the contingency of an object, rather it looms from the object being something lost. Indeed, Freud already said that the trait rises as a substitute to a libidinal connection with the object (Freud 2001 [1921]: 105), and thus the trait affirms its negation: “when it [is] a matter of defining the genesis of the trait, what is more destroyed, more effaced than an object” (Lacan 1961-62: 10.1.62).

Here we need to digress and explain what an object is in psychoanalysis. When the baby needs something and demands satisfaction (for example, the baby screams, demanding food) – this demand is never satisfied immediately. This inadequacy

may stem from the simple fact, that the baby does not receive what he 'really' wants: the demand to food may contain the absolute demand for love or rather the demand to know what the other desires. This implies that the demand, which is never fulfilled immediately (and thus, never completely: for example – the nurturing parent may talk on the phone or work or may not be able to express her/his love), leaves a residue that subverts the demand itself. This is, one might say, the definition of desire: what is left from the absolute demand after satisfying the need. The partial satisfaction causes the demand to reappear again and again, leaving a reminder, which not only subverts but also delineates demand. The object, which is left as a reminder, is the object of desire.

In this sense, the object of desire is always subtracted: in order that its demand will be fulfilled, the subject must recognise its dependency with the Other, that is, to recognise a forced order of law and thus to recognise the only partial possibility of finding satisfaction. Thus it is certainly not an object of need – it guides the path of the different demands but always ensures that these demands will never be fulfilled. For example, the breast, as the object of the oral drive, is not mammary (ibid: 24.1.62). We shall see now precisely how the unary trait appears in relation to the negated object.

For Lacan, the unary trait appears as a result from the negation of the object. Indeed, the object as negated is equivalent to the object as a point of failure: the child does not know what the other desires, thus poses the question to the indulging parent: "on what do you indulge?" This is a question addressed to the parent, but it is an unanswerable one: even the parent does not know on what his indulgence is based; let alone how to communicate this to other persons. From this point of failure, the subject obtains the unary trait: "the point of lack of the Other [...] is also where the subject receives from this Other, as locus of the word, its major mark, that of the unary trait" (ibid: 13.6.62). The trait is a particular

form of solution for the subject – it is an answer for what is missing in the Other. But being particular also implies that it is arbitrary: Dora could have adopted any other trait from her father in order to position herself in relation to his desire and the familial system.⁸ This arbitrariness is just another aspect of the trait's contingency: there is no confidence that this trait is the proper solution for the lack of the Other, being a necessary condition for establishing the symbolic order. From that point of view, the subject is inaugurated from a mistake in counting, shown by the repetitive appearances of the unary trait. Indeed, there is never an indication how many times the unary trait has to be repeated⁹ till the other person, to whom this trait is directed, will notice it, not to mention, till it will be sufficient to be an answer for the question posed to the other person. It is only by way of the mistake that one may obtain the possibility to say "I is I", by misconstruing the unanswerable question directed towards the Other.

It is at this point that topology appears. In order to account for the miscount, one cannot use – as before – words to express it, as they bear the same potential for a mistake in the field of the signifier. Thus two topological forms offer

8 | Looking again at the Dora case, one can see an example of another trait which is being borrowed. While visiting her two cousins, Dora found out that while the younger cousin was recently engaged, the older one was suffering from abdominal pains. A day after Dora herself was suffering from the same abdominal pains, and Freud says that Dora is identifying with the older cousin, trying to explain it either by saying that she was jealous of the younger cousin or that she saw the reflection of her fate in the condition of the older one. However, the reason for the appearance of this unary trait – as a borrowed sign from the other – is again not clear: "But Dora's own gastric pains proclaimed the fact that she identified herself with her cousin, who, according to her, was a malingerer. Her grounds for this identification were either that she too envied the luckier girl her love, or that she saw her own story reflected in that of the elder sister, who had recently had a love-affair which had ended unhappily." (Freud 2001 [1905]: 38)

9 | Cf. also the discussion after equation (1).

themselves in the field of psychoanalysis to account for the relations between the subject and the Other: the sphere and the torus.¹⁰

The sphere is a model that implies that the subject is the one who is shaping its world and that nothing can avoid the subject's attention, arising from the implied clear distinction between the inner psyche and the outer world. Since the object is founded on an uncountable and yet unavoidable mistake, it is easy to understand why Lacan rejects the sphere as what represents the mental life of the subject. Psychoanalysis firmly objects to this conception insofar as the Other determines the unconscious and the desire of the subject, at a point external to the subject. Already in the paper "the mirror stage" one can see Lacan's formulation regarding this: the baby sees his image at the field of the Other, he is inaugurated in the imaginary order from a field which is not under his control; and of course, the unary trait itself is adopted from the Other.

Instead of the sphere Lacan suggests another surface, embedded in a three-dimensional space, to show the uncounted being that always escapes the appearances of the returning signifier. What is suggested is the Torus, as what presents fundamental structural characters of the subject. Therefore, what is a torus?

A torus, simply speaking, is a hollowed "pretzel" (see Fig. 1).

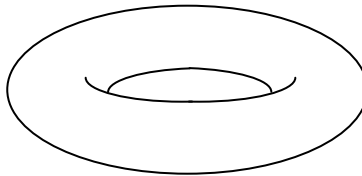


Fig. 1: A torus.

10 | The cross-cap appears also in later lessons of the seminar.

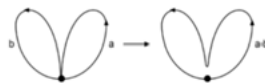
It can be constructed from an elastic rectangle by identifying both pairs of opposite edges together with no twists (see Fig. 2), or alternatively, it may be considered as surface of revolution generated by revolving a circle in three-dimensional space about an axis coplanar with the circle and not touching it.



Fig. 2: Identification of the edges in order to create a torus.

Lacan would like to use the torus not just due to the arguments, which were presented above, being another shape fundamentally different from the sphere. An important set that is related to any topological form is the set of loops drawn on this form.¹¹ Contrary to the torus, on a sphere every loop is reducible, shrinkable to a point (see Fig. 3, in mathematical terms, the sphere is *simply connected*):

11 | This set is called the *fundamental group*. A group in mathematics is a set G endowed with an action $*$ (hence usually denoted as a pair $(G, *)$), such that this action satisfy four requirements: closure (for every $x, y \in G$, $x*y \in G$), associativity (for every $x, y, z \in G$, $(x*y)*z = x*(y*z)$), the existence of an identity element (there exists an element $e \in G$: $\forall x \in G, e*x = x*e = x$) and the existence of an inverse element (for every $x \in G$ there exists an element $y \in G$ such that $x*y = y*x = e$). An obvious example for a group would be the set \mathbb{Z} of integer numbers together with the action of addition. However, the set \mathbb{Z} with the action of multiplication or with subtraction would not be a group (in the first case, due to the inexistence of an inverse element to every element (indeed, the inverse to 2 is $\frac{1}{2}$, but $\frac{1}{2}$ is not an integer, i.e. does not belong to \mathbb{Z}); in the second case, due to the lack of associativity: $(2-3)-5 \neq 2-(3-5)$). In our case, the set called the *fundamental group* (related to a surface) is the set of loops on given surface (a plane, a sphere, a torus etc.) starting from a specific point, and the action is concatenation of loops, e.g.:



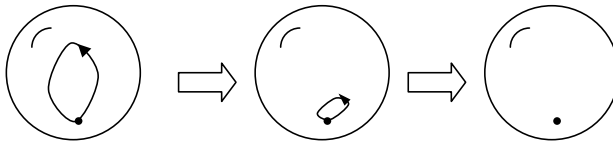


Fig. 3: The shrinking of a loop to a point on the sphere.

For Lacan, a loop demonstrates an event occurring on the surface of the subject. Considering a loop, drawn either on a plane or on a sphere, it defines an interior and exterior region: there is a well-defined region that is found outside this circle and a well-defined region found inside the circle. What does that mean with respect to the subject?

The fact that every loop on a sphere is shrinkable to a point manifests the conception of the subject as a unified subject: “the totality of inclusion which defines a circle can be reduced to vanishing unity of any point, of a world [where...] one believes that one can have the all in the hollow of one’s hand”, emphasising the tight relation between this reduction and tautology (Lacan 1961–62: 7.3.62).¹²

Indeed, if the surfaces mentioned above (sphere, plane) show us essential characteristics of the subject and its relations with the Other, then assuming that every loop is shrinkable illustrates, in line with Lacan, that every psychical event that intrigues psychoanalysis (e.g. symptoms, dreams, slips of

12 | “[...] la totalité de l’inclusion que définit un cercle puisse se réduire à l’unité évanouissant d’un point quelconque autour duquel il se ramasse, d’un monde dont l’esthétique est telle que, tout pouvant se replier sur tout, on croit toujours qu’on peut avoir le tout dans le creux de la main ; autrement dit que quoi que ce soit qu’on y dessine, on est en mesure d’y produire cette sorte de collapse qui, quand il s’agira de signifiance, s’appellera la tautologie.” (emphasis added) Lacan describes here a collapse towards a simple tautology that the shrinkable loops enable – indeed, if every symptom or dream is shrinkable to an explanation based on an undivided point, which has no parts, then there is no difference that may appear between the repetitions of the symptom: hence a pure tautology lies as the base of this reduction.

tongue) can be shrunk to – i.e. based on – explanations which are dependent only on the conscious subject and the “hollow of [his] hand”, i.e. based within the interior of the loop. In order to avoid that, Lacan looks to the torus where there are loops that cannot be reduced to a point. Moreover, these loops do not necessarily define interior and exterior regions.

On the torus there are two fundamental loops, which are not shrinkable to a point.¹³ The first Lacan names the “full circle” (see Fig. 4), which represents for him the loop of demand:

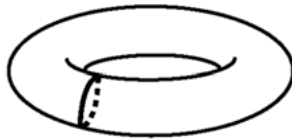


Fig. 4: The Full loop/circle: the loop of demand.

and the second is the “empty circle” (see Fig 5),

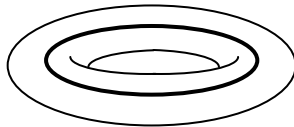


Fig. 5: The Empty loop/circle: the loop of desire.

representing the loop of desire. Via the torus Lacan demonstrates the position of the object of desire in the life of the subject. When we look at the loop representing recurrent demand, it appears as this loop in Fig. 6 when it finally closes¹⁴

¹³ | These loops are called fundamental in the sense that every other loop, which is not shrinkable, is a concatenation of (maybe several copies) of these two loops.

¹⁴ | “The bobbing movement of the repetition of demand closes somewhere even virtually, defining another loop which is completed by this very

is composed only from adding (i.e. concatenating of) loops representing a demand.

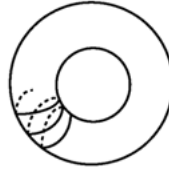


Fig. 6: The recurrent demands presented on the torus.

However, when unfolding the torus into a rectangle (which is the reverse process to the one presented in Fig. 2), we see that one must take into account the empty loop at the “base” of the loop of demands:

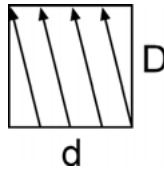


Fig. 7: The unfolded loop (of Fig. 6), presented on the model of the torus as a rectangle whose edges are identified. **D** represents the loop of demand, **d** the loop of desire.

The loop in Fig. 6, viewed only as a sum of $D+D+D+\dots+D$ is in fact the sum $D+D+D+\dots+D+d$ (as can be seen in Fig. 7), where the summand d , the desire, is being revealed a posteriori through the demands. It is a missed loop, which has no place between the different demands but has to appear through them.

Let us note that the example of Dora's cough is in this sense representative, since Freud does not succeed in his

repetition and which sketches out what? The object of desire.” (Lacan 1961-62: 9.5.62)

essay “Fragment of an Analysis of a Case of Hysteria” to give a complete explanation to the function of Dora’s cough.¹⁵ Dora is imitating her father’s cough, but it is not clear, during all of Dora’s psychoanalytic treatment, whether she desires her father’s love, after he has begun an affair with the wife of his friend (Herr K), or that Dora desires to seize the place of the mistress herself, or that she feels sorry for her father and thus the illness was copied out of mercy (in order to take her mother’s place), or that she wants to be in a relationship with the mistress instead of her father. The missed, inexpressible “goal” of the trait is represented mathematically by the commutativity of addition:¹⁶

$$\begin{aligned} (1) \quad D+D+D+\dots+D+d &= D+D+D+\dots+D+d+D = D+D+D+\dots+D+d+D+D \\ &= \dots = d+D+D+D+\dots+D. \end{aligned}$$

15 | “It [the coughing] was brought to fixation by what was probably its first psychical coating—her sympathetic imitation of her father—and by her subsequent self-reproaches on account of her ‘catarrh’. The same group of symptoms, moreover, showed itself capable of representing her relations with Herr K.; it could express her regret at his absence and her wish to make him a better wife. After a part of her libido had once more turned towards her father, the symptom obtained what was perhaps its last meaning; it came to represent sexual intercourse with her father by means of Dora’s identifying herself with Frau K. I can guarantee that this series is by no means complete.” (Freud 2001 [1905]: 83)

16 | Commutativity with respect to the group of loops means that for every two loops a, b , we have that $a \circ b = b \circ a$, where \circ is the operation of concatenation of loops. The signifiers of the demand operate exactly because of this commutativity. An “imperceptible trace”, being here the non-locatable loop of desire, which is “more inaccessible to our eyes” (Lacan 1961-62: 13.12.61) emerges through them: “These [...] signifiers [...] operate properly in virtue of their [...] commutativity, of the function of permutation taken as such” (ibid). Note that these series of equalities is correct due to the fact that the group of all loops on the torus (i.e. the fundamental group) is isomorphic to $\mathbb{Z} \times \mathbb{Z}$, hence abelian (or commutative). This is not always the case; indeed, the fundamental group of the Klein bottle is $\langle a, b : b \circ a = a \circ b^{-1} \rangle$ which is not commutative.

These series of equalities show us *de facto* that there is no fixed, known in advanced place for the loop of desire. Every placement of the summand d in that specific place would embody a mistake, as other sums might represent the same missed encounter.¹⁷ This is the mistake in the counting: though there is an expression formulating the relations between demand and desire, it is not to be found on any plane of any of the significations presented in equation (1).¹⁸

The missed loop, d , enables us to see what is not counted through the different demands, even though it delineates their route: “This circuit which is missing in the count is precisely what the subject includes in the necessities [...] that subjectivity can only grasp by the detour of the Other” (Lacan 1961-62: 7.3.62). This detour of the Other comes in the form of a settlement of the relations between desire and the Other. By giving a form of solution to the question: “what do you want from me?” – but not a solution as such – an attempt is made to decipher the parent’s look. Lacan puts the object of desire in the middle of the torus (see Fig. 8), in a point exterior to the surface of the torus, which is unreachable.¹⁹

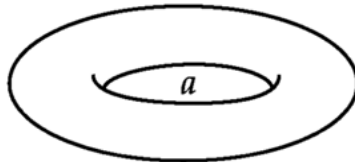


Fig. 8: Object a situated in the hole of the torus.

17 | One should note also that the three points “...” in the sum appearing in equation (1) embody the fact that there is no fixed amount of the how many times the unary trait should be repeated until it would fulfil its function.

18 | Note that Chiesa (2006: 86-89) explains the subject as an error in counting by referring to set theory and to the effects that a second counting has on the first one as a repression of the “organization of the void” (ibid: 91).

19 | This is why Granon-Lafont (1985: 52-53) indicates that object a is beyond the demand.

This is an object which cannot be placed, positioned, about which one can not say: “this is it!”; but one may also not declare that this object does not have any position in the subject’s life (ibid: 6.6.62). The positioning of the object in this unreachable point arises from the object of desire being an effect of the impossibility of the Other to supply a complete answer to the subject’s demand. As we have seen, what the parent does eventually supply – the trait – is always arbitrary and contingent. The desire is hence always lacking, as it is a desire to an unreachable, unanswerable object: “desire must include in itself the void, this internal hole specified in this relationship to the original law” (ibid: 13.6.62). The “void” refers here to the object of desire, situated in the internal hole of the torus. This placement is only revealed *de facto*, through the effects of the return of the signifier in our lives: “this irreducible draught-hole [...] is properly where there belongs, in the effects of the signifying function, *a*, the object as such [...] In no case could there be anything here but the contour of the object” (ibid: 23.6.62).

Thus, the repeating trait delineates the contours of the object. But it does not only delineate the contours of the object, but rather the contours of the torus itself, i.e. the structure. Here one may see that the relations that desire has with respect to demand are, following Granon-Lafont (1985: 52-53), the “*au-dela*” and “*en deça*”: being “beyond”, that is, unreachable, is in fact the structure, what is underlying, hence “below”. Granon-Lafont (ibid: 54-55, 60) describes this process as a *retournement* – turning a torus from the inside-out, like a glove, through a cut done on the surface of the torus. This causes the loop of demand to turn into the loop of desire and vice versa, and shows how the failure of the Other

to answer the question regarding his own desire constitutes the subject's repetitive demands.²⁰

If the torus shows us the relations between the subject and the Other, then these relations are not given beforehand. The torus itself is being established retroactively only after the minimal repetition of the loop, being composed of at least two repetitions of the trait, so that the appearance of the loop of desire may appear there retrospectively, as was described earlier. Hence, in the first appearance of the trait, the class of the Other, what gives an alleged confirmation to the position of the subject in the symbolic order, does not yet exist for the subject.

Hence, the loop of desire and its object are one of Lacan's ways to resort to the torus in order to show something essential to the subject. The question that rises now is – what is the fundamental, basic form of this loop? We should ask this question, since while a loop on a plane or on a sphere (i.e. a circle drawn on a plane) was the ground for the inside vs. outside, binary logic, a different loop, on a different surface, may offer us a logic that operates differently. This logic must be first literalised via its fundamental form.

THE “REVERSED 8” ON THE TORUS: THE OTHER LOGIC

In the 9th lesson of Seminar IX Lacan is presenting Russell's paradox with respect to sets, being a paradox in naïve set theory. The naivety, or rather, the permissiveness, of this theory is shown by the fact that for every possible property that one may think of, there is a set whose elements have this

20 | Cf. also Granon-Lafont (1990: 161-183) for an explicit case study dealing with the emergence of the *retournement* with respect to a psychotic young girl.

property (and all the elements that have this property are in this set). Thus, a set of oranges contains all the oranges in the universe, whereas an apple is not a member of this set. Moreover, the set of oranges is not an orange and hence does not belong to the set of oranges, i.e. to itself. But there are sets, which do belong to themselves; for example, the set of all things, which are not an orange. Obviously, this set is not an orange and therefore is a member of itself.


As is well known, the relation of belongingness is being signified by \in (thus, $a \in b$ means that the element a belongs to the set B) and the relation of unbelongingness by \notin . Russell looks at the following set: $B := \{x : x \notin x\}$, being the set of all sets which are not members of themselves. For example, the set of oranges is a member of B . But now the following question arises: Does B belong to B , i.e. does $B \in B$? If $B \in B$ then by definition, B satisfies the property that defines B , hence $B \notin B$, which is a contradiction. But if $B \notin B$, then from the definition of B it stems that B satisfies the property that defines B , hence $B \in B$ - and again we reach a contradiction.

One of the solutions that were proposed in order to avoid this paradox²¹ is to prohibit a definition of a set by self-reference. Lacan says that there is no a-priori reason that can justify this prohibition, and with respect to the self-reference

21| Set theory had to be axiomatised to avoid the paradoxes such as Russell's paradox. The first axiomatisation was due to Zermelo (1908) formulating the basic set-theoretic principles underlying his proof of Cantor's Well-Ordering Principle, i.e. that every set can be well-ordered. This axiomatisation indeed avoided Russell's paradox and later developed by Skolem and Fraenkel, leading to the ZF-axiomatisation of set theory. The key to avoid Russell's paradox is the Axiom of Specification: this allows new sets to be built which can only be quantified over some set. Thus, for a given set A , the existence of the set $S = \{x \notin A : x \notin x\}$ is allowed (indeed, we would obtain that $S \notin S$ and hence $S \notin A$ but this does not lead to a contradiction); however, the existence of the set $\{x : x \notin x\}$ is not allowed. Cf. Tiles (2004) for the development of set theory.

he declares that: “It [Russell’s paradox] has the closest relationship [...] with the position of the analytic subject, in so far as he also [...] does not include himself” (Lacan 1961-62: 24.1.62).²²

When Lacan is dealing again with this paradox in the 17th lesson of Seminar IX, he shows that the impasse reached due to self-reference is necessary to the subject’s life. The relation of the signifier to itself, as a signifier which already re-appeared (for example in the saying “my grandfather is my grandfather”), is a relation that already includes a difference: the signifier that appears for the second time is not identical to the signifier that has appeared at the first time. In order that the signifier would be able to signify itself, to repeat itself, he has to be distanced from itself. For Lacan, the signifier is fecund and hence also the contradiction, appearing everywhere we turn in Russell’s paradox, has fecundity, as it deals with the nature of the signifier itself. The subject as desiring cannot signify itself, cannot turn to itself as desiring. The subject is being established from a unary trait, which rises from an object, a member, which is not a member of itself; this object has no place between the signified, libidinal objects. From that point of view, the object of desire is exactly what is being shown by the set $B = \{x : x \notin x\}$, as a construct of all the objects which cannot be included inside the known objects. The object of desire is being placed (or rather, invented) as a form of solution to the impasse that looms via the rising of the group B in the subject’s life.

The discussion of Russell’s paradox leads Lacan to attempt to formulate another logic, operating via the impossibility of desire to refer to itself and through the impossibility of the subject to recognise its own desire. Lacan proposes another fundamental form to the logic of the trait, the form of the .

22 | Note that the verb that Lacan is using here is *comprendre*, which is both to understand but also to include.

instead of the Eulerian circle. Lacan draws, as in Fig. 9, this form on the torus, instead on a plane²³:

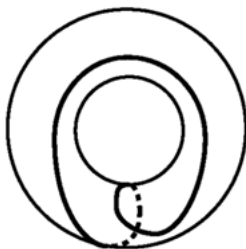





Fig. 9: the inverted 8 loop.

The fact that the loop  is being drawn on a torus is significant, as this prevents the loop from cutting itself. The lack of self-cutting shows that during the repetition of the same a difference is present and produced, preventing the expression $A=A$ from being meaningless. This is the basis of the logic present in the subject's life, being subject to language, but not being entirely reduced to its effects. We claim that three main features characterise this logic: The lack of tautology, the possibility of singularity and the affinity of Cartesian logic to the other logic.

(1) *The lack of Tautology*: Taking into account circles and loops drawn on a sphere, Lacan refers to them as Euler diagrams, describing sets and relations between them. Whereas such a circle would represent a logic, which ignores the dimension of the language in the life of the subject (Lacan 1961-62: 24.1.62), the loop  shows how the dimension of language, of the libidinal signifiers expressed in the various demands, exhibits itself.

The loop  as the fundamental loop in the subject's life is represented either by $2d+D$ or $2D+d$ as an element in

23 | Cf. also (Granon-Lafont 1990: 194; Skriabine 2004: 83).

the fundamental group (the group of loops) of the torus, generated by the loops D (demand) and d (desire); explicitly, there is always a disturbing element in the failed attempt to a self-reference process. Either that the element of desire cannot refer to itself, being disturbed by demand (the desiring subject must go through the demand to express its desires), i.e. by language; or that the different demands are always unsatisfied, being disturbed by the insufficiency of language and subverted by desire.

Moreover, exactly this discrepancy: the impossibility to decide between $2d+D$ and $2D+d$,²⁴ is presented with respect to the neurotic (ibid: 14.3.62): there is no overlapping between my demand and the desire of the other.

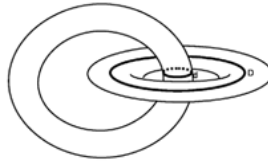


Fig. 10: The two tori: allegedly, the loop of demand (D) of the other is congruent with the subject's loop of desire (d).

Indeed, one might think, due to the relations between demand and desire, that my demand is being constituted by the other's desire: "An object requested by the other, the mother, a primordial Other, is found for the subject in the position of an object of desire." (Granon-Lafont 1985: 56) Thus, Dora's alleged desire (to be united with Frau K) is to

24 | This is shown via the fact that since the fundamental group of the torus (i.e. the set of all loops of the torus, cf. footnotes 11 and 16) is $\mathbb{Z} \times \mathbb{Z}$, the function $f: \mathbb{Z} \times \mathbb{Z} \rightarrow \mathbb{Z} \times \mathbb{Z}$ defined by $f(a,b) = f(b,a)$, is an *automorphism* of the group $\mathbb{Z} \times \mathbb{Z}$ (an automorphism of a group $(G,*)$ is a bijective function $f: G \rightarrow G$ such that $f(a*b) = f(a)*f(b)$, i.e. a bijective function that preserves the action).

be revealed retroactively from the demand of her father. One might suspect, as Darmon (1990: 207-208) shows, that there is a superposition between Dora's desire and her father's. This might be reflected via the loop $D+d$ drawn on one torus, being isomorphic to the loop $d+D$ on the other torus via the function $f(d)=D$, $f(D)=d$. Darmon suggests that both of them be could have been thought as "specularly symmetrical" (ibid) – i.e. one can transfer from one torus to another by means of reflection (see Fig. 11). However, this does not occur for the loop $2D+d$ – the suggested specular reflection (which is not equivalent to the function f above) does not reproduce the loop $2d+D$.

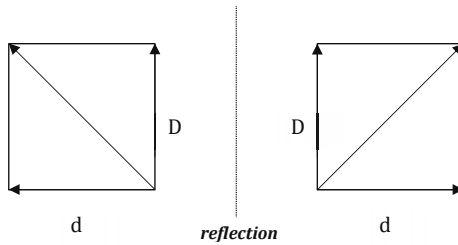


Fig. 11: the loop $D+d$ on one of the tori might be thought of as the loop $d+D$ on the second torus.

As was shown, only the Other constitutes the subject's demand (resp. desire), but this demand is by no means congruent to the desire (resp. demand) of the other. The repetitive demand is a form of solution to the lack of knowledge of the Other's desire.

The failure of this illusion (that the subject's demand and the other's desire are congruent) should be, therefore, included as a part of the logic and not excluded from it. One should note that Granon-Lafont describes the process of the illusionary mathematics between the subject's desire and the Other's demands as another instance of *retournement*. As was

described earlier, this process turns the loop of desire to the one of demand, hence containing within it a kernel of failure.

This failure is exactly what constitutes the impossibility of an empty tautology: since this failure rests on the fact that two distinguishable domains (denoted by 0 and 1, or inside and outside) cannot be defined via the loop \odot , it is impossible to state the formula $A=A$ as a tautology, since it is based on two values: true and false, belonging (to the collection of true, tautological statements) or not belonging. Hence, taking the loop \odot as the fundamental form contains already the element of undecidability,²⁵ of instability as a basis of the system. Tautology would be only possible once one ignores this instability – it is only then that the Cartesian logic would be revived. From that point of view, Lacan suggests that logic itself is not a strange or indifferent domain to the human subject, as being reflected in the prohibition of self-reference, being an attempt to alienate the subject from itself. It is hence Lacan that tries to show that it is not the human being that has to be modified in order to adjust itself to the (Cartesian) logic, but rather it is a question “what is logic” that should be posed including in its definition the psychoanalytic perception of the subject.

(2) *The possibility of Singularity*: As is already clear, the appearances of the unary trait are tightly linked with repetition. One may say that the basic unit of repetition is presented in Freud’s seminal paper “Beyond the Pleasure Principle” (2001 [1920]), in the Fort-Da game of his grandson. The child is playing with a wooden reel, in a game that at first sight recreates or processes the traumatic experience of the abandonment of the mother. While the child is throwing away the reel, he is calling “o-o-o-o”, interpreted by Freud as “fort”,

25 | Note that this is what Gödel showed in his first incompleteness theorem: that for every claim in a sufficiently strong system (e.g. arithmetic), this claim is either true, false or undecidable.

and when pulling it back, he is shouting “da”. The explanation that Freud gives at the beginning – that the child is trying to take control over an unpleasant situation – is unsatisfactory, since the repetition on this same scenario would not induce pleasure. However, as Freud indicates, it is repetition itself that produces pleasure, and not the reprocessing of the experience. There is an element of satisfaction, of enjoyment, that no element in this game can signify except the automatic repetition. It is repetition, which is necessary for the subject, but which does not necessarily obey the pleasure principle. Being seen in that way, the game forces an encounter with a difference between the Fort and the Da: it enables an encounter with the two values, first of (-) (disappearance) and then (+) (appearance). This is for Freud the complete game – disappearance and return (ibid: 15). According to Freud, The retrospective recognition of the subject, that he is stumbling upon an element of difference, is the source of this enjoyment. It is a meeting with an object, which cannot be represented in reality – the element of difference. This repetition is beyond the pleasure principle, since there is no difference between pleasure and displeasure. The Fort-Da game shows that the difference, that resides in the alternation, a difference that cannot be represented in reality, is what the subject encounters. However, also in the repetition of the unary trait the element of difference is encountered. Thus what is the difference between these two differences?

When Lacan discusses the game of the Fort-Da, this encounter is being elucidated. As was mentioned before, Lacan claims that the subject is being constituted from the entrance to system of signifiers. But in this game this system does not play any role. The Other is not present here – there is neither a demand from the mother to return nor a trial to take control of the trauma caused by her leaving, but rather there is an unplanned, accidental encounter, with another object. If there were a repetition of the same, which has the

mark of a signifier, then it would be a repetition on something that has a possible represented value in a system. The Fort-Da game is being aimed retroactively towards an encounter, which cannot be represented: “its alternation [...] being the *fort* of a *da* and the *da* of a *fort* [...] is aimed at what, essentially, is not here, *qua* represented” (Lacan 1998: 63).



In this game there is no difference between the *Here* and the *There*, between pleasure and displeasure, but rather the alternation itself produces another encounter. Obviously, this is not, as has already been said, an encounter with the object of demand (i.e. with a signifier), but it is also not an encounter with the object of desire, since, as was seen above with respect to the loop of desire, desire is being delineated and hence mediated via the appearances of the signifier. The Other is not present in any form in this encounter; here there are only an indefinable object and a subject, which is not entirely a subject, encountering each other. And in this encounter the subject identifies itself as what is being driven by what is impossible to identify, neither with a demand nor with a desire expressed via the signifier. Therefore, one may not simply claim that the subject is an effect of signifiers,²⁶ but rather it is a conjunction between two poles:

Our effort this year, if it has a meaning, is precisely to show how the function of the subject is articulated elsewhere than in one or other of these poles, that it operates between the two. [...] It is enough to know that the function of the subject is in the between-the-two, between the idealizing effects of the signifying function and this vital immanence. (Lacan 1961-62: 13.12.61)

26 | As may be understood from Lacan's famous definition: “a signifier is what represents the subject to another signifier”, expressed for the first time a few months before Seminar IX had started (Roudinesco 1994: 268).

Hence, this “vital immanence” is an identification, which is named, following Lacan, a real identification (as coming from the register of the real), in contrast to the identification that was based on the unary trait, i.e. on the signifier in the symbolic order. While during the repetition of the same, on the $A=A$, there is always a difference that is present, an unfolding difference that prevents the desiring subject from identifying itself as such, it follows that within the passage from $(-A)$ to (A) a retroactive possibility for such a pure identification does appear. This is already implied in Seminar IX: “the signifier [is...] always radically different to itself – A is not identical to A – there is no way of marking the same appearance except on the side of the real” (ibid: 30.5.62).

The real identity needs to be differentiated from the imaginary one, since the imaginary identity strives to reach a tautological identity of $I=I$, with which the subject can turn to itself as a constituting point. But it also needs to be differentiated from the symbolic one, signifying identity, as language and signifiers do not participate in this identity. However, it would not be correct to say that this real identity does not have a meaning, but rather that this meaning is not able to be signified in the terms of the symbolic order. It is thus beyond the signifiers: it does not appear at the background, being an exception, or through them, but rather it reveals itself by cleaning the area from them. One might say that it is an identity, which is always retroactively posited as a limit: “the inverted eight [is...] a circle which at the limit redoubles itself and grasps itself again [...] which allows this limit to be symbolized [...] as it identifies itself to itself” (ibid: 11.4.62).

The limit of the : a form that shows the difference present in repetition of the same signifier, is the loop . Within this form there is a self-intersection, which may only be present in the transition between the negation of A and A .

This is a limit, since while the symbolic identification has confirmed and stabled the subject's position with respect to

the Other, the real identification confronts the subject with the inherent lack of this position and its undecidability. It is in this identification that the subject identifies itself as un-recognised, un-identified, where both the 'stabilised' subject and the signifier fade²⁷ whereas the symbolic identification offers recognition in the form of the unary trait, which acts as a solution to the question "what do you want?".


It is thus no wonder that the singular loop  – singular since it cuts itself – can only be seen as a limit, as seen in Fig. 12:




Fig. 12: the passage from the inverted 8 loop to the inverted-singular 8 loop.

The singularity of the self-intersection emerges when the subject encounters the possibility of something that cannot be explicitly written, but which may only be shown as the possibility of an un-identified being; while the symbolic identification, supported by the Other, is being cleared. At the limit of this clearance the subject meets the other pole – the vital immanence.²⁸ The other logic should include this immanence, the possibility of the impossible, of the

27 | Cf. also (Skriabine 2004: 84): "A signifier which would try to get hold of itself in redoubling itself in the figure of the interior eight raced on the torus, can only subsist there in what becomes a field of self-difference, and only grasps itself as a limit, in its fading."

28 | This vitality may be called sexuality, *jouissance*, the Real order etc... i.e. it is exactly what in Lacanian theory takes always other forms and hence does not correspond to any fixed word or symbolisation. A discussion on the nature of this vital immanence would take us beyond the scope of our discussion.

unrecognisable, of what is “more inaccessible to our eyes [than ...] the footprint of the gazelle on the rock” (Lacan 1961-62: 13.12.61). The possibility of clearing any effect is based on the Other.

(3) *The affinity to the Cartesian Logic*: Just as the logic of the  has an affinity to the real identification (as described in the former passage) it has also an affinity to the Cartesian logic. This is clear as Lacan claims already at the beginning of Seminar IX that the unary trait is to be found at the limit of the Cartesian experience, being the guarantor of this experience. However, it is not the same limit that was mentioned in the former section regarding the identification with the unary trait. The real identification was a limit for the symbolic one since it showed the arbitrariness of this symbolic identification: it brought the instability of the signifying system to its limit and into the signifying system itself. However the Cartesian logic is a limit of the symbolic in the sense that the Cartesian logic is enabled only via forgetting which role the unary trait plays. What is ignored and hopefully erased is the uniqueness implied by this trait. What is necessary is the amnesia of the guarantor of truth. With this forgetting the imaginary ego is created: indeed, the erasure of uniqueness enables the constitution of the unified subject as a unique one, i.e. uniqueness is based on unity (and not the other way around, as Lacan presents with respect to the subject) and the imaginary ego emerges as the unique agency of and in the subject. It is this forgetting that enables the transition from the $A=A$ as a statement in the subject's life that cannot signify tautology towards the same statement as what signifies nothing but tautology whose foundation is the subject itself. Hand in hand with this Cartesian logic rises the conception of negation as what is enabling a contrast between inside and outside, between 0 and 1 – as what separates the subject from the outer world. Indeed, this is a logic which is

not compatible with the logic of the subject but rather with the logic of the ego, but only with it may the subject function.

One can see this forgetfulness in the history of mathematics: while Leibniz already had the idea of codifying mathematical statements by prime numbers, the sign as negation was codified as minus;²⁹ only a few hundreds years later, Gödel codified it as an action among others (such as \wedge (or) or \supset (if... then)). It is this conception of negation as an action that does not necessarily define outside and inside domains or that is not based on the logic of the sphere, that psychoanalysis follows and that the Cartesian logic aspires to delete.

LACAN/MATHEMATICS

What is the meaning of Lacan's use of mathematics, taking into account that topology first appeared in his writings in the domain that is so fundamental to it, the one of identity? Can one apply here the word "use" or does the appearance of mathematics rather indicate a different occurrence? Surprisingly, Lacan does not mention why mathematics is significantly integrated even if it is the first seminar where topology is substantially discussed in his teaching. In one of the few places where Lacan does refer to this subject, he says:


'By articulating things in this manner', I was asked, 'do you intend to make manifest something other than a pure and simple symbolization replaceable by anything else whatsoever or something which belongs more radically to the very essence of the subject?' 'Yes,' I said 'It is in this sense that you

29 | Cf. e.g. (Leibniz 1903: 69), though eventually Leibniz abandons this path as he encounters major complications.

should understand what I articulated before you [...]'. (Lacan 1961-62: 7.3.62).

Topology is not just a structure or a symbolisation, but rather the way in which the mental being of the subject shows itself. These are manifestations, which belong to the crux of the subject, and are not an example, which may be replaced by any other example. Mathematics shows that there is a necessity in its manifestations; there is no relation of demonstration but rather of showing (i.e. *montrer*) of what cannot be shown in any other way. Lacan opposes the attitude that mathematics is a technical procedure or that it is a special use of man's talents: mathematics is not an extension of an organ, like an additional hand. Mathematics is essential for showing the essence of the subject. But one must remember, that topology here does not appear as an image. If we were to regard topology as an image we would have to re-assert the human being at the centre, as a being using images as a tool to clarify his claims.

Lacan claims that psychoanalysis encounters what the mathematicians were afraid of in the last centauries: "the great mathematicians who opened up this beyond of divine logic... were very frightened; [...] they encountered [...] the void of the Other, a [...] terrifying place because someone is necessary there" (ibid: 17.1.62).

Mathematics hence shows us the lack of the Other and the fact that with respect to this lack a solution is posited. For example, the relations with the Other cannot be shown via an approach that trusts God (like Descartes) or that bases itself on the self-founding man (as this approach sharply distinguishes exterior and interior); they might be shown via the torus and the  loop and its limit states. In the same way, in front of Russell's paradox a solution is posited, taken in front of the impasses that the founding conflicts of our lives have led us. In that sense, the unary trait, as this form of

solution, as what enables the identification with the signifier in front of the stalemate of the set that is defined by not belonging to itself, is the “aporia of thought” (ibid: 21.2.62). It is being adopted from what is unplaceable, as it rises from an object about which one is not able to say whether this object belongs or does not belong to the set, which it founds.

Mathematics here has power, it produces by showing and shows by producing; but it is neither a production of a tool that forces itself on a thing nor a plugin, extension that helps us allegedly exemplify the structures appearing in the subject's life. It produces the properness of the aporia of thought. It is here that mathematics shows us Lacan's three orders, as they loom through, beyond and below the logic of the \odot . The symbolic arises through the lack of tautology presented in the $A=A$; the real looms in the limit of the \odot , beyond the existence of the signifier, where it fades; and the imaginary lies below and beneath, as what carries an affinity with the Cartesian logic.³⁰

BIBLIOGRAPHY

- Chiesa, Lorenzo (2006): “Count-as-one, Forming-into-one, Unary Trait, S1.” In: *Cosmos and History: The Journal of Natural and Social Philosophy* 2, 1/2, pp. 68-93.
- Darmon, Marc (1990): *Essais sur la Topologie lacanienne*, Ussel: Editions de l'Association Freudienne.
- Freud, Sigmund (2001 [1905]): “Fragment of an Analysis of a Case of Hysteria.” In: id., *The Standard Edition of Complete Psychological Works of Sigmund Freud*, vol. VII, trans. James Strachey, London: Vintage Press, pp. 7-122.

30 | This paper stems partly from my MA-thesis, done under the guidance of Prof. Ruth Ronen. I would like to thank her warmly for her support.

- Freud, Sigmund (2001 [1920]): "Beyond the Pleasure Principle." In: id., *The Standard Edition of the Collected Works of Freud*, vol. XVIII, trans. James Strachey, London: Vintage Press, pp. 7-64.
- Freud, Sigmund (2001 [1921]): "Group Psychology and the Analysis of the Ego." In: id., *The Standard Edition of the Collected Works of Freud*, vol. XVIII, trans. James Strachey, London: Vintage Press, pp. 65-144.
- Freud, Sigmund (2001 [1924]): "The Dissolution of the Oedipus Complex." In: id., *The Standard Edition of the Collected Works of Freud*, vol. XIX, trans. James Strachey, London: Vintage Press, pp. 173-179.
- Granon-Lafont, Jeanne (1985): *La Topologie ordinaire de Jacques Lacan*, Paris: Point Hors Linge.
- Granon-Lafont, Jeanne (1990): *Topologie lacanienne et clinique analytique*, Paris: Point Hors Linge.
- Lacan, Jacques (1961-62): *Le Séminaire, livre IX, L'identification* (unpublished).
- Lacan, Jacques (1998 [1973]): *Seminar, Book XI, The Four Fundamental Concepts of Psychoanalysis*, trans. Alan Sheridan, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Lacan, Jacques (2006 [1936]): "The Mirror Stage as formative of the Function of the I as Revealed in Psychoanalytic Experience." In: id., *Écrits*, trans. Bruce Fink, New York: W.W. Norton & Co., pp. 75-81.
- Lacan, Jacques (2006 [1966]): "Science and Truth." In: id., *Écrits*, trans. Bruce Fink, New York: W.W. Norton & Co., pp. 726-745.
- Leibniz, Gottfried Wilhelm (1903): *Opuscles et fragments inédits*, ed. Louis Couturat, Paris: Alcan.
- Moncayo, Raul (2012): *The Emptiness of Oedipus: Identification and Non-identification in Lacanian Psychoanalysis*, Hove/New-York: Routledge.

- Pluth, Ed (2006): "Lacan's subversion of the subject." In: *Continental Philosophy Review* 39, pp. 293-312.
- Roudinesco, Elisabeth (1994): Jacques Lacan, trans. Barbara Bray, New York: Columbia University Press.
- Skriabine, Pierre (2004): "Clinic and Topology: The Flaw in the Universe." In: Ellie Ragland (ed.), *Lacan: Topologically Speaking*, New York: Other Press, pp. 73-97.
- Tiles, Mary (2004): *The Philosophy of Set Theory: An Historical Introduction to Cantor's Paradise*, Mineola/New York: Dover Publications.

The Unreadable Letter

A Topology of the Image-Knowledge

Renen Amir

INTRODUCTION

Images are sweeping our culture; they are pervasively present in our life, forming our world and our conception of it. Those far-reaching effects of images imply that neither the image's content nor its form account for its power. The image-ness of images transcends the division between form and content. When image-ness is reduced to one side of this division, the power of imaging appears to be unaccounted for. Let us try to explain, for example, the traumatic, yet breath-taking effect of the paradigmatic photograph of 9/11. If we explain it either in terms of shot angles, or in terms of the monstrous scene depicted – in each case the photograph's power dissolves. What this means is that powerful images demand a re-consideration of where their effectiveness emerges from, and the cause of their effectivity cannot be explained in terms of content or in terms of form.

This unique quality of images is demonstrated in psychoanalysis. Psychoanalysis shows how an Image can carry a specific sense for a subject. Such is the case of the 'Wolfman', when he is struck by the letter V which he sees inscribed as an image and which carries for him an abundance of sense (Freud 2001 [1914]). This sense, I hope to show, is different from symbolic *meaning*. It is not equivocal and is not limited

to the conceptual significance of the letter V, i.e. the fact that it signifies the number five, although, at the same time, it is not unrelated to that meaning. The sense of the letter V for the subject is also closely related to its visual qualities, i.e. its being depicted as two diagonal lines starting at a single point, but of course, it is not restricted to that meaning.

How can we explain what happens in the act of inscription? How can a visual image be as effective for the subject, effective to the extent that it can organise, for the subject who encounters it, his or her entire psychic structure? The image is striking because it conveys knowledge to the subject that would otherwise not be conveyed. This knowledge is inseparable from the way in which it is conveyed. Since this knowledge cannot be attributed to either content (what the V signifies) or form (visual qualities of the V), I will argue that it belongs to the *image-ness* of the image that emerges at the interstices between form and content, at the point of divide which is irreducible to any of the image's components. I wish to argue that the letter *carries sense for the subject as an image*. What this means is that it is in its being *qua image*, as an *image for a subject*, that the letter V carries knowledge which is not equivalent to its form or to what it signifies. The letter V appears, it has a visibility, and as such it is also an image. As an image, it has also a signifying dimension, but the signifier does not exhaust what the letter is. The Imaginary and the Symbolic are intertwined in the letter.

As the psychoanalyst Jean-Pierre Klotz has asserted, "The letter can be read, but what is read is never the whole letter" (2012: 200). This article will attempt to locate the unreadable dimension of the letter. I wish to isolate the dimension of the letter as the image aspect of the signifier in order to examine its distinct effectiveness, which lies in its image-ness.

Alongside its relation to the signifier, Jacques Lacan formulates the letter as an independent element, which differs from the signifier and that "posits a domain" (2007b:

117).¹ For the purpose of differentiating the letter from the signifier, Lacan places the letter as a liminal area between the Imaginary and the Symbolic. In order to do so he uses what I will suggest calling the *topology of the littoral*. The littoral acts as a frontier between sea and land and is constituted by the unstable line that the sea creates when it approaches the shore. Nevertheless, despite this instability, shore and sea are never confounded. I will argue that it is with this topology of the littoral that the problematic logic of imaging can be unfolded in preliminary terms.

This article will first formulate the letter as an aspect of the signifier, later, as a separate element, in an attempt to show image-ness as an irreducible and immanent aspect of the letter. I will show, using the topology of the littoral, that the letter, as an image that is also a signifier, but also not entirely symbolic, inscribes a knowledge which is unattainable in the symbolic order. Hence, a knowledge that I shall call *Image-knowledge*.

THE LETTER AS AN ASPECT OF THE SIGNIFIER

In this section I will examine closely the function of the signifying mechanism as it appears in Lacan's text in order to try and isolate the aspect of the letter within the signifier.

In his essay "*The Instance of the Letter in the Unconscious*" (2006a) Lacan defines the letter as designating "the material medium [support] that concrete discourse borrows from language" (ibid: 413). The letter here appears as a medium that supports the signifier. The letter gives the signifier its appearance, its visibility and its localisation, as I will show.

1 | This quote and all the following quotes from texts by Lacan that have not been published in English (*L'Étourdit*, Seminar V, Seminar XII and Seminar XVIII) are my own translations.

The letter is what a “concrete discourse borrows from language” (ibid), that is to say, although it originally comes from language (language here is taken as a structure), it is also located in a certain discourse, i.e. in the actualisation of language in a discursive practice.

Although appearing in its title, the letter does not serve as the central subject of the article and Lacan alternates his use of it with the signifier to which it often appears congruent. A careful distinction between two aspects of the signifier is required in order to indicate the letter as a dimension that exists in the operation of the signifier. These two aspects are the signifier that is the letter and signifying as such. This distinction reveals the letter as what can be called “the imaging aspect” of the signifier. Although it exists side by side in the signifier, this imaging aspect of the signifier is inherently and irreducibly different from that of signifying, which also operates differently.

When Lacan uses the linguistic algorithm introduced by Ferdinand de Saussure (2011), he presents the sign as a fraction, in which the signifier appears in the numerator and the signified in the denominator.² One might be mistaken in thinking, says Lacan, that what is exemplified by this algorithm is the correspondence that occurs between the signifiers and the signified. By contrast, the sign, the whole fraction, is taken as a single, discrete unit. However, according to Lacan, in this model, there is a clear distinction between the signifier and the signified. The fraction line, or the bar, does not represent a unification of the signifier and the signified, but rather on the contrary, it indicates their separation, which is shown by the fact that the bar is uncrossable. This strict distinction undermines the conception of indexical correlation between

2 | The model, as Saussure presents it, is upside down: the signified is in the numerator and the signifier is in the denominator. Lacan performs this reversal to indicate the priority of the signifier to the signified.

signifier and signified, since this distinction implies, that the only meaning that is accessible is the one that emerges from the relations between the signifiers, whereas the signified content is inaccessible. The following is given as a classical example of this algorithm: an image of a tree appears below the fraction bar and the word “tree” above it, appearing as its signifier. This illustration leads one to wrongly assume that there is a correspondence between the signifier and the signified, as every signifier in language is assumed to stand in for a corresponding object. Lacan reads this model anew, showing that this correspondence is not-existent, since the signifier only exists in relation to other signifiers: it obtains its value and its meaning only from them, and its place in the language is determined with respect to them. When taken separately, and without any connection to other signifiers, the signifier “tree” for example is meaningless.³ Once we hear the word “tree” or read it, it instantly brings up associations that locate it within the chain of signifiers that give the word its value for us. The model, showing signifier and signified as a single unit, is a misleading one, as it does not express the manner in which language works in our daily lives.

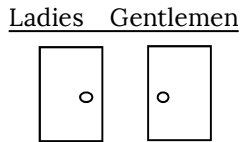


Fig. 1: Lacan's Model of signification.

In order to clarify the linguistic model, Lacan makes an alternative model that sheds light on how language functions.

3 | It should be noted that the letter aspect of the signifier, as will be demonstrated, operates differently, so that the word tree may, in fact, be meaningful when taken separately. As a signifier, though, the word tree itself lacks internal meaning.

In this model, instead of the image of the tree, two identical doors are shown, and instead of the signifier “tree”, two signifiers appear: the signifier “Ladies” above the first door, the signifier “Gentlemen” above the second (see Figure 1). In the alternative model the word signifies the doors in the same way the word “tree” signifies the image of the tree, but instead of the model which leads us to wrongly assume non-existent relations of correspondence, in the alternative model the relation between the signifier and the signified appears to be much more complex. Lacan describes the model as follows:

Here we see that, without greatly extending the scope of the signifier involved in the experiment- that is, by simply doubling the nominal type through the mere juxtaposition of two terms whose complementary meanings would seem to have to reinforce each other- surprise is produced by the precipitation of an unexpected meaning: the image of two twin doors that symbolize, with the private stall offered Western man for the satisfaction of his natural needs when away from home, the imperative he seems to share with the vast majority of primitive communities that subject his public life to the laws of urinary segregation.

The point is not merely to silence the nominalist debate with a low blow, but to show how the signifier in fact enters the signified-namely, in a form, which, since it is not immaterial, raises the question of its place in reality. For in having to move close to the little enamel plaques that bear it, the squinting gaze of a nearsighted person might be justified in wondering whether it is indeed here that we must see the signifier, whose signified would in this case be paid its last respects by the solemn procession in two lines from the upper nave. (2006a: 416-417)

These amusing passages reveal not only Lacan’s new conception of the signifier, which differs from the classical

linguistic conception, but also his conception of the letter as a dominant aspect of the signifying operation. The signifier does not correspond to the signified, as was explained before. However, the example above shows that the signifier invades the signified domain: The two doors are completely identical and are only differentiated by signification using two different signifiers, “Gentlemen” and “Ladies”. The two doors that would otherwise have been identical are now divided into two separate domains. This differentiation plays a crucial role for the subject who must now, when facing it, situate him or herself according to his or her sexual identity. What Lacan calls “urinary segregation” occurs since the signification created a real distinction, a distinction in the domain of the signified. This means that the signifier here does not represent an object external to language which exists independently, but rather gives the signified its value, determines its character: i.e. the signifier creates the signified, and not the other way around.

In contrast to the Saussurien model, in Lacan’s model the fraction bar receives a primordial status. Hence the question of priority collapses: it is no longer the question of what came first, the signified or the signifier, but instead, they appear as essentially distinct, each belonging to a different order entirely.

The signifier itself has a similar function to that of an algorithm. As in an algorithm, what the signifier inscribes is the mere difference itself. For example, we can see clearly that it is not “Ladies” and “Gentlemen” that is really inscribed on the bathroom doors, as what the doors signify is the difference between them. The signifier does not carry internal meaning, but— similar to an algorithm— the signifying mechanism is composed of a system of signs, one distinct from the other, which creates meaning only by the relations and combinations between these signs (cf. Nancy/Lacoue-Labarthe 1992).

The distinction between the doors or, in other words, the invasion of the signifier in the signified domain, is done through a presence of the signifier, which Lacan calls “not immaterial” (Lacan 2006a: 417). The signifier is inscribed; it appears, has visibility and only as such can act as a situating element, be segregative, distinct and differentiating for the subject that encounters it. The signifier appears here not only as a part of language, but as what has materiality or presence in reality, as what is inscribed on the doors.

The dimension of the signifier that is inscribed, that has visual presence, is called the “letter” here. Through this example we see how the inscription is what carries a decisive meaning, the signifying process has a branding quality, as that which leaves a distinct mark. The signifiers “Ladies” and “Gentlemen” do not conduct a relation of conversion with the doors signified by them, but mainly, whether appearing as words, images or letters (as sometimes happens in bathroom stalls), their inscription creates a distinction between the doors and situates the subject according to that distinction.

I would like to draw attention to another aspect: the example helps us acknowledge the fact that the signified is not the ‘doors’ – just like that in the previous model, although one may easily think so, the signified is not the image of the tree – but rather what Lacan formulates as “the laws of urinary segregation” (ibid). The signifier does not represent one meaning that is identical to it, but is empty of specific content or meaning and receives its meaning only with respect to other signifiers around it. The signified, which in the classical model could be mistaken for substituting one meaning, appears here as an existing element in reality or an object. In regard to the classical model, this is difficult to point out concretely. In the case of the example cited above, one might say, that what is signified is a collection of social orders and decrees. These lead to a consideration of gender distinctions alongside the acceptable social constructions that accompany

the distinction between the sexes, while enforcing a norm of discreet defecation. The letter, as the branding element of the signifier, operates *within* the signifier; it is what situates the subject in this example with respect to the law of segregation. The letter does not represent or substitute its signified, but instead changes its value, due to the letter's "not immaterial" presence. Using double negation Lacan points to the letter's strange materiality: even though it has a material dimension, which means that it appears and is locatable, it is simultaneously present in an immaterial manner. This immaterial dimension carries an abundance of meaning that runs much deeper than its materiality. It operates in the signified domain; the letter *makes* the signified what it is.

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I have shown how the letter, as what is inscribed in the signifier, gives the signifier its branding or situating power. In order to continue and differentiate the dimension of the letter from the work of the signifier, I will look into the two mechanisms of the signifying operation: metonymy and metaphor.

As indicated above, the signifier does not carry meaning independently. Hence the only possible meaning is the one that is created through the fabric of relations between signifiers, and, therefore, not by way of correlation. Two mechanisms are responsible for the creation of meaning: Signifying meaning is created only through metonymy or metaphor.

First, let us look at metonymy. Metonymy is a mechanism of language that moves along the chain of signifiers, i.e. in a horizontal manner: it is the replacement of a signifier with another signifier, based on the proximity of meaning between the exchanged signifiers. The common way in which meaning is created is metonymically structured, while this exchange of

signifiers occurs constantly. Meaning is created through the proximity of relations between signifiers, while the signified slides constantly under the signifiers that are divided from it by the fraction bar.

Secondly, let us examine metaphor. This constitutes another aspect of language, one that can be called vertical: when a certain attribute of a signifier is attached to another, fundamentally different, signifier, which then takes its place. The metaphor, Lacan claims, is not the effect created by the substitution of the two signifiers, equal in their actuality, but rather, it is one signifier that is taking the place of another one in the chain of signifiers while the metaphorical meaning moves back and forth between them. The absent signifier remains present in its absence due to its metonymical relation to the rest of the chain.

In contrast to metonymy, which exchanges one signifier with another that is proximate to it in the chain of signifiers, metaphor is a more significant exchange; it exchanges a signifier with another, totally unrelated signifier, and therefore it crosses the bar and operates in the domain of the signified. The metaphor, according to Lacan, “is situated at the precise point at which meaning is produced in nonmeaning” (2006a: 423). The nonmeaning of the metaphorical combination reveals what was subtracted from the chain, what is inaccessible– the signified. By the very act of crossing of the bar, and without any connection to the every-day meaning of words, a new meaning appears that was not present prior to this act.⁴

“The creative force, the generating force [...] of the metaphor”, Lacan claims, “is [...] essentially in a relationship of substitution” (1998: 31). Lacan even goes to state that “it is

4 | Cf. for example Lacan’s treatment of Victor Hugo’s metaphor in the poem “Boaz Asleep”: “His sheaf was neither miserly nor hateful” (Lacan, 2006a: 422).

in this possibility of substitution that the very generation [...] of the world, of meaning, can be conceived, that the whole history of tongue (language) [...] is constituted [...]” (ibid: 31-32). According to Lacan, the “minimum of signifying chains”, i.e., the most basic aspect of the operation of the signifying chain, “is the substitution of one signifier for another, at a certain place”. It is only on the basis of that principle operation, Lacan says, “that there is created not only the possibility of the development of the signifier, but also the possibility of the emergence of ever new meaning, going always in the direction of ratifying, of complicating and of deepening, of giving its sense of depth to what in the real, is only pure opacity” (ibid: 32). Namely, the basic element of the symbolic order in general is substitutability, while the Real is essentially one and devoid of substitution, and for that reason is also without meaning (but not without sense as we shall see).

Using Lacan’s model of the signifying mechanism I have shown how the signifier, which neither carries nor is directed towards meaning, is able to create meaning from its metonymical or metaphorical relations, relations that are based on substitution. The letter operates in a different manner when it contains *Sense-for-subject*.

To exemplify this let us return to the example of bathroom stalls mentioned earlier. Lacan discusses a childhood memory concerning a brother and a sister, sitting face to face in a train cart, looking through the window as the train approaches the station.

“‘Look’ says the brother, ‘we’re at Ladies!’ ‘Imbecile!’ replies his sister, ‘Don’t you see we’re at Gentlemen’”. (Lacan 2006a: 417) “It is impossible for them to reach an agreement”, Lacan says (ibid), and this argument would have taken place even “if GENTLEMEN and LADIES were written in a language with which the little boy and girl were unfamiliar” (ibid: 420).

One might be mistaken in thinking that meaning arises as long as the subject is better acquainted with the domain of

the signifier, that the better a subject speaks the language, the more fertile the signifier will be and will carry a wider variety of meanings. By contrast, as the example shows, the dimension of the letter in the signifier operates in a fundamentally different way. The dimension of the letter is the signifier's ability to be present as a distinctive, differentiating or branding element that already in its very presence, creates an effect in the subject encountering it. The operation of the letter has no relation to the signifying "richness" that the signifier, through its relations to other signifiers, is able or unable to carry. The signifiers, in this example, due to the dimension of the letter, having been inscribed, appear for the children as sites, which situate the children in relation to them. The letter is the presence of the difference. The difference between the two sites emerges from the inscription itself and would exist even if the written words were meaningless for the children – even if, for example, two different letters or two different signs were inscribed. We see that the operation of segregation, taking place as an effect of the letter, due to its appearance is not related to the *meaning* of the signifier, but to the letter. The letter is an additional dimension that exists in the signifier by virtue of its appearance *as an image*.

THE LETTER AS DISTINCT FROM THE SIGNIFIER

Along with what was just said concerning the letter as unrelated to signified meaning, i.e. meaning that exists in relation to a metonymical or metaphorical relation to other signifiers, we cannot say that the dimension of the letter is not meaningful; it has a decisive sense-for a subject. In order to understand how the appearance of the letter has sense but not signified meaning, I will compare two images, both of a

frontier and a sea. The first is a scheme from de Saussure's *Course in General Linguistics* (2011: 112):

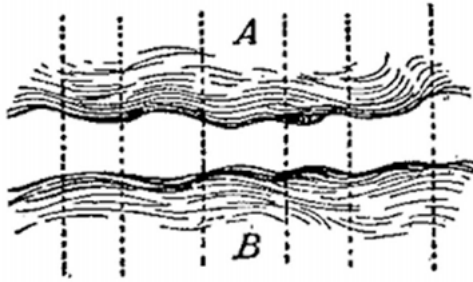


Fig. 2: de Saussure: *The Union of Thought and Sound.*

This scheme depicts the way in which a thought (non-distinct undivided “floating realm”) as a formless matter, in which nothing is fixed or rigid, (“the indefinite plane of jumbled ideas (A)”) is joined by “Phonetic substance” which is “neither more fixed nor more rigid than thought” (“equally vague plane of sounds (B)”) (ibid). Regarding the phonetic substance, de Saussure argues, “it is not a mould into which thought must of necessity fit but a plastic substance divided in turn into distinct parts to furnish the signifiers needed by thought” (ibid). The dashed lines symbolise the arbitrary division of the two planes into “thought –sound” units. “Neither are thoughts given material form nor are sounds transformed into mental entities”, de Saussure claims, “the somewhat mysterious fact is rather that ‘thought-sound’ implies division, and that language works out its units while taking shape between two shapeless masses” (ibid).

This structure brings the following image to de Saussure’s mind: “Visualize the air in contact with a sheet of water; if the atmospheric pressure changes, the surface of the water will be broken up into a series of divisions, waves; the waves

resemble the union or coupling of thought with phonic substance” (ibid). He continues by showing the arbitrary nature of the “sign” (the linguistic basic unit which is made of the coupling of signifier and signified): “Not only are the two domains that are linked by the linguistic fact shapeless and confused, but the choice of a given slice of sound to name a given idea is completely arbitrary” (ibid: 113).

As a consequence of the arbitrary relations between idea and sound, de Saussure develops his model of the linguistic sign; the arbitrary relation will now be applied to the sign’s components, the signifier and signified. The signifier is equivalent to the sound while signified is equivalent to the thought. For de Saussure the two components are linked in an inseparable manner, taken together they constitute a sign, which is the basic unit of language. Lacan objects to this Saussurean claim regarding the complete arbitrary division of the continuum of thought and sound. Based on his clinical experience, Lacan is forced to refuse the arbitrary nature of the signifier. Lacan reports that the signifier has a dimension of necessity, which is the dimension of the letter.

All our experience runs counter to this, which made me speak at one point in my seminar on psychoses of the ‘button ties’ [points de capiton] required by this schema to account for the dominance of the letter in the dramatic transformation that dialog can effect in the subject. (Lacan 2006a: 419)

Using a metaphor taken from the world of upholstery Lacan points towards what he names “button ties”. Along the horizontal structure of the sliding of the signified under the signifier, the button ties vertically bind signifier to signified and prevent the constant sliding of sense. Hence, although there is the mutual sliding of the chain of signifiers and the current of the signified, there a certain tie between the two. The existence of these button ties emphasises the non-

arbitrary dimension, lying at the basis of the effect of the letter. Along with the sliding of signifiers and the signifier's inability to anchor a certain signified, the letter uncovers the fact that the coupling of sense and sound consists of another dimension, which is not arbitrary, but definitive and exigent for the subject.

De Saussure likens the image of the separation of water to an operation of delineating a border between two identical areas. The borders in de Saussure's text appear in the shape of vertical lines, separating the formless matter into units of "thought-sound", units that later would define the signs. Since the borders here differentiate between two identical zones, that would otherwise be parts of one continuum, the positioning of the straight lines is not necessary and could be placed differently at the same degree of accuracy, hence the lines are dashed.

I will now examine the second image, also an image of water that also depicts a border. Lacan brings this up in his 1971 seminar, "On a discourse that might not be a semblance". During the lesson of 12 May, entitled *Lituraterre*, Lacan returns to the article cited above "The Instance of the Letter in The Unconscious". He does this in order to clearly distinguish between the mechanism of the signifier and the dimension of the letter (Lacan 2007b). While referring to the word "letter"⁵ as well as "literal" ("à la lettre"), Lacan proposes to see the letter as based on the structure of the *littoral*, the frontier between sea and seashore. When we compare the two images of borders, we realise that the littoral is not a border that can be delineated unambiguously, as it is *constantly shifting*. While walking along the shore, it is difficult, if not impossible, to point to a line (or on a predefined curve) that

5 | Lacan is playing here with both meanings of the word letter, as a reference to his opening essay in his *Écrits*: "The Seminar on the Purloined Letter", a text to which he refers in "The Instance of the Letter in The Unconscious".

would circumscribe the border between water and land. This border is to be seen only in overview and certainly cannot be depicted by a straight line.

In contrast to a border, that presupposes a distinction between the area circumscribed and what is left outside of it, the littoral is what creates a domain. "The littoral is something that posits a domain, as being [...] a frontier, but precisely because they [sea and land] have absolutely nothing in common, not even a reciprocal relation." (Lacan 2007b: 117) In this quote, Lacan stresses the fact that the littoral does not mark the bringing together of sea and shore; its effectivity rather lies in keeping the two apart.

In contrast to the arbitrariness of de Saussure's borders, the littoral has a necessity that stems from the real (as opposed to imaginary) difference between the areas that create it. A border that is created by delineating a straight line differentiates between two zones that otherwise would constitute one territory. This can be seen, for example, in a border line that differentiates between two territories – of houses, of cities or of states. By way of its delineation, this line creates a distinction that did not exist beforehand. This straight line belongs to a mode of human creation and lacks actual or *real* existence. By contrast, the littoral, which is not to be delineated by a straight line, "posits a domain" (ibid). The littoral is created as the outcome of the fundamental difference between the two areas separated by it. Hence this is not a border that distinguishes between its inner and outer territories, but rather what makes the distinction between inside and outside completely redundant. This is because the two areas that create the littoral by their mere proximity are fundamentally different, to the point that they do not even have reciprocal relations. The littoral, in other words, operates as an *image of division*; it marks the limit of each side when it approaches the other side. The littoral is an image of difference and separability.

The Saussurean borders are of the order of invention, whereas the littoral is of the order of encounter. We walk along the sea and the difference between water and seashore has a real existence for us, we encounter it, sense and see it. The border is not of the order of the difference that can be formulated in a signifying manner, via a series of dichotomies, such as hot / cold, wet / dry etc.; the water and the seashore have nothing in common, except being tangent to each other. To assume a difference would be to presuppose relations of similarity; but what is created here is a border that is not based on any relations of similarity. The letter does not *signify* the border as the straight line would, but instead it is, *in itself*, the border.

The arbitrary linkage of thought to sound is based on what was previously described regarding the signifier: that it lacks an internal meaning of its own, and receives its meaning from the metonymical or metaphorical relations with the other signifiers. The signifiers slide unremittingly as one cannot point to a single, discrete unit, which consist of the pair signifier-signified. In sum, what is to be learned from the image of the littoral is that the letter operates immanently in a different way. It is not devoid of independent content, but is of the order of the real; it has a necessity, a necessity that is striking. As Lacan testified, based on his clinical experience, the letter appears in the psychic mechanism as what has an exigency. Its attachment to a certain meaning has a decisive mental reason for the subject. This means that in contrast to the signifier, its position, in relation to meaning, is not arbitrary and cannot be shifted.

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In order to understand how a signifying meaning is created for the subject, and – in contrast to that – how the letter appears for him or her as a psychical necessity, I will now examine the

appearance of the letter V in the case of the Wolfman. I will compare it with another appearance of the number five, this time a signifying appearance.

Freud reports in his case “The Wolfman” that “[...] the patient remarked that the opening and shutting of the butterfly’s wings while it was settled on the flower had given him an uncanny feeling. It had looked, so he said, like a women opening her legs and the legs then made the shape of a Roman V, which [...] was the hour at which [...] he used to fall into a depressed state of mind” (Freud 2001 [1914]: 90). During the course of the analysis, this uncanny feeling is linked through associations to a scene that Freud refers to as crucial in the Wolfman’s sexual development. The Wolfman witnessed his nanny, Gruscha, lying on the floor, cleaning it, and as a reaction urinated next to her. As Freud says,

The question now arises whether we are justified in regarding the fact that the boy urinated, while he stood looking at the girl on her knees scrubbing the floor, as a proof of sexual excitement on his part. [...] Or are we to conclude that the situation as regards Gruscha was entirely innocent [...], and that it was not until later that the whole scene became sexualized in his memory, after he had come to recognize the importance of similar situations? (ibid: 96)

Based on this question one can infer that the appearance of the letter precedes the signification (i.e. the sexual significance of the scene). The shape of Gruscha’s body, cleaning while spreading her legs, appears to the Wolfman as a V sign that is imprinted as a mark or a trait possibly before it received a sexual significance. This trait will, from now on, condition every choice of sexual partner. This is a “not immaterial” dimension in the image that is imprinted on the psychic mechanism even before a signified meaning was created. The image of Gruscha, functions here as a letter. As it does not

hold any relations of substitution, the necessary condition for the appearance of meaning, it does not substitute anything either. Simply put, it is not a signifier. Rather it is what will appear in every sexual encounter of the Wolfman. This letter functions as a necessary trait, and without it a sexual encounter is impossible .

I will now examine another appearance of the number five. This appearance belongs purely to the signifying mechanism in contrast to the case of the Wolfman. In a seminar from 1965 Lacan defines the signifier based on the linguistic definition of the sign: "The signifier, over against the sign which represents something for someone, [...] represents a subject for another signifier" (1964-65: 5.5.65).

Saying that the signifier "represents a subject for another signifier" is another way of saying that the signifier determines the subject and simultaneously divides the subject, reducing his or her being. The word "represents" assumes a representation 'of something'; it therefore assumes the fact that what is represented is missing. The subject's being is reduced in the signifying process as the subject appears as what is represented. The subject represented by the signifier is the subject on behalf of which the signifier appears, that is, the subject who is speaking and transmitting the message. Lacan states that the fact that the subject is present in the act of signification indicates that instead of a machine like process of transmitting and receiving an independent message, the subjective presence affects the signifying operation. Why is the subject represented "for another signifier"? This is because the act of signifying is always done in relation to the signifier, to the law of signification. As stated above, the signifier acts in relation to other signifiers; this is opposed to acting in relation to an element that is external to the chain of signifiers.

Lacan provides the following example of a woman and her lover who agree on a secret code through which she

can inform him of when she is alone in order to explain the formula; it is taken from an article that explains the function of the signifier in linguistic theory. The curtain moved to the side on the window signifies 'alone', and the number of flowerpots, 5, indicates the time of day when she will be alone, 5 o'clock. Lacan states that the fact that the curtain functions as a signifier is unrelated to the fact that the two agreed that it was so. The fact that there is or is not someone to receive the message has no meaning in determining whether the curtain is a signifier or not. The quality of being a signifier stems from the act of *nomination*: the curtain stands for something other than itself. Another feature of the signifier is the fact that a signifier's appearance carries meaning for the speaking subject. This is unrelated to the intended message to the addressee: the woman signifying to her lover that she is 'alone' (*seule*) is actually expressing her desire to be the only one (*la seule*):

what does it mean to be alone, if not to articulate this term which gives rise, in the gap which immediately follows it, to the ambiguity of what is going to be articulated under the desire to be the only one (*la seule*), for the rendezvous to whom the only one (*le seul*) is summoned (Lacan 1964–65: 5.5.65).

Between the signifiers '5' and 'alone' a gap is opened, a gap that the subject, to whom the message is addressed, is invited to fill in. I showed earlier how the horizontal nature of the chain of signifiers is metonymic, so the signifiers have a relationship that always omits or lacks something. Lacan connects the metonymic structure to the subject of desire that moves between replaceable interchanging objects without filling the void. This example shows how the signifier opens a gap in which desire operates. The signifier 'alone' signifies the fact that she, the woman, is not 'the only one' (*la seule*), but leaves the desire to be 'the only one' unfulfilled.

“This alone could [...] evoke self-sufficiency”, Lacan states, “but it is precisely what it is there,[...] not to evoke it but to evoke the opposite, namely the lack” (ibid). Desire, always founded on lack, appears in every act of signification. The appearance of one signifier opens a gap, summoning another signifier, ‘5’, into which desire enters. In other words, between the two signifiers, there appears a *subject*, as a *subject who desires*.

This example also demonstrates how the signifier divides the subject. On the one hand, there appears the saying ‘I will be alone at 5 o’clock’ (“*Je serai seule à cinq heures*”). This is directed towards the encounter; it invites the lover to be the person filling in the woman’s loneliness. On the other, within the same signifier, there appears the desire, in this case the fantasy to be the only one, as that which is rejected in the act of signification, as the signified content of the saying ‘alone’ (*la seule*). This desire, the fantasy to be “the only one”, is the Other’s desire. The subject’s desire is entirely dependent on the Other’s, while the Other, according to Lacan, is the locus of the battery of signifiers: “In the division of the subject [...] ‘the only one’ functions here as desire, entirely in suspense with respect to the desire of the Other” (1964-65: 7.4.65).

This can be understood in what Lacan describes as the signifier in relation to the “battery of signifiers”: “Between the key and the lock, there is still the number (*chiffre*)” (ibid: 5.5.65). The signifier functions as a digit or a cipher (*chiffre*, in both meanings) opening a lock requiring a numerical code. The signifier functions as the same key, which will be discarded after opening, but it has a crucial role. In other words, the signifier functions in relation to the pre-existing code or combination. What lies beyond the locked door, what the lock conceals, as Lacan states, is of no importance. As stated above, the signifier does not indicate a real reference, which it supposedly points to, but exists in relation to a combination, to the ‘battery of signifiers’ found at the other’s

disposal. The subject is the one who either possesses or does not possess the signifier that unlocks the numerical code. In other words, the code precedes the subjective act of signification. To return to the formula, the signifier (a key) represents a single digit, the subject, which may or may not fit the other signifier, the lock.

The subject in this formula is what is omitted in the act of signification. This omission occurs at the moment when a signifier, the singular trait bearing the unique characteristic defining the subject's being, his or her core, stands in relation to the pre-existing battery of signifiers, as the representation of the subject. This representation omits the subject as that which is represented (cf. Lacan 2007a: 13).

Contra to this omission, Lacan contrasts the position of the letter to the signifier as such: "Writing, the letter, is in the real, and the signifier, in the symbolic" (2007b: 122). The letter works differently in relation to knowledge as opposed to the signifier. In the case of the Wolfman one can see that the letter, unlike the signifier, carries independent weight. This does not depend on its arrival at its destination, its addressee that is the other. *The letter is the effect of the very act of inscription, not the act of signification.* To illustrate this, Lacan recounts a meeting he had with a Japanese biologist, who filled up his blackboard with formulae that were entirely incomprehensible to Lacan. Yet, Lacan says, this in no way harmed their validity. The formulae, he explains, like genetic material, were imprinted into his body, to be transmitted to subsequent generations. "I classify [the formulae] among living beings." (Lacan 2007b: 126) Like in the example of the bathroom stall doors cited above, we see that the act of inscription has no relation to meaning even if it still bears *sense* for the subject. As for the inscription of the letter, it lacks meaning but it also devoid of semblance, or imaginary false appearance. It appears as a mere trait, "...nothing is more distinct from the void hollowed out by writing than the

semblance" (ibid). It does not represent, bear meaning or call for deciphering. The letter is nothing but itself, the inscription in itself, patent, obvious, as it is.

One could expect that being a pure material element, so restricted in terms of meaning to the point that it lacks it, would also mean that it carries no weight. Yet, it is precisely because it is merely the inscription, without semblance, that it has a decisive effect: specifically because it is not signifying in nature.

We can then compare the Roman digit V with the deciphering digit. In the example of the five flower pots, the manner in which the signifying mechanism works for the subject is revealed in every act of signification. The act of signification, while omitting the subject's being, creates a void into which the subject's metonymically operating desire is inserted in order to fill in the unfillable. The act of signification divides the speaking subject. The signifier creates the void, by virtue of the very act of signification. Yet it also sustains this void, it appeals to the subject (in this case the man to whom the message is addressed) to be the one to fill it. Every signifier is also 'the other signifier', and thus it is both the deciphering digit and the cipher itself simultaneously.

The letter does not represent a subject. Firstly simply because it is not said and therefore there is no subject who is situated as the agent in relation to the transmission of the message. Secondly, and more fundamentally, the letter is not founded on the void assumed in the act representing the subject. In other words, *its appearance in the image marks that which was omitted from and by the signifier*. As was shown, in the signifying process the core of the subject cannot be signified and creates a void into which desire enters. By contrast, the letter *inscribes what is otherwise omitted in the act of signification*. It appears as an image which inscribes knowledge - knowledge for the subject. The Wolfman sees the letter V in Gruscha's image, and, in that moment of

encounter, immediately, without a void, the fact of castration is imprinted into his psyche. This scene is related to an earlier scene, reconstructed in the analysis, in which the Wolfman saw as a baby his parents' coitus, seeing his mother's genitalia and her being 'castrated'. Only by seeing Gruscha re-enacting the position and the knowledge stemming from it does the fact of his mother's 'castration' acquire a psychic inscription for the Wolfman, who had hitherto refused to acknowledge it.

[The scene with Gruscha] provides important link between the primal scene [the parents coitus] and the later compulsive love which came to be of such decisive significance in his subsequent career, and it further shows us a condition upon which his falling in love depended and which elucidated that compulsion. When he saw the girl on the floor engaged in scrubbing it, and kneeling down, with her buttocks projecting and her back horizontal, he was faced once again with the posture which his mother had assumed in the copulation scene. She became his mother to him; he was seized with sexual excitement owing to the activation of this picture [...]
(Freud 2001 [1914]: 92-93)

To say that the letter V "represents" the fact of castration for the Wolfman means assuming that 'the fact of castration', as an object, has an independent, extra-linguistic existence. It assumes that the 'fact of castration' precedes its appearance in language, and that the manner in which it is represented, using a signifier that was chosen by and for the subject to stand in its place, is detachable from it. However, this is not a suitable description of the operation of the letter. The letter V *inscribes* the fact of castration. The fact of castration did not have prior existence for the Wolfman; the letter V is itself the form in which the fact of castration appears to him. This means that as an image the letter crosses the distinction between form and content and makes it redundant; 'the fact

of castration' is not the "content" for which the letter V is the form. The inscription of the letter, the form in which it is inscribed, and the fact of castration *are one and the same*.

That is why the letter, as a trait, is repeated obsessively. It is not bound to the law of the metonymic relation of substitution, as is the order of signifiers upon which human desire is founded. By contrast, it insists and is itself inscribed repeatedly, without substitution.

This encounter with the letter is striking. It induces anxiety and leaves a branding mark (the branding element that was referenced earlier) specifically because it does not bear the void that is part of the signifying mechanism. On the contrary, it is the thing in itself, which, in the moment of the encounter, the Wolfman is struck by and can no longer avoid.

I will return now to the analysis of the two images of the littoral and the parted sea. How do they themselves work? The image does not function as a metaphor; it is not a signifier, or something that appears in the place of another. By contrast, it is meant to inscribe the form in which things appear. In a word, the littoral inscribes (rather than describes) the structure upon which the letter is based. The parted sea inscribes the coupling of thought with phonic substance. The littoral does not function as a metaphor with regards to the letter. There is no crossing of the fraction bar, but an inscription of the letter's appearance. The littoral is not a metaphorical image, but an image in the sense of something that has form, that can be inscribed.

The image of the littoral neither *shows* a boundary, nor does it materially mark the presence of a frontier-line – it is an *image* of separation rather than a representation. The littoral brings sea and shore together while keeping them strictly apart (as two that have nothing in common). As an image, the effectiveness of the littoral does not lie in what it shows (it fails to show sea and shore as distinct because the sea constantly undulates in order to conquer land). It

also does not lie in how it shows it (the littoral lacks a crucial property of boundaries – their material stability). And yet the littoral is an effective image of topographical division that means that it constitutes a peculiar object which resides in the domain of the division itself, a domain which is neither land nor sea but is the domain of divide. *It is a boundary that has realness as an image, but not as an object.*

By delving into the images themselves we can understand an essential difference between the concept of the letter for Lacan and the arbitrariness of the signifier for de Saussure. The very use of images demonstrates the power of the image as a carrier of knowledge. The way in which an image appears (its mere appearance) imparts an essential difference. This difference is not merely conceptual, but actual; it is a difference of psychic necessity, between the way a signifier is connected to meaning and the way a letter bears sense.

The littoral is not an image of the letter, but it is the letter itself. For sake of comparison, Lacan provides another image as an example: “love is a pebble laughing in the sun” (Lacan 2006a: 423). As concerns this type of image, one can enquire what the quality of the pebble that laughs in the sun shares with love. What does the image reveal or indicate with regards to love by having this characteristic? This is not the case in the relation of the littoral and the letter. The littoral is not a metaphor of the letter that borrows features from it rather it is the letter. A meaning that arises from such an image is not a meaning that is based on relations of substitution. The littoral is the letter in the same way that castration is the letter V for the Wolfman; it is the form in which the fact of castration itself appears.

One can therefore say that not only is the letter a littoral, but the littoral itself is a letter. It does not conduct substitutional relations of meaning. It does not bear another sense that it directs one to. On the contrary, it has no existence separate

from its appearance, its *realness*, as a border, is purely as an image.

THE TOPOLOGY OF THE IMAGE-KNOWLEDGE

At first I characterised the letter as a part of the signifying mechanism, as a medium for the signifier. I showed how the aspect of the signifier is material and is related to the image, which I called the branding element of the signifier. Later I isolated the letter as that which works in a different order than the order of signifiers: what is not subjected to the law of metonymy and is not replaceable, as that which has a *realness*, that which is encountered by the subject and appears as external to the subject.

The case of the Wolfman indicates that these two characterisations, which logically contradict one another, exist simultaneously in the moment of inscription: the encounter of the image of Gruscha cleaning, as a letter, is forced from without. The letter appears devoid of semblance or meaning, i.e. it has *realness* and is not of the signifying order. Yet, at the same time, it does have some relation to the signifying order; it allows the binding of signifiers: 5 o'clock, which is represented by the letter, is the hour when the Wolfman's unsettled behaviour began as a child. Likewise, the letter V appears as a link between the primal scene and the compulsive repetition of the Wolfman's sexual choices. In other words, it might be one letter, which is encountered, as a matter of necessity, yet it is not disconnected from its signifying features. It allows for the binding together of a chain of signifiers and is also related to the substitutability of signifiers, to the ability to signify something other than itself: '5 o'clock'.⁶

6 | It should be noted that, in fact, the signifying quality of the V is not purely that alone: it is not '5 o'clock' as a term of language that is signified

It can be seen therefore that mental reality, as a result of the appearance of the letter, crosses the distinction between the external (the image as that which is encountered by the Wolfman as external content) and the internal (the image appearing as a trait binding together the subject's unique chain of signifiers). Therefore it can also be seen that the letter is present as an element crossing the distinction between image and signifier, revealing the dimension of the Real between the Imaginary and the Symbolic. What Lacan refers to as 'the instance of the letter' supports the signifier or is used by it as an instrument that comes from the Real. In other words, the letter is a link connecting the aspect of the signifier to the Real or to the single mental necessity. The latter is necessarily that which is absent from the purely signifying aspect of the signifier. It reveals the place where the image is used as a signifier, yet undermines its position as such while refusing to obey the law of substitution which the signifying order is founded on. As such, it is that which, in the order of signifiers, is petrified, stuck and imprinted or engraved into the psyche. The letter is what turns the image of Gruscha cleaning, which, as an image, is 'for everyone', to an image that is for the Wolfman, *for a certain subject and for that subject alone*. If the signifier summons the subject to be that whom is represented for another, then the letter turns the image to one that belongs to a single subject, who is also summoned by it. It is the link between the image, as a non signifier, and that which allows its binding to the subject's unique order of signifiers.

If a signifier 'represents a subject for another signifier', one can say that the letter is that which makes the image function as what operates '*for another signifier*'. It is that which makes the deciphering digit fit, opening the lock. The

by the letter, but the manner in which 5 o'clock is inscribed by its material aspect in the psyche of the Wolfman as a critical hour for him.

moment when the image of Gruscha appeared as a letter is *the same moment* in which it is imprinted in the Wolfman's psyche, and will return to appear as a trait determining his sexual choices. The moment of *the letter's appearance as the imaging element within the signifier* is also the moment of the *signifying element within the image*.

The letter's medium or the imaging aspect of the signifier exists as another aspect of the signifier's operation, which appears in it simultaneously. The letter allows one to isolate the manner in which knowledge appears in the image. It appears in the image in a way impossible to detach from its qualities of image-ness (to claim that knowledge is related to 'the form of its transmission as an image' would be to assume a difference that does not exist here: the image is not the format of knowledge transmission that can be conveyed by other means, rather, the knowledge transmitted here is knowledge derived from the order of the image). It is necessarily an image, as it is without meaning and is irreducible to the signifying plane.

The letter must appear, must be inscribed; as such, it is not subject to substitution or replacement. The visibility of the letter, or, in other words, the fact that it is an image, and as such, like any image, it is only one, is a necessary aspect in relation to the letter. The littorality is inseparably linked to its image-ness. For the instance of the letter to work, as a littoral positing a domain without semblance and for it to be inscribed for the subject, it has to be seen.

To say that the way in which the knowledge of the subject appears is inseparably bound to the appearance of the image itself, means revealing how the image bears *knowledge that by its very essence has the quality of being an image*. Such knowledge is not knowledge *about* an external element to the image transmitted or represented by the image, but is undetectable from the way the image appears. Knowledge as a representation is not the only form of knowledge ruled

out by the letter, but, as I have shown, so is the meaning as it is formed within the signifying order, in a metonymic or metaphoric substitutional manner, by crossing the fraction bar to the signified domain. The fact that the letter is a site without semblance means that it does not direct to anything else. It does not point to any different element that would fill in or give more knowledge to what is written. Knowledge is identical to the letter, to the very moment of imaging, with no remainder: it that has no existence outside of its image-ness.

Lacan also used this very knowledge that 'has no existence outside of its own image-ness' in terms of topological mathematics. Topology is *not an image* of psychoanalytic knowledge, and Lacan clearly explicates a warning to his students when he distinguishes it sharply from everything that is metaphorical; he claims that it is: "A reference that is in no way metaphorical" (2001: 471). Yet, like the littoral and the letter, it has realness: it provides *knowledge, which is otherwise impossible*. Topology reveals what the mental reality demonstrates; it demonstrates the fact that the distinction between inside and outside collapses in relation to the psyche. We have witnessed the same collapse ourselves. This has led us along two axes following what occurs in the inscription of the letter, which, as stated above, includes a logical contradiction. The letter, as the material medium of the signifier, is the product of a subjective mental activity that will now bind a chain of signifiers for the subject, while the letter as a domain of inscription, distinct from the signifier, has appeared as that which is forced on the subject from without. We have also seen that in the moment of encountering the letter, both contradictory axes exist simultaneously. In order to demonstrate how that is possible, like Lacan, we shall need the assistance of topology, which exposes mental reality as something that lacks internal and external facets.

The letter V appears to the Wolfman the way inscriptions on bathroom doors appear to children, as that which has a

presence with an undeniable realness, as that which does not appear on behalf of the subject. On the other hand, the subject is also not invited to receive the message or to act according to it. The letter appears as a place free of subjectivity; it springs up from elsewhere. Yet, in the very moment it appears, it creates within the subject encountering it a forced mental necessity. *Within that very moment it reveals his or her place as a necessary locus within the background of the act of imaging that just occurred.* In the very moment of appearance the image appears as that which is for the subject. Through the fact that an image appeared as that which has realness and external content, it already also appears related to the subject. Thus, in the moment of its appearance the letter carries a mental realness, related to the core of the subject's being.

On the other hand, without encountering the image as that which is a product of the act of imaging, as 'that which is imaged', the subject's appearance would not be as that of someone whose being is present in the image. In other words, the image is the manner in which the subject's being appears, and it is not separable from it. The subject's being is not an entity that is external to its imaged appearance, which exists in the first place merely to be revealed or to appear by means of the image, only to be imaged, but it is accessible only by means of the imaged content. Only then, *in the moment of the image's appearance, does the subject appear as that which is present that had remained forgotten behind that which is imaged.*⁷

The letter has no semblance. It lacks content that leads to deciphering or interpretation, and is devoid of meaning. And

7 | This is a paraphrase of a *mathème* taken from Lacan's *L'Étourdit*: "Qu'on dise reste oublié derrière ce qui se dit dans ce qui s'entend" (Lacan, 2001: 449) (One possible translation is: "That one might be saying remains forgotten behind what is said in what is heard").

yet, it has sense: its appearance upholds a mental necessity for the Wolfman—the fact of castration, which has not previously existed for him; it is inscribed in the letter and in the act of inscription reorganizes his psyche. In other words, what turns the letter into materiality that bears knowledge with reference to the subject is the fact that the letter is that which makes the image undergo transformation. It passes from a signifier, one of many in the battery of signifiers, to an image that carries a specific sense for the subject, inscribing the subject's being by virtue of its very appearance.

Finally, to sum up what I have defined as image-knowledge I shall turn to a topological reading of the littoral, which will itself, being an image, inscribe *image-knowledge*. Topology inscribes knowledge exactly as an image does, in a way that cannot be detached from its image-ness. The littoral, by virtue of being a liminal image with realness, neither symbolic nor imaginary provides topological knowledge or image-knowledge in relation to the act of inscription of the letter in the psyche. The image of the littoral makes the distinction between the external and the internal redundant or collapses it altogether. Even if it is reductive, one can say that the other topological models (e.g. Möbius strip, cross-cap or Klein bottle),⁸ although used for different purposes, all have in common a characteristically strange relation to the distinction between inner and outer fields. Lacan uses the topological models in order to demonstrate the manner in which the psychic mechanism does not have clear internal-external relations. In other words, they convey the knowledge of the problematic nature of the binary oppositional terms internal / external have with regards to the psychic mechanism. Yet, we can still speak of all of those topological structures, even if they lack an internal and an external side,

8 | Out of the many dozens of examples, cf. e.g. *L'Étourdit* (Lacan, 2001: 469–471).

in these terms while demonstrating their problematic nature. Let us take the Möbius strip for instance; it is a surface with only one side and only one boundary. This curious property is demonstrated by the fact that a line drawn starting from the seam down the middle meets back at the seam on the other side. That said, if we slice a little piece of a Möbius strip and examine it, we see that this piece of the strip has two sides. This quality of the strip makes it possible to differentiate between what is internal and what is external to it, i.e. although the strip has a strange relation to the distinction between its inner and outer fields, it is possible to refer to it using these terms. This is not the case with a littoral: the littoral collapses the ability to even relate to this distinction. We are struck by its image because it collapses the ability to make an imaginary distinction between the two areas of which the littoral is the inscription of difference; this is precisely the action of the letter. As I have shown, the letter makes the subject appear as its creator, while, at the same time, appears to him or her as forced from without.

The topology of the littoral, in which the border changes incessantly, and in which any encountering of the littoral as an image has a necessarily momentary and fluid existence, does not allow one to think of a border as that which restricts and entrenches a difference between the internal and external. This is because the difference between the two regions, the sea and the land, has realness. This topology clarifies well the uniqueness of the letter's function as a form of inscribing image-knowledge. As the letter is the real aspect of a signifier, binding the Symbolic and the Imaginary, so too is the littoral found between land and sea.⁹ The borders of land and sea change incessantly, invading one another's

9 | This sentence is an example for the manner in which, for lack of an alternative, I use imaginary terms (e.g. metaphor) in order to clarify the connection between the letter and the littoral, but we must definitely

realm, but that enigmatic domain between them, the littoral, has realness. Its realness, make obvious the fact that the distinction between form and content is not relevant to the understanding of the image's effectivity. Like in the letter the effect of the image is not related to the form in which it is written down (the way in which it appears in maps as a line) as it changes perpetually. Its effectiveness stems from its realness, which is the very difference, the real difference, between land and sea, which do not even relate to each other as opposites. The letter, the littoral, is a tracing of the gap and an encounter with it. It is not a replacement for something; it does not function as a form representing something different than itself, rather, it locates a domain. This image, which has realness, gives knowledge to a subject, which otherwise could not be obtained by means of real encountering. There is a critical difference between the littoral as an image that has real existence and its appearance in maps as a tracing of the shoreline, as a line. The perpetual change of the littoral turns it into that in which the subjective singular encounter is necessary: every moment of walking on the shore is different from the one before, making the act of sensing, witnessing or touching a part of what it is. One can even say that the littoral, as a domain, has no clear existence prior to the act of sensing it. Yet, in the very moment of encountering, there is only one, constant image. It is even possible that the footprint stepping exactly on the shoreline, in the same instant, changes it. The presence of the human foot delays the water's flow on the land on the same spot where the person stands. One can therefore say that this image, coming from without, the realness of which is forced on the subject, inscribed in his or her body, while feeling the cool touch of water on their skin, is also an image that the subject encountering it is in a way

understand this not in a metaphorical manner but as a way of inscribing image-knowledge.

involved in. In a word, the subject participates in its creation, in that single fleeting moment of encounter. The subject, in the moment of encountering the image as content coming from without, also appears in the background, as a reason, as a factor in its creation. As the footprint that changed the flow of the water, and thereby the shoreline, was erased, so too is the act of the imaging subject, and the image appears for the subject as content coming from without. In the moment of encountering, it is registered as a domain and appears to the subject as an *image*. Its appearance as an image, despite being *not one of the subject*, changes with every passing moment and *for every subject*. The image, therefore, inscribes the subject as its knowledge, an image-knowledge. This inscription is an outcome of the unique quality of image-ness, its littorality, as an 'unreadable letter'.

BIBLIOGRAPHY

- De Saussure, Ferdinand (2011 [1916]): *Course in General Linguistics*, trans. Wade Baskin, ed. Charles Bally/Albert Sechehaye, New York: Colombia University Press.
- Freud, Sigmund (2001 [1914]): "From the History of an Infantile Neurosis." In: id., *The Standard Edition of Complete Psychological Works of Sigmund Freud*, vol. XVII, trans. James Strachey, London: Vintage Press, pp. 1-122.
- Klotz, Jean-Pierre (2012): "The Littoral condition of the Letter." In: Santana Biswas (ed.), *The Literary Lacan*, Calcutta: Seagull Books, pp. 196-204.
- Lacan, Jacques (1964-65): *Le Séminaire, livre XII, Problèmes cruciaux pour la psychoanalyse* (unpublished).
- Lacan, Jacques (1998): *Le Séminaire, livre V, Les formations de l'inconscient*, ed. Jacques-Alain Miller, Paris: Edition du Seuil.

- Lacan, Jacques (2001): "L'étourdit." In: id., *Autres écrits*, Paris: Éditions du Seuil, pp. 449-495.
- Lacan, Jacques (2006a [1966]): "The Instance of the Letter in the Unconscious or Reason since Freud." In: id., *Écrits*, trans. Bruce Fink, New York and London: W.W Norton & Company, pp. 412-441.
- Lacan, Jacques (2006b [1966]): "The Subversion of the Subject and the Dialectic of Desire." In: id., *Écrits*, trans. Bruce Fink, New York and London: W.W Norton & Company, pp. 671-702.
- Lacan, Jacques (2007a): *Seminar, Book XVII: The Other Side of Psychoanalysis*, trans. Russell Grigg, ed. Jacques-Alain Miller, New York/London: W.W Norton & Company.
- Lacan, Jacques (2007b): *Le Séminaire, livre XVIII, D'un discours qui ne serait pas du semblant*, ed. Jacques-Alain Miller, Paris: Edition du Seuil.
- Nancy, Jean-Luc/Lacoue-Labarthe, Philippe. (1992 [1973]): *The Title of the Letter: A Reading of Lacan*, trans. Francois Raffoul/David Pettigrew, Albany: State University of New York Press.

The Spatiality of Being

Topology as Ontology in Lacan's Thinking of the Body

Rona Cohen

Do the limits of me as a corporeal thing
coincide with myself as a body?

HEIDEGGER, Zollikon seminar, 1965

Psyche is extended; knows nothing about it.

FREUD, 1938

INTRODUCTION: A PSYCHOANALYTIC SPACE

Against the Newtonian and the Leibnizian conceptions of space, the former, an absolute objective dimension existing *independently* of any *perceiver* and the latter, constructed from relations monads bear to one another, in the Transcendental Aesthetic of the *Critique of Pure Reason*, Kant considers space to be a “subjective constitution of our mind” (1998: 174), a spatial grid our cognitive faculties project onto the world rather than a dimension which objectively exists. Within this perspective space and time are not actual entities (*wirkliche Wesen*) but rather a priori intuitions which structure our experiences and lend objectivity to our epistemic judgment. In line with Kant's “Copernican Revolution” in philosophy, the shift of focus on the epistemic

conditions of knowledge, on how the mind apprehends things rather than on how things *really are*, space is considered to be an intuition which determines the manner objects are given to us as phenomena; this, however, claims nothing about the way these objects are in-themselves.

In a posthumous note written in 1938, Freud returns to the Kantian conception of space. Instead of arguing that it is our cognitive structure which determines the manner in which things are given to us in sensation, space is argued to be essentially a projection of our *psychic apparatus*. In what seems to epitomise the psychoanalytic notion of spatiality, Freud writes “space may be the projection of the extension of the psychical apparatus. No other derivation is possible. Instead of Kant’s a priori determinations of our psychical apparatus. Psyche is extended; knows nothing about it.” (2001 [1938]: 299)

Freud is in agreement with Kant that space is a subjective projection of the human mind rather than an absolutely real, self-subsistent “container”, however what is projected according to Freud is not determined by the structure of cognition but rather by the structure of the psychic apparatus, an apparatus whose logic Freud studied thoroughly in his metapsychological writings. Furthermore and significantly, the space Freud is concerned with is not an “epistemological grid”, the space in which objects are given to perception, but rather the *extension* of the *psyche*, in other words, it is the space which the subject of the unconscious is. Freud’s note is innovative in the sense in which it addresses the psychoanalytic subject not merely as an embodied psyche, but as a *place*, a *topos* which implicates the psyche on condition, Freud tells us, that the subject knows nothing about it, on condition, one could argue, that this knowledge

about its spatiality or more accurately about its embodiment is lacking.¹

What the psyche lacks is a certain knowledge, a knowledge about something which essentially cannot be known, a knowledge whose (primordial) repression constitutes the link or the possibility of there being a connection at all between the somatic and the psychic. Since it is with representations that the psychic apparatus is inhabited, what is at stake is the non-knowledge of a certain representation, in other words a repression of a representation of a “thing” (*Ding*) for which “the antithesis of conscious and unconscious is not applicable” (Freud 2001 [1915]: 177), a representation of a *thing*, which fundamentally cannot enter consciousness, cannot be known. It is on the basis of this repression of the representation of *the thing*, that the psychoanalytic subject comes into being.²

Despite being excluded from the spatial determinations which structure our perception and from the optic deter-

1 | Freud refers to Kant's transcendental aesthetic earlier than 1938. In *Beyond the Pleasure Principle* (written in 1920) a discussion on the temporality of unconscious mental processes is preceded by the argument that “as a result of certain psycho-analytic discoveries, we are to-day in a position to embark on a discussion of the Kantian theorem that time and space are ‘necessary modes of thought’” (Freud 2001 [1920]: 27). However it is only in 1938 that Freud addresses the Kantian conception of space as a subjective constitution of the mind that constitutes not merely the *Umwelt* of the subject but its *Innenwelt* as well, e.g. the body itself.

2 | *Das Ding* is the name of the Freudian lost object of the drive, the first gratifying experience qua inaugural point of drive cathexis, Lacan alludes to the *Three Essays on the Theory of Sexuality*, in which Freud claims that the drive-object is inherently a “lost object” (Johnson 2005: 188). The object is lost not because the subject actually possessed it and then lost it for some reason but because of the process of symbolisation that substitutes its symbol for the object, “absented” it. This object qua lost is produced by the operation of symbolisation, it is therefore retroactively lost. Object *a* is a remainder, a leftover, a fragment of *Das Ding* which serves as a substitute for the original lost object.

mination which construe the imaginary specular image, object *a* is not without spatiality. Indeed it is the *object* which essentially problematises the philosophical and physical conceptions of space, raising the question of the real of space. In introducing this psychoanalytic *Ding*, Lacan introduces an object which is fundamentally non-specular, and yet, is included as the impossible object-cause-of-desire in the spatial structure of *manque-à-être*. Indeed contrary to Freud, Lacan argues that space “is not a feature of our subjective constitution beyond which the thing-in-itself would find, so to speak, a free field – but rather that space is part of the real” (2014: 283). For Lacan space itself is part of the real due to the presence of the object. However if object *a* is a purely psychical *real* object devoid of extension, excluded from the spatiality constituted by the laws of the Transcendental Aesthetic, in what sense does it hold any spatial significance?

This article examines Lacan’s use of topology to designate the *topos* of the speaking being as a *topos* divided between two “elements”, “one which can have a specular image and the other which quite literally doesn’t have one” (2014: 40), however unlike this imaginary mapping of the division of the subject in terms of the specular and what escapes the specular, with topology Lacan seeks to designate the relation between these two “elements” in spatial terms. It thus concerns itself with being or more accurately with the lack-in-being [*manque-à-être*] by which Lacan denotes the subject of the unconscious as a *topos*, a place of existence. It was Heidegger who suggested that “we should learn to recognize that things themselves are the places and not merely belong to a place” (1997: 118) and when it comes to *Dasein* or to the speaking being, these *places* of existence should be thought of in terms of the distinct *spatiality of the speaking being*. For both Heidegger and Lacan respectively the spatiality of being is irreducible to the “taking-space” of the ready-to-hand or to the mere extension of material objects. Indeed if what is

at issue is the *place* of being, the *place* which being is, rather than the thinking of being as belonging to a place, then our investigation will inevitably lead us to the *place* which we ourselves *are*, the speaking body. This article will thus address Lacan's use of topology literally, i.e. it will address topology qua the *logos* of *topos*, or in this case the *logos* of the *speaking body* as a *topos*. If we follow Lacan's saying that the body should be considered as a structure (1976-77: 21.12.76) then it remains to be examined in what sense the body is a structure and in what sense this body is qua structure irreducible to the specular image.

BEYOND THE IMAGINARY BODY

In his early essay "*The Mirror Stage as formative of the Function of the I as Revealed in Psychoanalytic Experience*" (2006 [1936]) Lacan explored the archaeology of the specular image and its function in psychic life, drawing attention to an experiment carried out by French psychologist Henri Wallon who set out to examine how the human infant reacts to its mirror image compared with a baby chimpanzee. Unlike the indifference which the chimpanzee exhibited when confronted with her specular image, the human infant expressed notable jubilation. Lacan attributes this positive affective reaction to the fact that the mirror image gives the child an imaginary mastery over his body, one which is premature in relation to its real mastery.

Contrary to common opinion the jubilation which the child exhibits in front of the mirror image does not attest to a correspondence between the manner in which the child experiences her own body and her specular image, in Lacan's view it is on the contrary, jubilation arises as a result of a fundamental discrepancy between the subject's disjointed organic sensations and her perception of formal totality, it is

“not a satisfaction of a natural completeness, but a satisfaction rooted in a lack and which is established upon a discord” (Miller 2004a: 26). The fascination with the order of the image is thus rooted not in the wholeness of the image per se but in a compensatory illusion, which masks the discrepancy between the organism and the perceived image. Indeed for the specular image to be presented with a unified image it must exclude some “piece of the body”, something of the body that is bound to remain unspecularisable. In seminar X Lacan names this piece, which has not entered the imaginary, the phallus.

With topology, Lacan addresses this dimension of space, as *real*, and it is essential at this point to distinguish between the spatiality of the specular image and the spatiality of the real, between optics and topology, between body and being. Whereas it was via the image that Lacan approached the problem of the body (Soler 1995: 6) when discussing topology in Seminar X the register of the imaginary is insufficient to designate the real of space, and Lacan proposes to establish a different “mode of imaginisation”, a mode which goes beyond the imaginary mapping insofar as it is a mode “in which the object is defined” (Lacan 2014: 40). Whereas in Seminar X the object is merely posed as a limit to cathexis,³ as what “has not entered the imaginary”, with topology Lacan is able to give a positive status to the object as the hole around which the spatial structure of the subject is organised. Topology thus addresses the division of the subject in spatial terms rather than the image obtained by optic effect.

In Seminar X Lacan suggests a different “type of imaginisation” (2014: 40), which departs from the register of

3 | The “investment [cathexis] in the specular image is a fundamental phase of the imaginary relation. It’s fundamental inasmuch as there’s a limit. Not all of the libidinal investment passes by way of the specular image. There is a remainder.” (Lacan 2014: 38)

the imaginary. Imaginarisation is in a sense synonymous with topology; it is a way of accounting for the real of space formulated in terms of topological relations, rather than in optic terms. In other words it is a way of accounting for the spatial co-existence of what in terms of the imaginary would be the specular body and the non-specular bodily-object.

Indeed object *a* “escapes the status of the object derived from the specular image, that is the laws of the transcendental aesthetics” (ibid); it is “inaccessible to the subject’s perception” (Lacan 2006 [1966]: 860). A residue left from the attachment of the somatic instinctual impulse to a signifier in the constitution of the subject of the drive, the object cause of desire is a psychic object which escapes our perception insofar as it is not an actual material object, and more so escapes the optic laws which constitute the dimension of the specular insofar as it is real and as such “characterized by the fact that it is impossible for us to imagine it” (Lacan 2014: 150). Affirmed only negatively as what poses a limit to the subject’s cathexis of the imaginary specular image, the phallus, one of the names of the object *a*, can only appear in the form of a lack, an object that has not entered the imaginary but yet which Lacan argues belongs to the register of “the real image” (ibid: 39).

In distinguishing between optics and topology, we distinguish between the specular body and the spatial structure of the subject, between the *topos* qua the imaginary body and the *topos* qua the spatiality of the speaking being. Topological surfaces or shapes evidently do not represent the body, neither do they reflect it, instead they present the structure of *manque-à-être* and its relation to the psychoanalytic object, in spatial terms. Whereas the imaginary image of the body excludes the object, the object is spatially inscribed in the topology of being. Indeed Miller argues that when we are in the domain of the speaking body, we have changed a register, no longer the imaginary body, but the real (Miller 2014). No longer the specular body but the

imaginarisation of the structure. No longer the empirical, the ontic but the structural, the ontological.

In Seminar XX Lacan ties the question of the speaking body and its spatialisation to mathematics. The mystery of the speaking body, he notes, raises the question of the Real, a real which mathematics alone can reach and “it is in that respect that it [mathematics] is compatible with our discourse, analytic discourse” (Lacan 1998: 131). In “The Unconscious and the Speaking Body” (2014), Jacques-Alain Miller traces the mystery of the speaking body to Descartes’ sixth mediation, the meditation concerned with the mystery of the union between mind and body. Before I move further in analysing the ‘speaking body’ I begin by briefly introducing the problem of ‘the extension of the mind’ in Descartes’ metaphysics and the impasse that Descartes encounters in attempting to address this question.

DESCARTES AND THE IMPOSSIBILITY OF THE ‘EXTENSION OF THE MIND’

Descartes’ metaphysics consists in a dualistic split of two substances: *res cogito* and *res extensa*, a thinking thing and an extended thing, mind and matter. According to Brown (2006: 4) Descartes presents us with a worldview which entails a disintegration of the human being into two completely separate realms of activity, mental and bodily, the functions of which are specifiable independently of each other. Since the thinking substance has only mental states and is conceived in opposition to any mode of spatial extension and the extended substance has only bodily states and is conceived in opposition to any mode of incorporeal thinking, the possibility of mind-body union – of their interacting – entails a logical contradiction. In accepting substance dualism as coherent, the union is indeed *inconceivable*, it is as if we were asked

to accept, in fact to conceive, both A (the real distinction between body and mind i.e. dualism) and Not-A (the union of body and mind) or put differently the intersection of two disjoint non-empty sets, *res extensa* and *res cogitans*. The “union” i.e. the ‘extension of the mind’ which in logical terms consists in an operation of intersection performed on two mutually exclusive sets, produces an empty set, which Descartes interprets as a logical impossibility. In Descartes’ correspondences with Princess Elizabeth of Bohemia this “fault” is attributed to the human mind:

human mind is *incapable of conceiving very distinctly*, and simultaneously, both the distinction between body and mind and their union. The reason is that, in order to do so, it would be necessary to conceive of them as two things-which is self-contradictory. (Descartes 2003: 152)

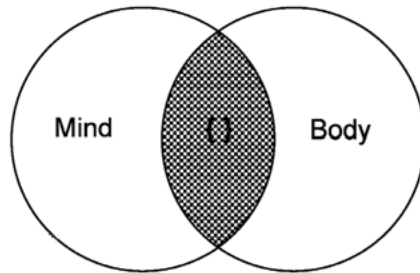


Fig. 1: The (empty) Intersection between *res extensa* and *res cogitans*.

Despite the logical impossibility of conceiving the ‘extension of the mind’, Descartes does not deny the possibility of such union, on the contrary, alongside the two building blocks of his metaphysics, *res cogitans* and *res extensa*, the union is said to be a *primitive notion*, a fundamental “atomic notion which cannot be analysed in terms of other notions, but also

is somehow explanatorily basic” (Brown 2006: 2). According to Brown, for Descartes

our conception of the union is primitive in the first sense because it is not entailed by the two basic concepts of his metaphysics, mind and body, taken separately or conjointly. The conceptions of mind as thinking substance and of body as extended substance entail nothing about how these substances interact or affect one another. Our notion of the union, which is a notion of mind and body interacting, must therefore derive from some source other than our metaphysical concepts of mind and body. It derives instead, Descartes claims, from our ‘experience’ of moving and being affected by our bodies. (ibid: 163)

However despite this evident phenomenological certainty, i.e. a certainty attained from ‘experience’, unlike the certainty attained by the operation of thinking, the certainty of the Cogito, metaphysically, the *speaking body* remains a mystery, a contradiction which is to be excluded outside the limits of philosophical thinking.

Dissatisfied with Descartes’ reply, Elizabeth keeps pursuing the question of how to conceive “a single person who has a body and thought together” and in response to her persistent demand, Descartes writes her that if she finds this matter to be of such great importance, he beseeches her “to take the liberty to attribute matter and extension to the soul, for that is nothing more than conceiving of its union with the body” (Descartes 2003: 183). When Descartes’ suggests to Elizabeth, that to “go beyond dualism”, so to speak, is incompatible with his framework of metaphysical thinking, and when he proposes that Elizabeth conceive the ‘extension of the mind’ he tells her that whereas the union is what “everyone constantly experiences in themselves”, it is however experienced *without philosophising* (ibid: 183). Elizabeth

may attribute 'extension to the mind' as long as she keeps in mind that she has stepped outside the gates of philosophical thinking. In arguing that conceiving the union could only be done "without philosophising", Descartes establishes an irrevocable gap between philosophical thinking and our experience, between metaphysics and phenomenology, between the real and the (im)possibility of its formalisation.

Indeed Descartes' *Meditations* is probably the most influential text on the dis-location of the subject. It was Descartes who sought to deliver the philosophical subject from her body and ended up leaving her without a *place*, looking at the world from a disembodied "view from nowhere" to use Thomas Nagel's famous critique of the perspective of the cogito (1986). Not wanting to run the risk of making the metaphysical subject *inconceivable*, Descartes disembodies her and thus transforms the philosophical subject into a "nonspatial thinking substance, an individual unit of mind-stuff quite distinct from the material body" (Churchland 1984: 13). In this respect the famous "cogito ergo sum" is an argument whose implication (*ergo*) claims an incorporeal existence, an existence with no *topos*.⁴

Descartes' dualistic metaphysics reaches an impasse against the question of the 'extension of the mind', an impasse which does not attest to a theoretical fault,⁵ but rather to an encounter with an impossibility. Indeed the mystery of the speaking body Lacan argues in Seminar XX is a mystery which pertains to the real, and the real "can only be inscribed on the basis of an impasse of formalization. This is why I thought I could provide a model of it using mathematical formalization"

4 | On Descartes' conception of the incorporeal status of the eye cf. (Crary 1990: 48); on the interrelation between vision and natural geometry cf. (Hatfield 2015).

5 | It is what Pierre Skriabine denotes by the "fault in the universe", the hole which the real punctures in the symbolic, and the "hole which supports the structure" cf. (Skriabine 2004: 79).

(1998: 93). Whereas for Descartes the mystery of the union is deemed *inconceivable*, for Lacan the *inconceivable* is one of the names of the Real. Formulated in Cartesian terms, Miller argues that the mystery of the speaking body is the “union between speech and the body” (2014), a union which psychoanalysis attests to from the early days of Freud’s encounter with the clinic of hysteria.

TOPOLOGY: THE SPATIAL STRUCTURE OF THE SPEAKING BEING

Whereas philosophical metaphysical thinking reaches an impasse in front of the enigma of the ‘talking body’ Lacan finds in mathematics a way of escaping from the constraints of traditional knowledge:

Mathematization alone reaches a real – and it is in that respect that it is compatible with our discourse, analytic discourse – a real that has nothing to do with what traditional knowledge has served as a basis for, which is not what the latter believes it to be – namely, reality – but rather fantasy. The real, I will say, is the mystery of the speaking body, the mystery of the unconscious. (Lacan 1998: 131)

Instead of the totality of the metaphysical substance, Lacan’s *manque-à-être* is informed by a structural lack, a lack which is *real* and which can be formalised with the mathematical notion of structure, *as real* (2009: 40). Where “traditional knowledge” which Lacan associates with the totality and absolutism of the metaphysical substance comes to a halt against the ‘fault in the universe’, topology structure, developed after Descartes’ death, can account for the function of the fault i.e. the real, which Descartes seems to exclude to the domain of “without philosophising” in favour of sustaining the coherency of his

substance dualism. Indeed the impossibility of representing the union between two disjoint non-empty sets could be addressed in terms of a topological connected space, a space that is metaphysically *inconceivable* but yet is *real*. To be able to account for this “fault”, e.g. the empty set, a step away from the conceptions of 17th century mathematics to the topology of 20th century mathematics is required.

“BUT WHAT IF EULER INSTEAD OF DRAWING HIS CIRCLE, DRAWS MY INVERTED EIGHT?”

(LACAN 1961-62: 11.04.62)

The subject of *topos-logia*, the *logos* of *place*, is those properties of geometric figures that are unchanged by topological mappings, that is, by mappings that are bijective (i.e., one-to-one and onto correspondences)⁶ and bicontinuous (i.e., continuous with continuous inverses). Those properties that remain unchanged under topological mappings are called the topological properties of the figure. Two figures that can be mapped topologically onto each other are said to be homeomorphic (Seifert/Threlfall 1980: 1). Put differently, topology studies the possibility of the deformation of objects without changing their intrinsic properties that are, strictly speaking, purely mathematical relations – fundamentally all topological properties are reducible to mathematical relations between sets. Considering the fact that a topologist cannot distinguish a doughnut from a cup of coffee as a cube and a sphere are topologically homeomorphic and therefore could be subjected to a continuous deformation, it is evident

6 | An *injective function* is a function between the elements of two sets, where it does not map two (different) elements to the same element. A *surjective function* from X to Y is a function between the elements of two sets (X and Y), where to every element y of Y there is an element x of X which is mapped to y. The function is *bijective* if it is both injective and surjective.

that topological transformations between figures do not pertain to an homophonic resemblance which characterises imaginary relations of similarity, but rather to mathematical relation which pertain to a structural similarity.

However despite Lacan's turn to topology to address the spatiality of the speaking being, topology is in fact said to epitomise the historical move of the liberation of mathematics from all spatial or sensory intuition (Hallward 2003: 340). With topology "numbers and relations between numbers no longer need be considered in terms of more primitive intuitive experiences (of objects, of nature) or logical concepts" (ibid). If topology is reducible to relations between sets and only in a "secondary sense, due to the birth of the thing, do we consider a space to be involved" (Miller 2004b: 35), what kind of spatial relation takes place between subject and object?

Notably, conceiving the distinction between subject and object in terms of spatial relations is not a psychoanalytic novelty; it is rather a distinction upon which the metaphysical separation between subject and object rests on. The metaphysical distinction between subject and object is grounded in a spatial distinction between that which is, and that which is *external* to it, the object (in Latin *objectara*) is literally what is external to the subject, put before it, opposed to it. With the introduction of the psychoanalytic object this distinction is problematised. Indeed Lacan coins the neologism *extimité* to subvert the exterior/interior distinction. By applying the prefix *ex* from *exterieur* to the word *intimité*, "intimacy" Lacan formulates the spatial status of the object as indeterminate with respect to the distinction between interior and exterior, a distinction upon which the metaphysically firm differentiation between subject and object rests.

Lacan gives the paradigmatic example of the object's *extimité* in his discussion of object *a* in Seminar X as a detachable object. When discussing weaning anxiety Lacan

argues that it is not that on a particular occasion the breast is missing when the child needs it, it is rather that “the infant yields the breast to which he is appended as a portion of himself” (2014: 313). Interestingly, Lacan argues, when the little child cedes his mother’s breast, it is as if she cedes an organ that is part of her very own body. In ceding the mother’s breast, the child experiences the loss as a loss in his own body, “it is that in the body there is always, by virtue of this engagement in the signifying dialectic, something that is separated off, something that is sacrificed, something inert, and this something is the pound of flesh” (ibid: 219). In separating from the mother so as to constitute herself as a subject, the object “which is not the actual breast but what the breast incarnates, something that had brought the child immense pleasure” (Gessert 2014: 60) becomes spatially extimic, suspended between subject and Other. The *extimic* object as a “semblance of being” is included in the spatial structure of being as an impossible object.

THE MYSTERY OF THE SPEAKING BODY

In “The Unconscious and the Speaking Body” Miller (2014) traces the mystery of the speaking body to the Cartesian mystery of the ‘extension of the mind’. To account for the ‘extension of the psyche’ one has to account for the question how it is possible for one single being to be both extended and non-extended? Put differently, how can two heterogeneous disjoint sets (body and mind) be both non-identical and yet continuous, like the two sides of a single-sided figure? Topological shapes like the cross-cap and the Möbius strip, as twisted, doubled topological surfaces in which interior and exterior are in a relationship of continuity, demonstrate such spatiality. According to Blum and Secor “these surfaces take relationships that in some ways seem contradictory or

impossible and show that there is a mathematical basis for understanding them in this way” (2011: 15). Against Descartes’ introduction of the hypothesis of the pineal gland as a “point of interaction” between body and mind, in Lacan’s view there is no privileged point which stands as the point of intersection between mind and body union, as “topologically the nature of the structural relationships which constitute the surface is present at every point: the inside face is merged with the outside face for each one of its points and its properties” (1961-62: 16.5.62). The spatiality of the psyche is thus like a continuous one-sided Möbius strip, wherein there is no point which makes possible a leap from the one side to the other as the strip is one-sided. In other words there is no point of reversal between inside and outside, as the Möbius strip is a one-sided continuous figure.

However topological elements demonstrate their efficacy as psychoanalytic mathemes only on the condition that they are subjected to a certain kind of cutting (Nasio 2004: 102). In Seminar IX Lacan argues that the signifier, in its most radical essence is a cut in a surface (1961-62: 16.5.62), a cut that is equivalent to the operation of the signifier on the body. Indeed what the signifier introduces, Lacan argues, “in its corporal incarnation is discontinuity. The interruption in the successive forms part of its structure” (*ibid*). The operation of the signifier on the body produces two topologically connected pieces, connected by virtue of the cut, a discontinuity.

If we take the topological figure of the cross-cap and introduce the signifying cut in a way which divides it into two shapes we obtain both the subject and the object in its division, a surface devoid of orientation, the Möbius strip, which represents the subject of the unconscious and a surface of orientation, a disk, representing object *a*.⁷ Unlike

7 | While an ordinary surface has two sides, Möbius and Listing made the discovery that there are surfaces with only one side. The simplest such

two unrelated parts produced from a cut of a geometric shape, the “interior 8” cut produces two heterogeneous parts which nonetheless are not unrelated, inasmuch as they both “compose” the structure of the spatiality of being.

The cutting of the cross-cap produces two different pieces, one which can have a specular image and the other which, quite literally, doesn't have one. It was a question of the relationship between minus-phi and the constitution of the little *a*. On one hand, there is the reserve that can't be grasped in the imaginary, even though it is linked to an organ, which, thank goodness, is still perfectly graspable, this instrument which will all the same have to go into action from time to time for the satisfaction of desire, the phallus. On the other hand, there is the *a*, which is this remainder, this residue, this object whose status escapes the status of the object derived from the specular image, that is, the laws of transcendental aesthetics. (Lacan 2014: 40)

Lacan's *logos* of *topos* constitutes the ontological space of *manque-à-être* as a spatiality that includes both a specular element and a non-specular element, that which is imaginarily graspable and that which is not. In extending towards the object in the Other, the subject of desire is always in spatial

surface is the so-called Möbius strip formed by taking a long rectangular strip of paper and pasting its two ends together after giving one a half-twist. Anyone who contracts to paint one side of a Möbius strip could do it just as well by dipping the whole strip into a bucket of paint. The boundary of a Möbius strip is a simple and unknotted closed curve, and it is possible to deform it into a circle. During the deformation however the strip must be allowed to intersect itself. The resulting self-intersecting and one-sided surface is known as a cross-cap, once the disc, whose boundary is this circle, is attached. If inversely one slices into the cross-cap along its self-intersecting line, the resulting surface is a twisted Möbius strip and a flattened disk, which can be joint or glued together only when deformed (cf. Newman 1956).

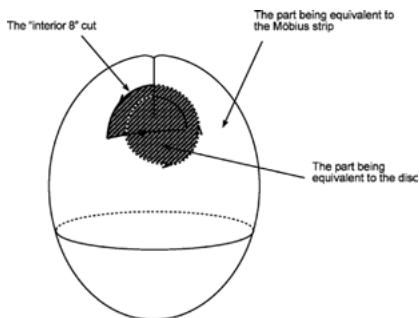
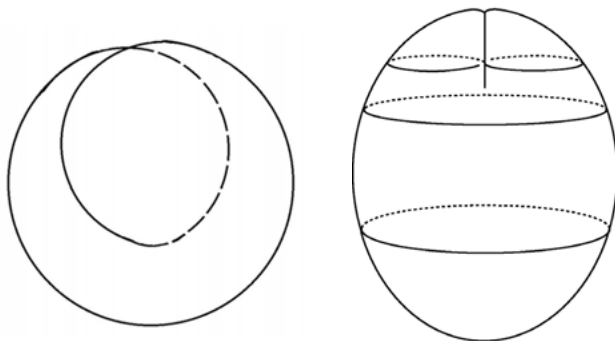


Fig. 2: Upper part: the cross-cap as gluing of a twisted disc and a Möbius strip. Lower part: left – the “interior 8” loop; right: the cross cap and the loops on it, demonstrating how the disc is twisted while glued to the Möbius band.



excess with respect to the specular limits of the body, it is always ontologically more than its empirical body. This excess is ontological as it pertains to the spatiality of being rather than to the extension of the body as in desire *manque-à-être* is always ahead of itself spatially.

IN CONCLUSION: TOPOLOGY AND EXCESS

In *Being and Time* Heidegger notes that Dasein's existence is always ahead-of-itself, ek-sistentially and not transcendently, Dasein is capable of transcending what it already is, the possibilities of its being. In the later Zollikon seminar Heidegger discusses Dasein's ontological structure of ahead-of-itself in spatial terms, "when pointing with my finger towards the crossbar of a window over there, I [as body] do not end at my fingertips" (2001: 86). For Heidegger, only beings that share Dasein's mode of being can go beyond themselves spatially, as what underlies this spatial excess pertains to the ontological structure of Dasein. This structure reveals a discrepancy between the ontic body and the ontological, between the corporeal limits and the bodily limits "the bodily limit and the corporeal limit are not quantitatively but rather qualitatively different from each other. The corporeal thing, as corporeal, cannot have a limit which is similar to the body at all [...] The difference between the limits of the corporeal thing and the body consists then in the fact that the bodily limit is extended beyond the corporeal limit" [...] thus raising the question 'do the limits of me as a corporeal thing coincide with myself as a body?' " (ibid: 86)

Insofar as Dasein is ontologically ahead-of-itself, its projection towards its possibly-to-be has a spatial dimension which Heidegger designates as *bodying forth* (*Leiben*). *Bodying forth* like an *existentiale* is said to be a "way of Dasein's being" (ibid: 197). In being ahead of itself as *bodying forth* Dasein's spatiality exceeds and extends beyond the imaginary figure, it exceeds towards a possibility that is not-yet. Heidegger notes that unlike the physical limits of the body which change rarely when the figure of the body changes, such as in growing fat or slim, the ontological structure of *bodying forth* is ever-changing, inasmuch as being itself, in Heidegger's thinking, is never static like the metaphysical substance but is rather

transitive or active in projecting towards future possibilities, thus always exceeding its corporeal limit.

With Heidegger's notion of the ontological difference the discrepancy between the ontic, empirical body and the ontological *bodying-forth* can be demonstrated. Whereas the former's limits rarely change and consist of a mere extension in space, an extension which could grow fat or slim, the latter's limits pertain to the ontological structure of Dasein and to an excess which is *qualitatively* different, it pertains to the structure rather than to the shape. However it is the ontic, "pointing with my finger towards the crossbar of a window over there" which discloses the ontological structure of Dasein's spatiality as being-ahead-of-itself. Following this Heideggerian distinction it could be argued that for Lacan the limits of the real of the body exceed the limits of the specular body, as the real of the body opens onto the dimension of the spatiality of being, a spatiality which includes the object which is *extimate* to the body of the subject. The spatial structure of the speaking being thus includes the *locus* of the Other. The topological structure of *manque-à-être* exceeds the specular limits of the body insofar as it includes the object as a non-specular yet structural element. Inasmuch as the movement of the drive is a movement of going out of itself and achieving its goal which is satisfaction through the Other, this extension of the psyche exceeds the corporeal imaginary limits of the body, reaching out to a non-specular object situated in the Other.

BIBLIOGRAPHY

- Blum, Virginia/Secor, Anna (2011): "Psychotopologies: Closing the Circuit between Psychic and Material Space, Environment and Planning D." In: *Society and Space* 29, pp. 1030-1047.

- Boothby, Richard (2001): *Freud as Philosopher: Metapsychology After Lacan*, New York: Routledge.
- Brown, Deborah (2006): *Descartes and the Passionate Mind*, Cambridge: Cambridge University Press.
- Churchland, Paul (1984): *Matter and Consciousness*, Cambridge, MA: MIT.
- Crary, Jonathan (1992): *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, Cambridge, MA/London: MIT.
- Descartes, René (2003 [1647]): *Meditations and Other Metaphysical Writings*, trans. Desmond Clarke, London: Penguin.
- Freud, Sigmund (2001 [1915]): "The Unconscious." In: id., *The Standard Edition of the Collected Works of Freud*, vol. XIV, trans. James Strachey, London: Vintage Press, pp. 166-204.
- Freud, Sigmund (2001 [1920]): "Beyond the Pleasure Principle." In: id., *The Standard Edition of the Collected Works of Freud*, vol. XVIII, trans. James Strachey, London: Vintage Press, pp. 7-64.
- Freud, Sigmund (2001 [1938]): "Findings, Ideas, Problems." In: id., *The Standard Edition of the Collected Works of Freud*, vol. XXIII, trans. James Strachey, London: Vintage Press, pp. 299-300.
- Gessert, Astrid (2014): "Hysteria and Obsession." In: Astrid Gessert (ed.), *Introductory Lectures on Lacan*, London: Karnac, pp. 55-69.
- Hallward, Peter (2003): *Badiou: A Subject to Truth*, Minneapolis /London: University of Minneapolis Press.
- Hatfield, Gary (2015): "On Natural Geometry and Seeing Distance Directly in Descartes." In: Vincenzo De Risi (ed.), *Mathematizing Space*, Heidelberg: Birkhäuser, pp. 157-191.
- Heidegger, Martin (1997 [1969]): "Art and Space," trans. Charles Siebert. In: Neil Leach (ed.), *Rethinking Architecture: A Reader in Cultural Theory*, London/New York: Routledge, pp. 116-119.

- Heidegger, Martin (2001 [1959-1969]): *Zollikon Seminars: Protocols-Conversations-Letters*, trans. Franz Mayr/Richard Askay, Evanston: Northwestern University Press.
- Johnston, Adrian (2005): *Time Driven: Metapsychology and the Splitting of the Drive*, Evanston: Northwestern University Press.
- Kant, Immanuel (1998 [1781]): *Critique of Pure Reason*, trans. Paul Guyer/Allen W. Wood, Cambridge: Cambridge University Press.
- Lacan, Jacques (1961-62): *Le Séminaire, livre IX, L'identification* (unpublished).
- Lacan, Jacques (1976-77): *Le Séminaire, livre XXIV, L'insu que sait de l'une-bévue s'aile à mourre* (unpublished).
- Lacan, Jacques (1992 [1959-60]): *Seminar, Book VII, The Ethics of Psychoanalysis*, trans. Dennis Porter, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Lacan, Jacques (1998 [1972-3]): *Seminar, Book XX, On Feminine Sexuality: The Limits of Love and Knowledge*, trans. Bruce Fink, ed. Jacques-Alain Miller, New York: W.W. Norton & Co.
- Lacan, Jacques (2006 [1936]): "The Mirror Stage as formative of the Function of the I as Revealed in Psychoanalytic Experience." In: id., *Écrits*, trans. Bruce Fink, New York: W.W. Norton & Co., pp. 75-81.
- Lacan, Jacques (2006 [1966]): "Commentary on the graphs." In: id., *Écrits*, trans. Bruce Fink, New York: W.W. Norton & Co., pp. 858-963.
- Lacan, Jacques (2014 [1962-3]): *Seminar, Book X, Anxiety*, trans. Adrian R. Price, ed. Jacques-Alain Miller, Cambridge: Polity.
- Merleau-Ponty, Maurice (1968): *The Visible and the Invisible*, trans. Alphonso Lingis, Evanston: Northwestern University Press.
- Miller, Jacques-Alain (2004a): "Lacanian Biology and the Event in the Body." In: *Lacanian Ink* 18, pp. 6-29.

- Miller, Jacques-Alain (2004b): "Mathemas: Topology in the Teaching of Lacan." In: Ellie Ragland/Dragan Milovanovic (ed.), *Lacan Topologically Speaking*, New York: Other Press, pp. 28-48.
- Miller Jacques-Alain (2014), "The Unconscious and the Speaking Body", lecture given on April 17, 2014, at the 9th Congress of the World Association of Psychoanalysis, trans. Adrian R. Price (<http://tinyurl.com/jbvma4s>).
- Nasio, Juan-David (2004): "Objet a and the Cross-cap." In: Ellie Ragland/Dragan Milovanovic (ed.), *Lacan Topologically Speaking*, New York: Other Press, pp. 98-116.
- Nagel, Thomas (1986): *The View from Nowhere*, Oxford: Oxford University Press.
- Newman, James R. (1956): *The World of Mathematics*, vol. 1, New York: Simon and Schuster.
- Seifert, Herbert/Threlfall, William (1980 [1934]): *A Textbook of Topology*, trans. Michael A. Goldman, *Pure and Applied Mathematics*, vol. 89, ed. Samuel Eilenberg/Hyman Bass, New York et al.: Academic Press.
- Soler, Colette (1995): "The Body in the Teaching of Jacques Lacan." In: *Journal of the Centre for Freudian Analysis and Research* 6, pp. 6-38.
- Skriabine, Pierre (2004): "Clinic and Topology: The Flaw in the Universe." In: Ellie Ragland/ Dragan Milovanovic (ed.), *Lacan Topologically Speaking*, New York: Other Press, pp. 73-97.

List of Figures

Wegener: Psychoanalysis and Topology – Four Vignettes

Figure 1-4: Scan: Mai Wegener.

Figure 5, 6: Graphics: Michael Friedman.

Figure 7: Source: Wiki Commons.

Blümle: Secret Topology – Lacan's Optical Models and Schemata as a Combination of Mathematics, Media, and Art

Figure 1-12: Scan: Claudia Blümle.

Friedman: Torus and Identification. The Beginning of Lacanian Mathematics

Figure 1-12: Graphics: Michael Friedman.

Amir: The Unreadable Letter A Topology of the Image-Knowledge

Figure 1: Graphics: Renen Amir.

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*Cohen: The Spatiality of Being Topology as Ontology
in Lacan's Thinking of the Body*

Figure 1,2: Graphics: Rona Cohen.

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