

Lacan's twist on Peirce's dial

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This paper traces Lacan's reworking of Aristotelian propositional logic, as it appears in the session of 17 January 1962 of *Seminar IX, Identification*.¹ Lacan comes to the propositions in the course of an investigation into 'identity', the problematic which he sees as implicit within the very concept of 'identification'. The first seven sessions of the seminar outline how various classical and contemporary logicians have theorised logical identity (ie. given the concept 'A', by what law can one claim that 'A = A'?). This outlining serves to offset Lacan's simultaneous exposition of the 'logic of the signifier' which has consistently eluded such thinkers.

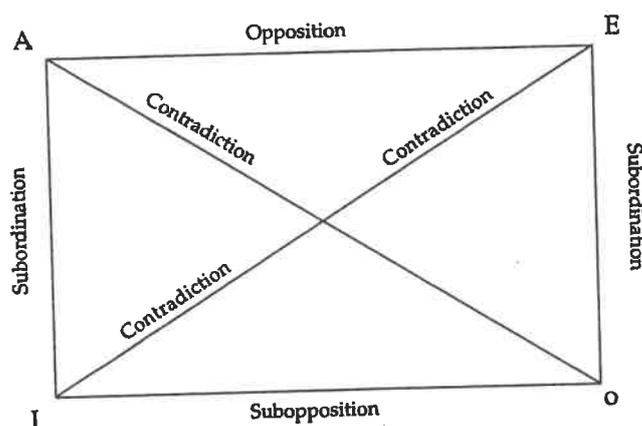


Fig. 1 The square of opposition²

The logic of identity *qua* signifier which emerges from this investigation is then, in the latter chapters of the seminar, rolled back into Lacan's exposition of identification itself. This formation must, he claims, be understood as 'a signifier-identification (*une identification de signifiant*)'.³ Appearing at the mid-point in this

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¹ Jacques Lacan, *Identification, The Seminar of Jacques Lacan 1961/62* (Unpublished anonymous English translation)

² Cf. A. Getmanova, *Logic*, (Moscow: Progress Press, 1989), p. 105.

³ Jacques Lacan, *Seminar IX: Identification*, [1961/1962], anonymous unpublished English translation, 22 November 1961.

transition from the logic of identity to the linguistically informed topology of identification, the analysis of the propositions has a pivotal position within the seminar. It therefore seems appropriate to attempt, in the following pages, to open up this dense and difficult passage through a presentation of the sources that Lacan draws on, and an interpretation of the figures that are drawn from them.

In session of 17 January 1962 of *Identification* we find an outline of the table of general propositions known since the early Middle Ages as the Logical Square or the Square of Opposition (fig.1). The square is not classical in origin at all, and yet all of the logical relations it schematises can be found within Aristotle's works. Lacan proceeds to rework these relations in the ensuing pages, drawing mainly on Charles Saunders Peirce's essay on 'The Algebra of Logic'.⁴

Peirce⁵ (b.1839, d.1914) is widely regarded as the 'father' of American philosophical pragmatism, a philosophy whose imprint can definitely be felt in his work on the square. His critique of the logical contradictions enshrined in the square led him to re-schematise the propositions in the form of the circle in fig.2, which appears in Lacan's text as the 'dial' (herein fig.3).

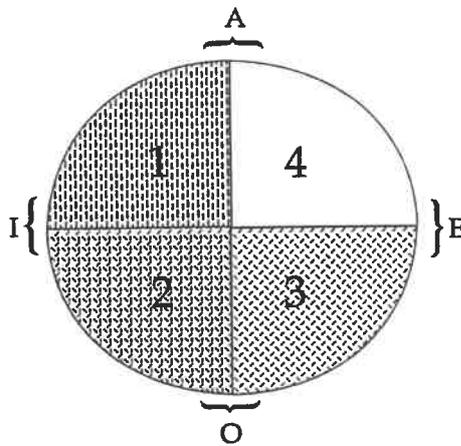
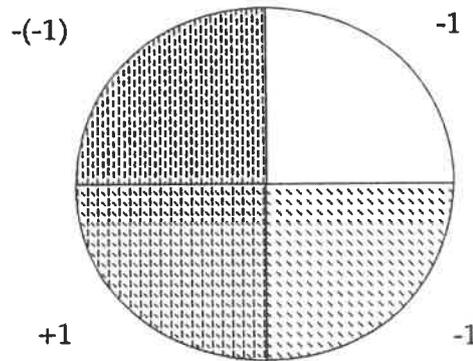


Fig. 2 *The quadrant*⁶

⁴ C.S. Peirce, 'The Algebra of Logic,' [1880] in *Collected Papers*, ed. C. Hatshore and P. Weiss, 1931-35, vol.3.

⁵ Pronounced /pɔ:s/ ie. 'Purse'

⁶ Cf. C. S. Peirce, 'The Algebra of Logic,' vol.3, p. 114.

Fig. 3 *The dial*⁷

In the following pages I will attempt to revisit and unfold these figures, tracing the basic movement of Lacan's progression through them—but I will do so slowly, keeping the shapes he shifts through as simple and as close to hand as possible. Starting then, with a description of the Medieval square, I will move on to Peirce's circle (referred to, metonymically, as 'the quadrant') so as to arrive finally at the dial, a shape which, at first glance, might seem to be simply a direct, albeit confusing, transcription of Peirce's figure. There is, I will suggest, a reworking here too. My attempt to show how Lacan reformulates Peirce's findings will be aimed at illustrating how this movement from quadrant to dial might allow us to tune into Lacan's own twisted logic.

The Square of Opposition

In the top left corner of the Square (fig.1) you will see a capital A, which here denotes the universal affirmative proposition (or judgment) : 'All S is P' i.e. 'All of the Subject is the Predicate.' Taking the example Peirce later uses for his quadrant (in preference to Lacan's confusing Latin example, *Omnis homo mendax*), I will present this proposition through the statement 'All lines are vertical.' To follow this example through its various articulations within the square will give us:

- E: universal negative* (No S is P) : No lines are vertical
O: particular negative (Some S is not P) : Some lines are not vertical.
I: particular affirmative (Some S is P) : Some lines are vertical

Looking at the square that is thus formed you will see A + I on the affirmative side and E + O on the negative. These letters are taken - acronymically - from the Latin *affirmo* and *nego*, a feature which further illustrates the medieval origin of

⁷ Cf. J. Lacan, *Seminar IX: Identification*, 7 March 1962.

the square.⁸ The distinction thus enshrined between affirmative and negative propositions was said to be one of *quality*. As Peirce states, this distinction was traditionally supposed to hinge on the subject: 'It is usually understood that affirmative propositions imply the existence of their subjects, while negative ones do not.'⁹ The distinction between universal and particular judgements, on the other hand, the grouping of A + E against I + O, was placed under the rubric of *quantity*. The quantity of a judgement was said to relate to the predicate i.e. in how many cases could the predicate ('vertical') be truthfully attributed to the subject ('lines').¹⁰ Each judgement, then, in the classical system, was to be described in terms of both its quality (yes/no - pertaining to the subject) and its quantity (all/none/some - pertaining to the predicate).

As well as identifying each of the propositions in this manner, the square was taken to schematise various possible relations between them. The two axes of *contradiction* which you see running diagonally between the judgements are intended to denote the absolute and respective incompatibility of the two pairs A + O and E + I. If one of these judgements is true (ie A: 'All lines are vertical') the contradictory judgement cannot be true (ie. it cannot simultaneously be the case that O: 'Some lines are not vertical'). Nor can both be false at the same time. The truth of one *contradictory* (as they are often termed) entails the falsity of the other.

The two universals A and E, on the other hand, are *contraries*, set in a relation of *opposition* (which Lacan terms 'control'). As with the contradictories, A + E may not be simultaneously true. Unlike the contradictories, they may both be false: 'it is false that A: "All lines are vertical"' (the falsity of the universal affirmative) can hold at the same time as 'it is false that E: "No lines are vertical"' (the falsity of the universal negative). It may be the case that neither all, nor no lines are vertical - i.e. it may be that the particular affirmative I: 'Some lines are vertical' is true, in which case both A and E are false simultaneously. This is legitimate according to the square. On the other hand, these two universal judgements may not be simultaneously true. If A, the universal affirmative, is true: 'All lines are vertical', then E, the universal negative, can only but be false, for, given the truth of A, it cannot be the case that 'no lines are vertical.' Because of the laws of contradiction described above, a similar, yet directly inverse, relation of *subopposition* ('subcontrol' in Lacan's terminology) pertains between the contrary particulars I and O. They can both be true, yet they may not be simultaneously false because, as the law of contradiction shows, E and A, their respective contradictories would then be simultaneously true.

⁸ A. Getmanova, *Logic* (Moscow: Progress Press, 1989), p.89. I have drawn mainly on Getmanova for this exposition of the square, though I have also made use of W & M. Kneale, *The Development of Logic*, Oxford: Oxford University Press, 1962, pp.54 - 67.

⁹ Peirce, 'The Algebra of Logic,' §.178, p.114.

¹⁰ This differentiation of the universal and the particular propositions in terms of the predicate, is the very opposite of that denoted through the universal and existential quantifiers, $\forall x$ ('for all x') and $\exists x$ ('x exists such that') respectively, which hinge on the distinction around the subject. These symbols were introduced into modern propositional logic to obviate precisely the problems one encounters in the traditional definition of quantity *qua* predicate.

Turning from these quantitatively defined laws of opposition (among the universals) and subopposition (among the particulars), to the qualitatively defined groups, you can see that relations among the affirmatives and the negatives respectively are characterised by lines of *subordination*. Among the various claims made here, that which is most germane to our interests is the rule that the truth of the universal judgement implies the truth of the particular judgement of the same quality. So if A: 'All lines are vertical' is true, then this is supposed to prove automatically the truth of I: 'Some lines are vertical'. As Peirce puts it, 'it is said that there is an immediate inference from A to I, and from E to O.'¹¹ There are more categories one could consider here (ie. *conversion* and *obversion*), but for our purposes, I imagine the above is sufficient to indicate the regime of relations which Peirce takes on through the quadrant.

The Quadrant

The quadrant (fig. 2) is quite literally a *version* of the square, in the sense that it is obtained simply through turning the square on its side, and filling in the gaps with the illustrations to which the propositions are now referred. This is, first and foremost, an exercise in contextualisation. The resultant illogic of the square will then call forth its rescue in the simplified and workable system of relations which Peirce proceeds to put in the place of the classical rules. The first (top left) quadrant has hence been used to give an illustrative context to 'All Lines are vertical,' the same universal affirmative judgement which I abstractly pegged onto the square above. The following three quadrants illustrate that judgement's subsequent negations and particularisations. In each of the four possible cases, or quadrants, those propositions which subtend the individual quadrants are in those cases true. Those which do not, are false. Each proposition is therefore true of two quadrants and false of the other two.

As is immediately apparent, both A + O and, on the other hand, E + I, remain in relations of contradiction and mutual exclusion (the truth of one indicates the falsity of the other). Yet suddenly the relation of opposition supposed to hold between A and E (that neither can be simultaneously true) has disappeared, for now it can be seen, with regard to the fourth quadrant, that A is true at the same time that E is true. This situation holds because, as Peirce states, 'universal propositions do not... imply the existence of their subjects.'¹² The statement 'All lines are vertical' is indifferent to the presence or absence of its subject (of lines per se) and hence it can hold as true when there are no lines and where it is equally true that E: 'No lines are vertical.' In like manner, the relation of subopposition supposedly pertaining between O and I (that neither can be simultaneously false) disappears, for this rule is, as I explained above, merely the inversion of the relation of opposition supposed to hold between A and E, their respective contradictories. The other categories disappear for similar reasons. In the final analysis, contradiction becomes the sole relation determining the respective falsity and truth of the various judgements.

¹¹ Peirce, *ibidem*.

¹² Peirce, 'Grand Logic' [1893] in *Collected Papers*, vol.2, §456, p.280.

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¹² Peirce, 'Grand Logic' [1893] in *Collected Papers*, vol.2, §456, p.280.

It is worth stressing that this critique of propositional logic, as it was practised up to and including Kant, retains the *law of non-contradiction* (the logical law that stipulates that the concept 'A' cannot equal the contradictory concept 'not-A') as its absolute grounding. It is instructive to compare Hegel, that other great critic of Kant (and influence upon Lacan):

Formal thinking lays down for its principle that contradiction is unthinkable; but as a matter of fact the thinking of contradiction is an essential moment of the Notion. Formal thinking does in fact think contradiction, only it at once looks away from it, and in saying that it is unthinkable it merely passes over from it into abstract negation.¹³

This leads Hegel to a logic which derives impetus from the recognition that the negation of the 'unthinkable' forms a vital stage in thinking itself. This recognition, of the necessity of contradiction is but one of the cumulative series of *determinate* negations by which thinking approaches truth ('the Notion'). Hegel's logic refuses to 'pass over' the contradictions through which it must pass, which is why his critique of the logic of 'formal thinking' is world's away from Peirce's. The structural principle of Peirce's revision of the propositions is not the experience of contradiction, but rather the rule of its inadmissibility. Any contradiction in the actualisation of the propositions is hence stamped out of the quadrant and left behind as the property of the square. Take the classical notion of subordination, the immediate inference from A to I, which claims that if A: 'All lines are vertical' is true, it must follow that I: 'Some lines are vertical' is true. Now, as the circle illustrates, the empty sector (four) can be the support of the universal affirmation A: 'All lines are vertical.' If one were to follow the rule of subordination, this would, in turn, make the particular affirmative I: 'Some lines are vertical' true, because of the fact that none are. This is a contradiction, and for this reason the whole rule by which it occurs must be made to disappear from Peirce's magic circle.

I highlight this issue so as to foreshadow the comparison I will later make between Peirce and Lacan's respective uses of the quadrant. All the same, I want to make it clear that I am by no means dismissing Peirce's work, which is far more sophisticated and interesting than will appear from this brief sketch. In fact, his semiotic interests and innovations lead him very much in the direction of what Lacan terms 'the logic of the signifier.' An example of immediate relevance to the logical investigations in *Seminar IX: Identification*, is Peirce's work on what he calls 'sophisms,' meaning thereby logically contradictory statements like the Liar's Paradox (the statement 'I am lying' which, if it is true, must be false, and if it is false, must be true). Peirce's example is the paradoxical statement 'This proposition is not true.' A logician like Bertrand Russell, in his theory of types, feels compelled to brand such paradoxes with a metalinguistic value beyond the level of ordinary speech so as to preserve the internal consistency of his logical system. That is to say, Russell places them within a hierarchical register that delineates between levels of self-reflexivity in speech,

¹³ G.W.F Hegel, *The Science of Logic*, as quoted in Catherine Clément, *Syncope, the Philosophy of Rapture*, (Minneapolis: University of Minnesota Press, 1994), p.74.

and thereby neutralises the threat they pose to the bald logical statement. Peirce, on the other hand, takes a far more Lacanian approach, arguing that: 'we are not to ask ourselves whether "This proposition is not true" is a true or a false proposition, for every proposition asserts its own truth'.¹⁴

In claiming this, Peirce makes an implicit distinction between two modalities of speech, coexistent in the same speech act, one being the bald logical statement and the other the meaning which it derives from its very context of utterance. That is to say, he is making that familiar Lacanian distinction between the articulation (*énonciation*, also translated as 'utterance' and 'enunciation') and the statement (*énoncé*) - the same apparatus which Lacan utilises to make sense of 'I am lying,' as you might recall from the *The Four Fundamental Concepts*.¹⁵ Of course such parallels can only be carried so far. Lacan's explanation of the Liar's Paradox is given in the service of an argument that will ultimately claim that 'it is as establishing itself in, and even by, a certain lie, that we see set up the dimension of truth'.¹⁶ For Peirce, on the other hand, the gesture that opens the paradox up to its own doubling (as statement and simultaneously articulation) is arrested and read as resolution: the paradox is solved; it can now be discarded as a 'sophism'; we can all get on with the non-contradictory business of pragmatic interaction. There are no truthful lies for Peirce, for ultimately his thought, for all its semiotic sophistication, is constituted by the exclusion of such logical impossibilities.

Hence he sees the necessity to remove those erring Aristotelian/Kantian categories of quantity and quality from the circle. As I stated above, the distinction between affirmative and negative propositions in terms of quality, was supposed to reside in the notion that affirmative judgements imply the existence of their subjects and that negative ones do not. The fact that the universal affirmative can, as the circle demonstrates, be derived from the empty quadrant (four) which it shares with the universal negative indicates, on the contrary, that affirmative judgements do not, of necessity, imply the existence of their subjects, while universal judgements never do. That implication lies, on the contrary, in the realm of the particular judgements I and O. 'Some lines are vertical' implies that there are indeed lines. 'All lines are vertical' does not. In fact the features traditionally said to be qualitative are actually, Peirce claims, the property of the quantitative grouping - and vice versa. Yet one cannot simply turn them on their heads, for the terms are too mired in bad history to be retained: 'I for one,' states Peirce, 'vote to eject them'.¹⁷ In their place, he suggests that the distinction between universals and particulars, which does indeed hinge upon the subject, be denoted through the Ancient Greek word *Lexis*: 'to pick out, and also to tell; it is the mode of picking out, or of reckoning'.¹⁸ Lacan also finds

¹⁴ G. Deledalle, *Charles S. Peirce, An Intellectual Biography* (Amsterdam: John Benjamin's Publishing Company, 1990), p.76, fn.14. [Ed. Author's emphasis]

¹⁵ Jacques Lacan, *The Four Fundamental Concepts of Psychoanalysis*, 1964, (London: Penguin Books, 1979), pp.138-42

¹⁶ *Ibidem.*, p.138.

¹⁷ Peirce, 'Grand Logic', §455, p.279.

¹⁸ *Ibidem.*

'reading' among the various meanings of this word¹⁹. Peirce proceeds to suggest that the distinction between affirmative and negative propositions be denoted by *Phasis* which he defines as follows: 'saying, in the sense of: 'What do you say? Yes or No?'; being the base of *kataphasis*, affirmation, and *apophasis*, negation.²⁰ There is nothing in this distinction by *Phasis* which, in itself, can indicate the presence or absence of a subject.

Thus far we have:

Phasis: which groups the affirmatives (A + I) together, against the negatives (E + O), and hinges the distinction on the applicability (yes or no) of the predicate to the judgement's putative subject. (*Phasis* replaces 'quality', which supposedly focussed on the subject).

Lexis: which groups the universals (A + E) together, against the particulars (I + O), and hinges the distinction on the implication (necessary or unnecessary) of the subject's existence. (*Lexis* replaces 'quantity', which supposedly focussed on the predicate).

A E I O: the missing letter in this *Lexis* is of course U. In passing over to Lacan I want to briefly highlight the manner in which Peirce's work brings the world of his readers into the realm of abstract logic. His critique of the square's failure to encapsulate human reality is achieved through contextualising its abstract logical laws within a domain of reference. The pragmatism of this approach does not, however, amount to a rejection of the universal *per se*. On the contrary, Peirce insists on the reality of universals, deriving this anti-nominalist stance from his reading of the Medieval logician Duns Scotus. The pragmatic currents of his philosophy bring this belief in universals home: 'The social principle,' he states, 'is rooted intrinsically in logic'.²¹ Peirce seeks to contextualise the abstract principles of logic, for he believes that the contextualisation of logic will lead not away from, but into, the universal. This commitment to the sociality of logic entails, as its corollary, that he reject those philosophies which fail to evidence it. So, for instance, when he characterises the introspective foundations of Descartes' philosophy as 'all the salad of Cartesianism,' the point of the characterisation is to lead his readers to the logical conclusion that they should indeed toss it out as rotten.²² In this, as much as in his critique of the square, he is engaging in that civic process by which men arrive at a truthful comprehension of reality, through the constant accumulation of self-correcting logical inferences. Our chances of attaining the truth in this manner, once one accepts that it does indeed exist, can be put down to statistical probability, for 'it follows necessarily that a sufficiently long succession of inferences from parts to

¹⁹ J. Lacan, *Seminar IX: Identification*, 1961/62, (Unpublished anonymous English translation), Ch. 8, p. 11.

²⁰ Peirce, 'Grand Logic', §455, p.279.

²¹ Peirce, quoted in Deledalle, *An Intellectual Biography*, p.21.

²² *Ibidem*, p.11.

whole will lead men to a knowledge of it.²³ There is a great deal of common-sense here, in this aspect of Peirce's thought. Viewed from this angle, filling in the gaps is indeed an appropriate metaphor for what he is doing with the quadrant.

The Dial

Hopefully the above elaboration has given you enough leverage on the square and the quadrant to move on to the dial. Lacan's immediate approach to these shapes is, of course, not so simple. He gives us an initial picture of the topological terrain at the start of the session of 17 January 1962 of *Seminar IX*, where he compares the 'empty extension of Descartes' approach' with the dimension opened up in the elastic logic of Euler's combinatorics: through the latter's 'beyond of divine logic' we approach 'the void of the Other, a much more terrifying place [than the 'empty extension'] because someone is necessary there.'²⁴ From here Lacan proceeds to a lengthy discussion of the function of negation in French, to ask whether the negative particle *pas* can be seen, as certain grammarians claim, to represent utter 'privation', the exclusion of something from the real. The example *Pas un homme qui ne mente*²⁵ ('There is no man who does not lie'), shows, on the contrary, how such a supposedly privative negation can be translated into the form of the universal affirmative proposition: *Omnis homo mendax* ('Every man is a liar'). Such a translation, from the *Pas...ne* to the *Omnis*, serves to ground the universal affirmative in a privation supposedly opposed to its very identity. The questioning of the function of negation—'What does it suppose?'²⁶—which led us to this point, is, in this manner, diverted into an illustration of the fact that affirmation itself supposes negation. Lacan does not, that is to say, fill in the gaps, so much as focus on the process through which such gaps proceed themselves to fill in the field of reality, making 'the void of the Other' the very substance of his subject.

With regard to the exposition of the square that Lacan now conjures from this void, I want to confine myself to some highly specific, indeed typographic, comments. I will then proceed to address his treatment of the other shapes.

In the transcript of the session of 17 January 1962, the formula given for E: the universal negative, *Nullus homo non mendax*, is misprinted.²⁷ A double negative of the form *Nullus...non* actually denotes emphatic affirmation ie. as it stands, the sentence means 'absolutely every man is a liar,' which is to say it is indistinguishable from the universal affirmative A: *Omnis homo mendax*. Of course, this is where, according to Lacan, the universal negative will eventually lead us - but through misrecognition, not misspelling. The proposition should be *Nullus homo mendax* ('No man is a liar') and, indeed, it appears in this form on the following page.

²³ *Ibidem*, p.21.

²⁴ J. Lacan, *Seminar IX: Identification*, 17 January 1962.

²⁵ *Ibidem*.

²⁶ *Ibidem*.

²⁷ *Ibidem*.

The formula for I: the particular affirmative, *Non omnis homo mendax*²⁸ ('Not all men are liars'), is an illegitimate addition of Lacan's own to the square, as he himself goes on to say. Classically it should be *Aliquis homo mendax* ('Some man is a liar'). This illegitimate form appears, all the same, in the square as depicted²⁹. This seems to be not so much a mistake, as evidence of Lacan's perversity—or rather Lacan's evidencing of the square's perversity. According to the classical definition of quality, an affirmative proposition implies the existence of its subject, while a negative one does not. Among the various confusions arising from Lacan's *Non omnis* is that it yields a judgment which is affirmative and yet which in no way guarantees the existence of its subject ('Not all men are liars' could equal E: 'No men are liars' as much as I: 'Some man is a liar'). Hence Aristotle himself remarked, as Lacan reports, that 'it is not on the qualification of universality that negation should be brought to bear'.³⁰ That is to say, at this moment, Aristotle is speaking not like the Aristotelian he was latter taken to be, but rather like Peirce, for whom negation must always have a phasic significance i.e. it can only refer to the applicability of the predicate (either to denote E: 'in no cases is it applicable', or O: 'In some cases it is not.' O does indeed imply the existence of its subject, but for reasons that have nothing to do with affirmation or negation). Though absent from Peirce's quadrant, the *Non-omnis* acts, in like fashion, to problematise that classical subject-oriented definition of quality. Doubtless Lacan twists the square into this aporiā so as to pave the way toward the quadrant/dial we are now given to consider in its place.³¹

The *Non-omnis* has, however, an additional characteristic, which one might note in passing. It presents us with a particular judgement which fails to imply the existence of its subject (as I showed above, 'Not all men are liars' could equal E: 'None are'). Yet Peirce's very grounds for distinguishing (in terms of *Lexis*) the particulars from the universals is his claim that the particulars do bear that implication. This additional aporia does not resurface in the argument—though I suspect the logicians in Lacan's audience could have done without the reminder that the very ground upon which they are about to step has just disappeared.

On the actual diagram of the dial the 'I' should be in the place of the 'O' and vice versa as will be apparent if you refer to Peirce's version (fig.2) which is, in all other respects, exactly the same.³² But just in case you felt you had the key in your hands you will discover that the numbers delineating the various sectors of Lacan's dial run in the contrary direction to those in Peirce's figure. Lacan gives the number 'two' to the empty set, not 'four' as Peirce does. In the session of 7 March 1962, on the other hand, he follows Peirce's numbering which I myself will adopt in what follows.

In the first half of this paper I attempted to unfold, in a decontextualised but parallel fashion, the outlines of Lacan's movement from the square to the dial of *Seminar IX*. Having briefly tuned back into the specifics of his text, I want to veer off from it again, and not simply because I'm losing my grip on the dial at the

²⁸ J. Lacan, *Seminar IX: Identification*, 17 January 1962.

²⁹ Ibidem.

³⁰ Ibidem.

³¹ Ibidem.

³² Ibidem.

very moment I should explicate its psychoanalytic significance. Though it is true that I find Lacan's usage of *Phasis* and *Lexis* to elucidate the Freudian proposition that 'the father is God or every father is God' (also, 'there is no other father but God') very confusing.³³ All the same, I think that what is apparent is a distinction between two different types of reading, which, when muddled up, lend unintended power to that which would appear to have none—ie. the empty set. I think that the explanation Lacan gives, when he tunes back into the dial in chapter twelve, is actually much clearer, and for that reason I have chosen to focus my analysis on this later passage.

Lacan returns to the dial to explain how the logical notion of class rests on a relation not of inclusion³⁴—such as would seem to be the case with a universal classification of the sort A: 'All mammals have *mammae*' ('breasts,' again in Latin)—but of exclusion. 'Mammals,' Lacan writes, 'are what are excluded from vertebrates by the unary trait *mamma*.'³⁵ To illustrate this (see fig.3), Lacan places the universal class of mammals, as signified by the trait *mamma*, in the first sector of the dial (the vertical lines are now to be read as traits, as *mammae*). He then claims that we can only arrive at the universal class thus signified through the fourth sector - the empty set. For the 'reading' which will lead us to the first sector involves effacing the substantive features of the mammal to the point that simply a unary trait remains - *mamma* as signifier of the mammal class - all that is necessary to signify 'not-vertebrate,' though not enough, of course to embody a positive identity. The unary trait is not the subject from which it was subtracted, which is why Lacan places the subject in the empty sector. In fact he goes further, designating the subject's place by a 'minus one' to signify this very subtraction. This lack is then taken up in the 'reading' which, on finding the *mamma* trait in the first sector, refuses to allow that a trait can exist without a subject for 'it cannot be that the *mamma* is missing, here is what constitutes the universal class.'³⁶ The effect of such a reading is to substantialise the trait—though not by adding a subject to it. On the contrary, this reading subtracts the very possibility that the subject could be absent from the trait which signifies its presence, ie. the possibility exemplified in the fourth sector, the 'minus one.' The subtraction of the 'minus one' from the universal class *qua mamma* leaves us with a 'minus minus one,' an equation which adds up, by one law of reading, (whereby: $-(-1) = -1 \times -1 = +1$), to a positive one, a class of mammals all united with their *mamma*.

That is my guess as to interpreting this gyratory movement from lack to a double lack that is then confused as plenitude. The confusion that allows for the elision of the universal class's lack of contents and gives us a positive subject founded upon a double lack occurs because, as the division of *Lexis* makes clear, the universal realm operates in basic indifference to the existence of its subject. It is only after this misreading has occurred that we can rotate into the particular

³³ J. Lacan, *Seminar IX: Identification*, 17 January 1962. At one level Lacan poses this paternalistic formula and ascribes it to Freud; he does however insist that, as regards the question of existence, it is for Freud in radical doubt.

³⁴ J. Lacan, *Seminar IX: Identification*, 7 March 1962.

³⁵ *Ibidem*.

³⁶ *Ibidem*.

domain—that which implies the existence of its subject—and hence say, of the members of the mammal class defined above (mammals that have *mammae*), that there truly are some mammals here (I), or that there truly are some non-mammals here (O). This truth is founded on error; for the reading of the subject's existence *qua* class, which should be justified on this level of *Lexis* (among the particulars), is already vitiated by the *phasic* misreading of the universal category as valid, when its contents simply cannot be validated at the universal level. It is to this impossible class that the particular and possible judgement then addresses itself. Hence Lacan concludes that 'it is only from starting from the not possible that the real takes its place.'³⁷

From Square to Quadrant to Dial to Where?

Finally it remains for us to return to the shapes with which I started. By superimposing them upon each other I shall attempt to give one final illustration of Lacan's praxis, in its difference to Peirce's. This is an argument I am myself imposing on the text—Lacan does not even bother to name Peirce—in order to highlight Lacan's position. Giving his work on the propositions a 'not-Peirce' significance will hopefully illustrate how the minus minus one figure of 'not-not-Lacan' who leads us to this point then revolves Peirce's quadrant into the signifying model that will inform the topological figures to follow.

I think, in conclusion, that it is possible to see the distinction between the square and the quadrant in terms of the difference between statement and articulation. As I claimed above, it is through such a distinction that Peirce resolves the liar's paradox, through isolating - just like Lacan - a second level of speech, a realm of articulation, which he terms the 'leading principle' of the argument. For Peirce, this result is to be seen as a resolution of the paradox, another step, that is, along the one-way evolutionary path from logic considered as statement, to logic considered as social articulation, of the universal which remains its object. His work on the square occurs within this same trajectory. From such resolutions he can hence proceed, quadrant blueprint in hand, into the ever more real logical community of the future. For in the final analysis, the future functions as the only indeterminate (neither true nor false) place allowed within his philosophy. Even in that indeterminate future, one can be sure that just as 'A' shall never equal 'not-A', the square shall never return to haunt us with its illogical aporia (but don't forget that *Non-omnis...*)

It strikes me that Lacan, on the other hand, for all his Peircian critique of Aristotle, is not discarding the square at all. On the contrary, he is superimposing the dial onto it, and finding significance in the very act of shunting from the former to the latter. Meaning, for Lacan, lies neither in the abstract Aristotelian statement, nor in the pragmatic quadrant which articulates it. It is in the passage between the two and for this to be so, an error, or equivocation must be preserved, albeit undisclosed. This is equally apparent, if one turns to the paradoxes, and notes the difference between Lacan's approach and Peirce's. For Lacan the paradox is unfolded not simply by articulating two levels of speech which contradict each other—by asserting that the statement

³⁷ *Ibidem.*

'a'³⁸ is not the same as the articulation 'a'; its 'leading principle' as Peirce would call it. The very law of non-contradiction, which Peirce rescues through such a manoeuvre, is itself, Lacan argues, supported by the difference ('not-a') integral to supposed identity of the signifier 'a'. For, he states, ' "a" is useable as a signifier in so far as "a" is "not-a"'.³⁹ Only by shunting between 'a', 'not-a', 'not-not-a' (= 'a' again, ie. $-(-1) = +1$) can the signifier acquire, through a sort of *phasic* misrecognition, the apparent identity that can then be set down as a self-evident rule of internal consistency. Thus we arrive at the logical law of identity (corollary to the law of non-contradiction), the seemingly tautological claim that 'a = a'.

To take this paradoxical movement back to the square and the quadrant, the signifier's ability to carry meaning derives from its turnstile shunting between the two shapes. This twist from one to the other preserves the error of the square's misreading and makes it, as error, integral to the quadrant's ability to spin reality into its 'own' particular and illusory shape. Rotating this movement through one final illustration: the signifier *mamma*, which the universal registers of the square led us mistakenly to substantialise ('it cannot be that the *mamma* is missing'), is then, as one trips triumphantly into the particular quadrant, read for real as indicating the presence or absence of a mammal united with its *mamma*, when all you really have is a subject with a signifier in its mouth. This subject, suddenly lost in a revolving door of signifier-identifications, is thereby shunted into the cycle of repetitions which will, in turn, loop us into the torus in the chapters to come.

³⁸ N.B. The large letter 'A' is used in logical notation to denote a concept, whereas the small letter 'a' denotes a judgement. The law of identity which forms the corollary to the law of non-contradiction, is hence given in two forms: 'A=A' (for concepts or classes) and 'a=a' (for judgments).

³⁹ J. Lacan, *Seminar IX: Identification*, 21 February 1962.

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