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## Lacan and Probability

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### Abstract

In the general frame of an inquiry concerning *Lacan and mathematics*, the author is interested in the treatment of the probabilities, the theory and decision, all topics that give way to an interpretation of Pascal's calculus of partition and, in its wake, of the famous argument of betting. Starting from a critical examination of Kant's transcendental aesthetics, that Lacan propounds to the philosophers to replace by logical space and time of the theory of game (as substitute), the psychoanalyst attempts to prove that Pascal is probably the forefather of the theory of game and decision. What is disturbing in this affair is that a number of interpretations of the "geometer of chance <hasard>", which will happen in the 1970s, are in debt, perhaps unconsciously, surely in a secret way, to the Lacanian interpretation that appeared, ten years before.

### Résumé

Dans le cadre général d'une recherche sur *Lacan et les mathématiques*, l'auteur s'intéresse ici au sort que Lacan réserve aux probabilités, à la théorie des jeux et à la théorie de la décision, qui lui permettent d'interpréter le calcul des partis et, dans son sillage, le fameux argument du pari. Partant d'une critique de l'esthétique transcendantale de Kant, que Lacan propose aux philosophes de remplacer par l'espace et le temps logiques de la théorie des jeux, le psychanalyste se tourne vers Pascal pour montrer qu'il est probablement l'ancêtre de la théorie des jeux et de la décision. Ce qui est troublant dans cette affaire, c'est qu'un certain nombre d'interprétations de Pascal, géomètre du hasard, qui auront cours dans les années 70, devront, peut-être sans le savoir, à cette interprétation lacanienne, qui se fait jour dans les années 60, un certain nombre d'éléments qu'elles ne mettront pas forcément en avant.

**Keywords** : Pascal, wager, the problem of points, the calculus of divisions, probabilities, Kant, Transcendental aesthetic, theory of games, theory of the decision.

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« God knows that Pascal is our friend, if I dare say, in the way of a man who leads us, at every step. »

Jacques Lacan, *Le Séminaire*, lesson of January 20<sup>th</sup>, 1965.

Authors who are incapable of invention in mathematics may have nevertheless a *spirit of mathematics*, a “*spirit of geometry*” (*un esprit de géométrie*) as Pascal wrote in his famous fragment of the *Pensées*<sup>2</sup>. We have a spirit of mathematics when we “understand” what we read in mathematics, not without equivocation over the verb *to understand*<sup>3</sup>: we mean through this word neither that we could produce something similar to what we read nor that we should all be able to reproduce it without making any mistake which would rid us of the resolution. We only mean that first we know how mathematics may be rendered “thinking”, sometimes more successfully than those who know how to demonstrate; that, secondly, thanks to our mind, we are able to convert vital, social and existential circumstances into a set of parameters, and then into a frame written in mathematical terms. The mathematical spirit expects from mathematics to be useful, through their methods and results, to the mind itself, in writing its thoughts about objects and fields that look different from those which are apparently the ordinary concern of *arithmetic*, *algebra*, *geometry* and *topology*. Such was the case of Lacan who, similarly to his interest in Hegel – but especially when he ceased to use the Hegelian dialectics to shape the concepts he was aiming at, such as *desire*, *the other* (or *the Other*) - expected to find in mathematics the opportunity for an etching and an engraving of a selection of psychical elements. The symbolic inscription of a number of apparently fundamental elements will be translated into mathematical graphs and signs.

Undoubtedly, Bergson was more of a mathematician than Lacan; he was prized as a *Concours General* laureate; but mathematics were for him nothing but a field for or an object of philosophy when he would speak of them. Mathematics constantly penetrate the purpose of Lacan, providing it, at any moment, with the schemes, the categories he needed – similarly to what can be seen in the works of Pascal and Leibniz, who were among the inventors of mathematics, or in the works of Hegel who was not a creator in this field. Lacan uses mathematical demonstrations, results, manners of arguing, as a painter uses colours and shapes, as a musician uses or produces sounds. The prospect is, in some way, risky in the case of Lacan, because one can be mistaken when one cannot demonstrate the result one uses or when one isolates a demonstration from its context and may sometimes be lured by the use of mathematics in this way. It is not ascertained that Lacan understood the import of Gödel’s theorem, for instance. His enunciation of the problem of division (in the theory of chances) <the famous “*problème des partis*”<sup>4</sup> is sometimes so tangled that we may doubt he understood

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<sup>2</sup> Pascal, B., *Pensées*, frag. 512. Penguin Books, London, 1995.

<sup>3</sup> An equivocation Lacan has always wanted to remove, at least in other sectors, as early as the beginning of his *Seminar* (Lacan 1953-1954, here 1975, p. 120) : “The main thing, when we try to carry out an experiment, it is not so much what we understand as what we don’t understand. [...] It is on this point that the method of commentary proves to be creative. To comment on a text is equal to having a psycho-analysis. How many times have I pointed it out to the analysts I check when they tell me – I thought he would say this or that- ? One thing from which we must the most abstain, is to understand too much, to understand more than what is present in the discourse of the subject. To interpret is not at all the same thing as to fancy that we understand. It is exactly the contrary. I would say furthermore that it is on the basis of a certain refusal to understand that we push the door of the analytic understanding”. [From now, the Seminar will be noted by the letter S, followed by the date of the lesson referred to ; or by LACAN, followed by the year or years of the *Seminar*, when the quotation is less precise or more general]

<sup>4</sup> We shall call here the ‘*problème des partis*’ indifferently the problem of division or the problem of points, in accordance with the practice we can observe in the article by Lorraine Dalton, ‘Probability and evidence’ in *The Cambridge History of Seventeenth-Century Philosophy*, Cambridge University Press, 1998, p. 1124; or, before,

the matter<sup>5</sup> while phrasing it. But, most of the time, speaking under the accepted control of mathematicians who attended the lessons of the Seminar, Lacan extracted from the mathematics he read or spoke of a lot of precise, acute, relevant and creative allusions that spread light on the so-shaped concern. So we are entitled to apply the phrase “mathematical spirit” while speaking of Lacan in so much as he used these very same words himself in a distinct Pascalian way (S, 12/I/69).

If we had to deal with the general relationship of Lacan with mathematics, this concern would be so large that it would lead us into topology (which will only be tackled briefly here), in the theory of knots<sup>6</sup>, in the calculus of infinite series. Here we will stick to what Lacan said about the notion of *probability* and its calculus, accepting large limits to this calculus, since we intend to insert into them what he said about the theory of games, the way he understood it and the fashion he integrated it into psychoanalysis. This enquiry on probability in the wake of Lacan leads, on the one hand, to the core of his incomplete breaking off with Kantism while revealing, on the other hand, how interested Lacan was in Pascal - particularly in the 1968-1969 *Seminar* which immediately and strangely followed the May’ 68 events, or again in the 1970’s *Seminar*. Lacan proved how much he was a very acute connoisseur of the Jansenists, being sometimes a Pascalian author in the way he makes use of Pascal to work on his own current questions, solving them with inventive or creative answers, excluding openly the history of philosophy and what academic philosophers <les discoureurs de l’Université> could say about the “problem of points” (or the problem of division) in the sixties and seventies. The calculus of division in the doctrine of chances and the wager argument, that Lacan is authorized to render jointly liable, in the way he binds them, are originally interpreted and matched with what Lacan said was one of his creations, perhaps the only one in comparison to Freud: the creation of the *object a*, which has echoed all along the *Seminar*, since its emergence in *L’angoisse*, the title of Book X of the *Seminar*. The reading that Lacan makes of the problem of division and of the wager in Pascal’s works will be our concern in the second part of this paper. The purpose of the first part is to follow the criticism that Lacan levelled at the “transcendental Aesthetics”, the section of the *Critique of Pure Reason* which brought so much to the history and philosophy of mathematics. *Critique of Pure Reason* is, along with some other works such as Hegel’s *Phenomenology of Spirit*, one of the foundations of the philosophical culture of the years 1950-1980. The beginning of my enquiry concerning the Lacanian perusal of Pascal was for me the opportunity to be struck with surprise. I am being careful when using *beginning*, because of the hundreds of pages which remain to be deciphered: whether he did this on purpose or not, Lacan did not always speak a clear and unambiguous language. Nevertheless it is worth taking up the challenge. My greatest surprise was to observe the obvious link between *the Seminar* that Lacan entitled *De l’Autre à l’autre* <From the Other to the other> which he ran from 1968 to 1969 (for although he treated academic discourse <le “discours universitaire”> with well known scorn, the general

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according to the articles by A. W. F. Edwards, ‘Pascal and the problem of points’, in *International Statistical Review*, December 1982, pp. 259-266; and ‘Pascal’s problem : The gambler’s ruin’, *International Statistical Review*, April 1983, pp. 73-79.

<sup>5</sup> See the terms he used on January 22d, 1969. Perhaps, we are faced with a bad copy. At any rate, the copy we shall use all along the present paper, when there is not an available text revisited by the hand of Jacques-Allain Miller, is one of the Ecole lacanienne de psychanalyse (EPEL) hosted at: [www.ecole-lacanienne.net](http://www.ecole-lacanienne.net). To quote the Seminar, when no publication was published at Le Seuil, we shall content ourselves with the mention, between two brackets, of the lesson’s date.

<sup>6</sup> The theory of knots is a branch of mathematics that Lacan practised particularly in the last years of the Seminar, and more specifically in *Le Sinthome*, of which Joyce is the main subject. See LACAN, 1975-1976).

framework of his *Seminar* was based on the University's : it may have been the only concession he made to the venerable institution) and the ancestor of today's *Seminar on probabilities*, hosted since 1981-1982 by the Ecole des hautes études en sciences sociales. On the one hand, it is no surprise that Lacan instances the works of his friend George T. Guilbaud; it clearly indicates the source of his knowledge on the problem of division and of the wager. But, on the other hand, the paper by Ernest Coumet, published in the *Annales* (May-June 1970) and broaching the question 'Was the theory of chance born by chance?' - which, to me<sup>7</sup>, appeared as a sort of absolute starting point to the research in the link between the *divisions* <les partis>, the *wager* and a general conception of institutions and society, even before I undertook the present inquiry - must be reconsidered and re-assessed. It is not that the value of the paper has changed ; however its sense appears nowadays as an end or conclusion, as the result of a number of works, because some key-ideas of the famous article were openly expressed in the Seminar '*From an Other to another*', particularly in the lesson of January 15<sup>th</sup>, 1969. Specifically, the idea that the calculus of divisions was rendered possible only by the emergence of economic liberalism (which over-estimates the significance of the future upon the past whose history counts for nothing to estimate an enterprise or a seat at the table of a game) is a key argument in Lacan's *Seminar*<sup>8</sup>. The author indicated that the relation to *pleasure* and to *enjoyment* <jouissance> had to be radically transformed to permit Pascalian calculations. In short, the pages of Coumet, which never alluded to Lacan, did not spring by chance at all<sup>9</sup>.

But before looking into these matters, before starting going into detail and before investigating the Lacanian reading of Pascal, however difficult its language may be, I will explain first of all why the conception of 'object a' demanded to break from Kant who was considered as a philosopher unable to deal with the subject of psychoanalysis (for the using of Kant's philosophy by Lacanian psychoanalysis gives an instance of the many constant ways to make philosophy an instrument for psychoanalysis<sup>10</sup>); I will explain afterwards the promotion of the theory of games and its concern for the reflection of psychoanalysis on its object.

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<sup>7</sup> To myself and, without any doubt, to the most part of readers of my age.

<sup>8</sup> The idea takes sometimes a funny and succinct turn, as in the lesson of June 25<sup>th</sup>, 1969: « Every time the matter is to wager on life, it is the master who speaks. Pascal is a master and, as everybody knows, a pioneer of capitalism. Refer to calculating machine, then the buses". The last words allude obviously to the Pascalian inquiries of itineraries through Paris for public transports in stagecoach, at reasonable price and at regular intervals. Pascal fancied such enterprises some time before dying.

<sup>9</sup> I ignore whether Ernest Coumet was present to Lacan's *Seminar*; I don't know if he had any knowledge of its content, directly, or indirectly through Georges Th. Guilbaud who was one of the pioneers, with Coumet and some other prestigious searchers, of the actual Seminar on probabilities, of the Centre d'analyse et de mathématiques sociales, that has been housed for more than 25 years in the Ecole des hautes études en sciences sociales. Unless the thing is one of these coincidences of which the history of ideas is used to. (Georges Th. Guilbaud died on march 23<sup>rd</sup>, 2008; the review *Mathématiques et sciences humaines* will soon publish an issue that will be dedicated to his memory and whose elements will carry on the purpose of the present paper).

<sup>10</sup> Lacan does not endeavor to deal with the equity of the historian of philosophy who considers an author as the writer of an entire work. An author is only considered as having upheld one thesis or having written such or such statements. Lacan can, at one moment of the *Seminar*, be attached for having supported another argument at another moment. Lacan has not the same care for "justice" as a professional historian of philosophy has; but there is nothing wrong with that.

The watchword given to philosophers by the author of the *Seminar* about anxiety is to rewrite the transcendental aesthetics; nevertheless Lacan had no illusions on the industry and on the inventive capacities of contemporaneous philosophers whose laziness he fustigated even in front of those who attended his Seminar. Keeping aside this delightful attention to philosophers, we may wonder whether Lacan believed much in the possibility of such a rewriting. But we must begin with seeing how the plan was devised.

The most meaningful lesson was given on June 12<sup>th</sup>, 1963. Lacan was speaking about anxiety and established that the traditional philosophical frames to build an object do not fit when the object is such an affect as anxiety. Undoubtedly the affects translate themselves into phenomena, but we would be greatly mistaken if we tried to build the affective object directly from these phenomena while deeming it possible to construct the rule of falling bodies or of any other movement. The type of link between affects and the world is extremely indirect as regards phenomena; it is a sort of sign or signal and we would certainly miss the description of the affect if it were built as an object is in classical physics. The *Critique of Pure Reason*, which is an explanation of the process according to classical physics, whether Galilean or Newtonian, is radically disqualified to deal with affects and objects that affects grasp through phenomena and circumstances. Lacan disparages the *Critique of Pure Reason* less with regard to its properly conceptual part - that is to say in the transcendental logic - than to its theory of space and time, if not in its transcendental aesthetics. Lacan could neither ignore that the 'transcendental aesthetics' was contested as early as the 19<sup>th</sup> century and, we should dare say, was impossible as early as the 17<sup>th</sup> century when more-than-three-dimension spaces were invented; and then four-dimension ones in the geometry of Pascal when he conceived the issue of gravity centre in volumes turning around the axis of a cycloid. Moreover, microphysics at the beginning of the 20<sup>th</sup> century needed spaces that included different sorts of dimensions and that could be defined by an intuitive characteristic of continuity. The spaces-and-times of microphysics are counter-intuitive; phenomena that spread in them, if we dare say, disturb the immediate feeling that we have of space and time. These spaces and times are such constructions that they have nothing to do with the immediate conception we fancy to have of them.

The value of Lacan's work concerning the matter of affectivity exactly shows that affects and affective objects cannot enter the schemes of three-dimension spaces, whose characteristics are continuity, and some other intuitive properties. Lacan thought it necessary to build, without any preconceived judgement, the affective spaces and times, as Freud had promoted in the famous *Konstruktion in der Analyse*, on which Lacan's work may be considered as a long commentary.

The only point on which Lacan could somehow receive some help from Kant's *Critique* is to be seen in the very practical conception of the making of concepts. Concepts are not right just because of their ability to match the phenomena or things themselves: they are composed and made; they are practically and ethically relevant. Lacan kept saying that the unconscious itself was an ethical concept, meaning here that it was not necessary to look for any corresponding *vis-à-vis* in the things themselves, that is to say in the mind<sup>11</sup>. The unconscious is a fictitious construction which enables the analyst to give a practical shape to a certain sort of experience that can be organized without any prejudice or preconceived ideas.

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<sup>11</sup> See LACAN, 1964 ; here 1992, p. 41 : « The statute of unconscious, that I indicate so frail on the ontic plan, is ethic » ; and, a little further : « If I word here that the statute of unconscious is ethic, no ontic, it is precisely because Freud don't bring it forward when he gives a statute to unconscious » (ibid., p. 42).

That is how Lacan came to speak of his ‘transcendental ethics’, even if he later deemed the expression regretful<sup>12</sup>; but if he saw an invention of the subject in his conceptual activity, which he described as ‘transcendental’, he contrasted it with the transcendental intuition of Kant’s ‘Aesthetics’; and he added, addressing himself to philosophers, not without blaming them :

“Here, I am obliged to step forward in a land where I can only strive to turn the spotlights on the sides, without being too insistent. It would be relevant, I should say, that the philosophers do their work and dare to define something to permit us to locate really to its place, that operation I point out when I say that I extract the function of cause from the field of the transcendental aesthetics in the way of Kant. It would be relevant that others point out for you that it is nothing but an extraction, in a very teaching way, because there are many things, many other things it matches to extract from transcendental aesthetics”<sup>13</sup>.

In a previous lesson, on January 9<sup>th</sup> 1963, he talked of “reconstructing for us, the transcendental aesthetics which suits to us and suits to our experience”. One year before, in the *Seminar upon The Identification*, in the course of the lesson of February 28 1962, Lacan said:

“It is all clear that there is no ground to admit Kant’s transcendental aesthetics as defensible, in spite of what I called impassability of the good service he does us with his *Critic*, and I hope to make it feel just from what I want to show necessary to substitute for it. Because, precisely, if it is fitting to substitute something for it and if it runs all right in keeping something of the structure he has framed, that is the proof he foresaw at least this thing, that he deeply foresaw the thing. So Kant’s aesthetics is not defensible, simply because it is, for him, grounded on a mathematical arguing that depends on what can be called the geometrizing period of mathematics”<sup>14</sup>.

Kantian space is indeed an imitative space of physical phenomena; Kant has always differentiated it from a set of logical relations. Now it is exactly this logical construction that concerns Lacan, because he attacks neither theoretical value nor practical importance to intuition. What is called *intuition* is nothing but the incapacity to detect the ‘formal’, which gives itself inside out as a feeling.

Here we can make a strange critical remark: Lacan stands on very similar grounds to those defended by Bachelard in *The New Scientific Spirit* <*Le nouvel esprit scientifique*>, and for the same reasons. It is from microphysics that Lacan, like Bachelard, gets the idea to express time and space in terms of logical relations. One must break with the conception that a three-dimensional space and a space-time continuum would give the ultimate explanation for worldly phenomena; we must attribute no primacy to this sort of Galilean space-time; the alleged imitative geometry must be totally dismissed and turned to the great benefit of pure logical and algebraic relations. Yet Lacan did not advocate – and neither did Bachelard - a

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<sup>12</sup> He openly denies all adherence to such a philosophy. Bernard Baas reports that, on May 13<sup>th</sup>, 1970, Lacan reacted with alarm to the idea that his work could be spoken of as a ‘transcendental psychology’: “That seems rather overwhelming to me. I did not believe I was so transcendental; but we never know very well” (see BAAS, 1998, p. 26).

<sup>13</sup> LACAN, 1961-1962b, here 2004, p. 326-327.

<sup>14</sup> LACAN, 1961-1962a (see [www.ecole-lacanienne.net](http://www.ecole-lacanienne.net), lesson of January 28<sup>th</sup>, 1962, p. 11).

pure dismissal of Kantism. Lacan calls for a re-writing of the transcendental aesthetics; Bachelard adds to the Kantian antithesis the antinomy of determinism / indeterminism, emphasizing that probabilistic laws are deeper than the non-probabilistic laws of Newton and Kant, simply reducing Newtonian laws to particular and local cases of much more complicated laws. He did not claim to be a contradictor of Kantism<sup>15</sup>, while he did not dare to promote openly a non-Cartesian epistemology.

Curiously, Lacan did not say a single word about Bachelard; in more than 25 years of *Seminar*, he neither pronounces nor recalls his name on any occasion; such oblivion cannot have been voluntary. It seems difficult to imagine for second that he never held in his hands *The New Scientific Spirit* (1934) or any other book of like importance by the same author. Lacan readily quoted Canguilhem and Koyré; he never quoted Bachelard, even on points where his name could be expected. It is difficult to explain such a silence over an author that has apparently, nowadays, stood the test of time better than the two others. Canguilhem would have the same reserve whenever he had the opportunity to quote Bachelard; perhaps he tacitly criticized the grounds of Bachelard's ideas concerning indeterminism<sup>16</sup>. Without a doubt, the fields in which these three authors investigated were different, but Lacan himself emphasized that the epistemology of psychoanalysis does not differ much from the epistemology of microphysics; Lacan enlarged the scope of psychoanalytic critique until it became as infinite as the philosophical concepts. Our astonishment still increases when we realize he could have extracted from Bachelard a particularly interesting criticism of the notion of probability: the author wrote a thesis on approximate knowledge<sup>17</sup>. It appears that even if Bachelard, in the 1930's, did not clearly distinguish his doctrine from Kant's - while their theories were poles apart on many topics -, Lacan could have differentiated himself from Kant in the years 1960 and 1970, stressing the misery of Kantian's reflection on the matter of probabilities.

The Kantian discussion on probabilities was particularly poor; first because he did not understand the logic of probabilities; secondly, because his conception of mathematics and physics was such that he excluded the theoretical dignity of the concept of *probability*. On the one hand, Kant considers probability as a magnitude that differs from the "right" measure; however probability and its calculus have all their importance and value precisely because we have not their "right" measure and because the "real measure" is nowhere hidden behind probability. Kant saw a contradiction between the evaluation of probability and the right value given by a rule or a law; to his eyes, it is impossible to evaluate a degree of probability unless we know the rule from which it deviates<sup>18</sup>. Truly, for Kant, it was necessary to have

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<sup>15</sup> He does not do that because, as Barsotti noticed, 2002, p. 78, "Bachelard remains inscribed, sometimes in veiled terms, in an idealism of the subject of science".

<sup>16</sup> It could be that Lacan displayed, for the same reasons, the same reluctance as Canguilhem regarding Bachelard. In the lesson of February 2<sup>nd</sup>, 1966, he speaks of the progressive rise of a very important thought called indeterminism". Perhaps Bachelard is here indirectly aimed at.

<sup>17</sup> BACHELARD, 1928.

<sup>18</sup> The tenth paragraph of the introduction of the *Logic* of Kant defines *probability* as "a holding-to-be-true based on insufficient grounds which have, however, a greater relation to the sufficient grounds than do the grounds of opposite" (*The Jäsche Logic*, in I. Kant, *Lectures on logic*, translated & edited by J. Michael Young, Cambridge University Press, 1992, p. 583). It is admitted that mathematicians can measure a degree of probability and, more, that "only the mathematician can determine the relation of insufficient grounds to the sufficient ground", whereas "the philosopher must content himself with plausibility, a holding-to-be-true that is sufficient merely subjectively and practically" (*The Jäsche Logic*, op. cit., p. 584). Accordingly we find that "with probability there must always exist a standard in accordance with which I can estimate it. This standard is the *uncertainty*" (p. 583). But Kant adds this strange appreciation that disparages the calculus of probability and strikes it with uselessness: "For since I am supposed to compare the insufficient grounds with the sufficient ones, I must know how much pertains to certainty" (p. 583). If it is necessary to know the certainty to appreciate a

discovered the rule of phenomena, of the object or of the bond between objects, in order to have a right to speak of science; there cannot be probabilistic science, for the reason that as long as we content ourselves with probability, even with the intention to measure its degree, we go no farther than opinion. The concept of *probabilistic law* is, from a literal Kantian point of view, nothing but a nonsense.

This point is important: it makes us understand why probabilities are not precisely the concern of Lacan, but something else. What reveals this point, in an unexpected way, is the congruence of the ideas he defends - first without being aware of it - on transcendental aesthetics, with Jaakko Hintikka's views on the mathematical philosophy of Kant. In a way, Hintikka answers Lacan's question to the philosophers. At least, he shows the principle of an answer: it is necessary to substitute for transcendental aesthetics - which does not match either in physics or in psychology - a transcendental deduction of the semantics of the game theory<sup>19</sup>. Now it is precisely what Lacan was attempting to settle, from the beginning of the *Seminar*.

As early as the very first years of the *Seminar*, Lacan was concerned by a logicization of time, that would change the impressions and intuitions we feel into some decaying signified. He collected at leisure suggestive occurrences in which the intuitions on time vanish for the benefit of a pure logical relation. So, in the *Seminar on The Stolen Letter* <*La lettre volée*>, we see him, throughout pages, be interested in a little game related by Edgar Poe: the game of *odd and even*, enjoyed by the little players of marbles. In this game, the aim for one player is to guess the number of marbles, even or odd, that the other player clutches in one of his hands during the guessing. If his hand hid two marbles and if the other player said 'even', he won and must receive the marbles from the loser; if his hand hid three and if the other player declared 'odd', he lost and must give the equal number of marbles. The consideration that concerns Lacan is that, if the first part of the game is kept aside (if we do not consider the first part of the game in so far as it is random), being random, the game, as soon as the second part begins, is only a game of chance in appearance but it is really a game of cleverness and strategy, won by the player who enters more easily the motives of the other and who knows how to evaluate his capacities to conceal. Fundamentally, the game is the very spring of some fragments of the *Pensées*, when Pascal shows the gradation from complete stubbornness up to utmost cleverness<sup>20</sup>. Indeed, the ultimate degree of perfection is pushed off towards infinite. True psychology is a logic, here a sort of indefinite series, but whose order of terms can be mastered. Psychoanalysis is not the knowledge of the psychical depths: it is the detection and precise spotting of the order of psychical acts, in their symbolic inscription which can be ignored by the imaginary of the signified. Intuition is nothing but an appearance (that has all

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probability, it is perfectly clear that it is useless. Man can appreciate chances to be right in appreciating that the probability of an event is situated between some degree and another.

<sup>19</sup> HINTIKKA, 1996, p. 168, wants to purify Kantism from a prejudice and to succeed « to situate the intuitive and synthetic element into deductive and axiomatic arguments », adding a little further : “The essence of our removing of the Kantian thought stands literally for a transcendental deduction of the semantics of the game theory”.

<sup>20</sup> The most typical case is given in the fragment Br. 337, Sel. 124 of the *Pensées*, entitled *Reason of Effects*. “Gradation. Ordinary people honour those who are highly born, the half-clever ones despise them, saying that birth is a matter of chance, not personal merit. Really clever men honour them, not for the same reason as ordinary people, but for deeper motives. Pious folk with more zeal than knowledge despise them regardless of the reason which makes clever men honour them, because they judge men in the new light of piety, but perfect Christians honour them because they are guided by a still higher light. So opinions swing back and forth, from pro to con, according to one's lights” (Pascal, *Pensées*, translated by A. J. Krailsheimer, Penguin Books, London, 1995, p. 24)

the chances to be false or lying) of a game that can be displayed symbolically and logically. What can be taken for an intuitive refinement is, most often, a right and quick calculation. Far from being opposed to a spirit of logic, refinement is an accurate calculation. Supposing that there be no possible quantifying of psychical phenomena, nevertheless there would be no means to escape at all sorts of logic and of mathematics, for they have a shape and an order which can be justified.

The second instance, which has a paradigmatic value in the works of Lacan (who often repeats it, included in the *Ecrits*), is the case of the prisoners who are told that one of them will be released if he is the first to deduce the colour of the disc pinned between his shoulders, that may be white or black, meanwhile his companions are treated in the same way, provided he may give a right explanation for his deduction. Here is the problem:

“The director of a jail brings three prisoners of his choice before himself and gives them the following instructions: ‘Sirs, for reasons I cannot report now, I must release one of you. To decide which of you, I subject you to a test you will support if you enjoy it. You are three in front of me; here are five discs that differ only in colours: three are white and two are black. Without it be possible for you to know my choice of the colours, I am going to pin one disc between the shoulders of everybody present here; that is to say: in such a way it is impossible for everybody of you to look at the disc he has got (though directly or indirectly), the look through a mirror being excluded. Given that, in a second time, you will have the opportunity to consider your companions and the discs carried by the two others, without it be possible to communicate one to the other the result of your inspection. What’s more, it would not be in your interest to act otherwise. The reason is that it is the first person able to conclude one’s colour who can benefit from the releasing. However it will be necessary that its conclusion will be founded on logical motives, not on probable reasons. To that purpose, it is agreed that as soon as one of you be ready to draw such a conclusion, he will get out by this door, so that, taken aside, he may be judged from his answer’. This telling being accepted, each of the three prisoners is attributed a white disc, without using the black ones, which were two in number”<sup>21</sup>.

Here, the interesting point is that nobody can decide before they have experienced that none of the other two prisoners was running to the door to explain his deduction. If he had a black disc pinned in his back, any of the two others, after a necessary moment’s hesitation (that could not have occurred if one of them could have seen the two black discs), could have told himself that he had a white disc, given that the others had not gone. Nobody having gone out, any of them may be certain, provided he has rational partners, that he has a white disc pinned in his back. So they must go out in the same time. Here again, the interest of the prisoner’s dilemma is to settle ourselves in the logic of the game theory. I can only place my bets according to the others’ betting and according to the fancied other’s betting; not of the symbolical other, of flesh and blood (though it may be the case) but the symbolic Other. My decisions are taken only in a system that makes them dependent on the other’s behaviour. What is called *psychology* is really a *logic*; here a *logic of time*. Affects, which arise in many circumstances, and which look *intuitive* to those who experience them, are really brought forth by an *order of time*. In the present case, the circumstances are ridiculously simple; but as soon as it becomes intricate, the affect seems to be their “comprehension”, though it is only

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<sup>21</sup> LACAN, 1999, p. 195-196.

the expression of a logic caught more or less distinctly. Affect is symbolically spelled, though most often its writing cannot be seen, being hidden behind the imaginary felt impression.

Lacan and Hintikka agree to substitute for time and space of the transcendental aesthetics - thought as intuitive forms - logical relations of the sort we have just exemplified by two instances. Space and time are specifically matters of logic, that of decision-making, in a system where nobody is alone, and where the character of the Other is radically constitutive of the figure of consciousness and of self-consciousness. The *Other* must be understood with a capital O <in French: *l'Autre, le grand Autre*>, in the sense that, even if the Other did not want to play this part, he would be forced to do it by deeper relations than those of his own personal decision. Clearly, the *Critique of Pure Reason* was never re-written by anybody in that sense; but this intention to complete it that way, though no realistic (is it more possible to fit such a work with so enormous an addition than to fit a body with an artificial limb without removing it thoroughly?), prompted Lacan to re-read Pascal in an original way that we are about to explore now.

#### GAME THEORY, SIGNIFYING ENGRAVING AND TYCHÉ (τύχη)

In his work Lacan singles out the theory of games, but he does not develop a theory of probabilities, though there is no mutual incompatibility since those theories had brought forth complementary and synthetic works, as can be seen recently with John C. Harsanyi<sup>22</sup>. The reasons for this privilege may be understood.

Lacan is searching a theory of the mind that would not stand the affect for a fundamental and ultimate reality, but that would consider it as the signified of a set of signifying elements whose functioning must be grasped. When, at the end of Book I of the *Seminar*, Serge Leclaire asks him how affects must be dealt with, he answers, without beating about the bush, that the word is no longer part of his psychological vocabulary<sup>23</sup>. If affect does not exist, it is necessary to substitute what we fancied to be its reality for a symbolic mark, of which (what Lacan called) *imaginary* is the veil. To be clearly understood, Lacan often quotes the sentence of La Rochefoucauld : “Never would it be possible to fall in love if love was never heard of”<sup>24</sup>. What is experienced in a subjective way by anybody who fancies he feels an affect for another is really a game that stages the Other in a more complicated and more unnoticed way than could be imagined. Lacan had the feeling that the theory of games could explain the way affects work; perhaps he was deluding himself, but works such as those by John F. Nash<sup>25</sup> have recently given shape to this idea concerning some affects at least; however, we are still far from having entirely substituted the theory of games for psychology, as some logicians have dreamed, not without deriving some advantage from the different branches of the psychology that ignore this type of investigation.

In the theory of games, the protagonists do not necessarily sympathize with the others; they put themselves in the place of others only to “know” how they would behave themselves if they were in their situation. There is no transcendent situation to make them feel how the other feels and make them run across or ignore the distance that separates myself from the other. Calculations put myself in the place of the other, only fictitiously. Affects are deceptive as long as those who feel them fancy this transcendence. It is a bringing forth of signs that

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<sup>22</sup> HARSANYI, 1982 and 1989 ; HARSANYI and SELTEN, 1988.

<sup>23</sup> LACAN, 1953-1954 ; here 1975, p. 419.

<sup>24</sup> LACAN, 1964, *Tyché et automaton*; here 1992, p. 59; LACAN, 1961-1962b, here 2004, p. 210.

<sup>25</sup> NASH, 1996.

stands for transcendence, which cannot be realized because of the uncertainty of the signified terms. Pascal said it noticeably in one fragment of the *Pensées*, where he strangely bound the understanding of words with probability:

“We suppose that all the men conceive of things in the same way. But that is a quite gratuitous supposition, for we have no proof that it is so. I see indeed that we apply these words on the same circumstances; and whenever two men see a body change its position, they both express the view of the same object by the same words, each telling that the body has moved. Then, from the similarity of the two discourses, we draw a firm guess of a similarity of ideas. But that is not absolutely convincing at the utmost degree acceptable, though the odds are that the affirmative is right, since we know that the same consequences are often drawn from different suppositions”<sup>26</sup>.

To speak of the mind, Lacan is searching a system that is strictly immanent. Not immanent in the subject since the subject is as imaginary as the object. What we consider as a game between the subject and the object falls under a deeper logic. It is impossible to tell the truth of what occurs in a psychological circumstance; it is possible indeed to create concepts for trying to tell the truth and to engrave it with strong signifying elements, but the symbolic engraving has nothing ultimate. No doubt that engraving could stand for a right discourse, or even for a discourse of the truth; but this truth is not the transcending of any situation, it is the truth of a sort of metalanguage that would carry over all other linguistic operations. Lacan repeated it again and again in every possible way: there is no metalanguage, because there is no point of view permitting to go beyond the immensity of our relations with others, except under a sort of illusion<sup>27</sup>.

No doubt Kant did not think space and time as transcendent, since they are dealt with as transcendental forms. But Kantism’s unifying of spaces into a single space, and of times into a single time, into a subjectivity described as unifying, has more or less the same effect as a transcendent affirmation. In reality, dialogue has a primacy over the intuitive monologue; it is the impossibility of unifying otherwise but in a constructive way that is (or stands for) fundamental. Intuition feigns to solve, as if by waving a magic wand, what demands the greatest and most oblique effort to be unified. One characteristic of the theories of probabilities and of the theories of games is precisely to offer neither transcendent point of view nor any part to intuition, except, most often, to thwart and circumvent it.

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<sup>26</sup> This translation is inspired from A. J. Krailsheimer’s one. See *Pensées*, op. cit., p. 7-28.

<sup>27</sup> On November 22<sup>nd</sup>, 1957, Lacan expressed himself in these terms: « There is no metalanguage ; there are formalizations whether at the logical level, or at the level of the signifying structure whose autonomy I try to exhibit. There is no metalanguage in the meaning for instance of a complete mathematization of the phenomenon of language, and that precisely because there are no means here to formalize beyond what is given as a primitive structure of language. Though this formalization is not only due (as an obligation), it is necessary”. On May 31, 1961, he said noticeably the same that thing: “It could be a metalanguage when I write on the blackboard these little symbols a, b, x, kappa; it runs, it goes, it functions: this is mathematics. But, concerning what is called the speech, when a subject commits himself in the language, there is no doubt it is possible to speak of the speech, and you can see I am doing that, but doing that, all the effects of the speech are engaged and it is for that you are told that, at the level of the speech, there is no metadiscourse”. On December 9<sup>th</sup>, 1964, as a critic against Russell’s point of view, he wrote: “All sort of approach, included the structuralist approach, is by itself included, is itself dependant, is itself secondary, is itself at a loss to comparison with the primary and simple use of language. Any logical development, whatever it may be, supposes originally the language from which it came off. If we don’t hold firmly on this point, all what is matter for us, all the topology I try to display, is perfectly vain and trifling; anybody, Mr. Russell, Mr. Piaget, all are right; the only hitch is that none of them, not a single of them succeeds to get along with each other”. Willing to elaborate a metalanguage, they elaborate one more language!

Another characteristic over which we must linger is the mark of that fixation that is deeper than all affectivity and all opposition between the subject and the object. Lacan depicted it by the Greek name  $\tau\acute{o}\chi\eta$  whose meaning is a *chance encounter*, or an *encounter that seems to occur by chance*. We may notice here that Lacan engraves equally by using the symbolic of Greek words or by the symbolic of mathematics. Pierre Kaufman behaves in the same way, which he probably inherited from his attendance at the *Seminar*. In *L'expérience émotionnelle de l'espace* <*The Emotional Experience of Space*>, he tries to refine the affects by using Greek words, whereas in another book upon Kurt Lewin, he endeavours to explain what mathematical symbolic would enable to give an expression of them<sup>28</sup>.

What is  $\tau\acute{o}\chi\eta$ ? In Book XI of the *Seminar*, entitled *Les quatre concepts fondamentaux de la psychanalyse* <*The Four Fundamental Concepts of Psychoanalysis*>, Lacan explains what he means through this term. The  $\tau\acute{o}\chi\eta$  is the event of an encounter, apparently occurring by chance, and expressing however a reality that escapes the agent. Never can we encounter anything or anybody by chance; chance, in that matter, is the appearance that necessity takes when we cannot see it or when we do not want to see it. This explains why we are always deluded by every encounter: we believe we meet the “radically different” whereas we never encounter but a look of ourselves, caught upside down, or back to front. Every encounter is a false encounter, a missed encounter ; we never meet what we expected to meet, but meanwhile what we fancy to meet as a sort of “radically different” never enjoys the “otherness” we imagine; at least, “otherness” is never where we were awaiting it. This encounter, necessarily missed, that is itself or that brings about its effects only when it fails, is the last possible introduction to the “division problem”, because this problem is exactly the recovery from or the management of a failure.

#### LACANIAN VERSION OF THE PASCALIAN PROBLEM OF DIVISION

Time has come now to explain the interpretation that Lacan gives of the problem of division. First, he sees immediately that it is not a problem of probability<sup>29</sup> but that it is a question related to the theory of games (January 29<sup>th</sup>, 1969). This remark, though abrupt and anachronistic, is profound and leads at once to the main point. Let us compare, just a moment, Fermat's solving of the problem of division with Pascal's resolution. It is clear that Fermat enumerates arrangements of events as if he had counted tables and chairs in a room. The arrays of chances are, for him, as if they were things, beings; the fact they eventually are bound to happen and that everyone is one possibility among others is taken into account only in a sort of map-making of all the enumerated cases that may occur. When we come to think of it, this solving is given by the lawyer of Toulouse from a strange point of view; it is enough that the case should be possible to be taken into account from Sirius, from a transcendent point. What makes us feel uncomfortable in this too clear a solving, though it gives the result, is that chance is not dealt with properly: chance is not at all dealt with as a chance. The registers of chances are account-books, with profit and loss, as closely surveyed by the calculator as if the matter was to take notice of real events or cases. The *immanence* matched with the notion of *chance* (for it would not be *chance* for us if it was possible to encompass

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<sup>28</sup> KAUFMAN, 1968 et 1977.

<sup>29</sup> On February 2<sup>nd</sup>, 1966, Lacan warned: « We must pay attention to avoid the ambiguity that would consist in expressing the Pascal wager in the terms of the modern theory of probability, not yet sprung up at this time ».

the whole thing at one glance) is entirely bound with the profit of a quiet transcendence managed like gilt-edged stock that a prudent administrator would manage<sup>30</sup>.

Such is not the point of view of Pascal, who returns to the perspective of the τύχη, of the missed encounter. The event of “being missed” is exactly the matter of the Pascalian calculation of division. *Tyché* has as much elapsed and collapsed in Fermat’s calculation as it is regarded for by Pascal’s version of the calculation. It is the breaking of what would have occurred that is accounted for. There is a sign that cannot mislead the man who notices the rhetoric of demonstrations and argumentations in mathematics: the calculation of division turns up (at least, in certain texts) as a dialogue; the winner or rather the man who is winning (but who may not be entirely sure he would win) talks to the man who is losing, as soon as the game is interrupted. The winner explains to the loser what he owes to him, speaking in a tone and with the arguments of a man who does not believe in the hazard of the breaking, in the chance of the encounter, but who suspects the loser has deliberately stopped the game before it was too late and could have led him on the road to ruin. The loss must be made cruel at any moment of the game and the loser must bite the dust for a single trial or point less than his opponent. The winner claims and calculates victory for fear of having it stolen by too early a stop that could permit to salvage the loser from a dangerous situation or to get him hold of some more cash, if we dare say. Really the monologue of the winner –and nearly the prosopopeia of victory, if not stolen, at least, at the risk of being stolen, since it is the winner who tells the truth of the calculation of division to the loser, who keeps quiet and acquiesces to it without a single word or whose retort will keep continuously restrained- is the cruel and humiliating stage of the loss<sup>31</sup>.

The τύχη signifies that chance is taken into account as chance by neither protagonist, not because they enjoy a transcendent point of view (as Fermat thought), but because they are holding talks and they suspect that chance is never chance. Even the loser lets the winner talk instead of pleading that the game was not over and that he could have “recouped his losses”, that the following trial is overvalued. But, on further consideration, these arguments cannot be used for it would amount to the confession that what he wished for was the end of the game. What appears to be a prosopoeia of the winner is really an expression of loss; loss of a player who is really losing and fear of losing from the winner who feels constrained to protect his fragile victory. The loss expresses itself on the masochist mode of the “discourse of the master”.

Our insistence on the inequality of dialogue and its disparity is justified because, strangely, Lacan, in his lesson of February 2d, 1966, chose to bring forward the consent between partners, while he brought his speech to a close by a sparkling notice which seems to support the preceding interpretation: “What is not highlighted is that it was I the winner who stopped the game, my opponent would be entitled to say: your pardon, you have not won and therefore you have nothing to claim on my stake”. But what would be exactly to know is the

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<sup>30</sup> In his lesson of February 2<sup>nd</sup>, 1966, Lacan saw well that Fermat’s enterprise must be added to the file of the theory of probability: “[Pascal] had a long conversation with Fermat, mind of first order, without any doubt, but who was diverted from the strict firmness necessary to the mathematical speculations by his office in the Toulouse Bench. Indeed, they don’t agree on what will be called the value of *divisions <partis>*; it is justly that, too soon, Fermat wants to deal them under the name of *probability*, that is to say of the succession of trials distributed according to the series of combinatory results”. It’s a pity that he accompanies this purpose by undue reserves. From Pascal to Fermat, we can notice a difference in methods; Fermat is no less a mathematician than Pascal. Simply, they don’t approach the matter in the same way and perhaps they are solving only in appearance the same problem. The discrepancy that appears when the problem of divisions presents three gamers instead of two would be worth a close inspection, from this point of view.

<sup>31</sup> Lacan brings out that the stake is the propriety of nobody; that it is « as lost » (January 22<sup>nd</sup>, 1969).

man who does not highlight the point. Yet it is not Lacan himself - who seems to change his mind, with some vivacity indeed but in the way of a little appendix - so much as Pascal who has the cleverness to stage the silence of the loser. Indeed it could have been logically possible for the loser to speak in the same way as the winner, but this utmost humiliation does not seem possible, particularly for large amounts of money: the winner plays his part when he speaks his own way. Nevertheless, it seems strange that it didn't even cross Pascal's mind that the winner could draw some advantage from stopping the game; Pascal does choose this way. The psychical dynamic of the game puts the winner in a position to gain more than he could draw from a game's stopping; and the loser in the situation of drawing more advantage from a game's stopping, since it is more cruel to lose a certain amount of money than it is happy to earn an equal one.

Affects are not as superfluous as they would be if, by some strange, nearly impossible game - and in any case not favoured by the author - we wanted to project them on the inventories of Fermat. Fear, threat, hope and despair are nearly as sensible in the calculations of Pascal as in the calculations of Nash. Affects are absolutely constituent in Pascal's solving. Or, more precisely, since their engraving through the calculus is more important than what is felt itself, the strange dialogue of the master - the victorious man, who has the knowledge and in any case who speaks - with the man he reduces to silence and obedience, constitutes the issue. With a view to performing the solving that will restore a sort of equilibrium, the winner needs to suspect the loser of willing to draw his profit from the circumstances. He operates with the supposed affects of the other, with affects he is entitled to suppose the other will identify himself. So, it appears that everybody plays their parts and that the empirical others are less taken into account in this calculus than the Other that is in control of the debate or rather of the monologue. Nothing can be understood of Pascal's calculation if one misses its structure of dialogue, of debate; nothing can be understood of Fermat's calculation if it is not led from the point of view of a "disaffected" or disinterested calculator who corroborates combinations. Pascal operates with fictive actors that operate with the ideas of the other, the others, and even of the Other, which makes the using of universal and objective argument possible. Pascal labours with a set of opposite interests that the interested men defended by themselves. To Lacan's eyes, the wager argument seems to raise the same question as the problem he searches: "le désir est le désir de l'Autre" (with the ambiguity wrapped in the French language : is *le désir de l'Autre* the Other's desire or Desire for the Other?) (January 20<sup>th</sup>, 1965). There is not the slightest tension in Fermat's work whose resolution is entirely slackened and relaxed.

The catastrophe of the game's breaking is dealt with the images that players fancy of the breaking itself and with passions that they cannot rid of experiencing, settled to them. The association of images and passions explains the restructuring plan that is taken by Pascal's resolution. Under the plan that gives the ordinary outcome of the game when it is carried out to its regular end, runs, at any instant of the game, another plan that may arise if necessary, that results from the balance of the tensions between players who, winning or losing, may leave or enter the game at any moment. It is also a problem to know how much a player must pay to enter the game, at any stage, for instance by buying back a seat in a game. The mathematics of the problem of division are mathematics of a catastrophe; they are meant to compensate for an incident that endangers justice and equity. Behind a rule that can be stopped at any moment, there is a second one, much more steady, though it appeared as a substitution for the first: yet it is the second rule that sustains the first, at any moment. Lacan recalls opportunely that a *σύμβολον*, in Greek, is the object that was broken into two halves and given to two persons who were not to see each other for a long time, so that they could eventually recognize each other once they met again when they were older. In a way, the breaking staged by the calculation of division is a sort of symbol between players;

mathematics have to be brought forward because they can give a monetary equivalent to this symbol and a substitution for the ancient symbol in a new one. That is endowed with deep psychological value since, indeed, what is broken can never come back again and returns only at other conditions or under other shapes. The calculation of division is the expression of that symbolic substitution. What is interesting here is that this series of symbols that are as many masks one for the other. The calculus of division is the story of a never-ending loss dealt with through talks and logical trees.

Before broaching our last point dealing with commentaries by Lacan on the fragment *Infinity – Nothing*, that the posterity has immortalized under the name of Pascal’s wager, I want to emphasize how enlightening the preceding notices are to understand philosophical approaches that cannot be separated, in Paul’s works, from mathematical approaches. That truth is historical does not frighten Pascal; that is openly expressed, even when truth deals with what is the most sacred, since “the history of the Church should properly be called the history of truth”<sup>32</sup>. It must be noticed however that the fact that truth be won by a *fingere*, by a making, by a fictional industry, is not an obstacle to its relative steadiness; it impedes this stability less than problems we would fancy to be the reflection of natural steadiness. The fact that in the 17<sup>th</sup> century, space was sensed to have three dimensions has not hindered the “heart” <”le coeur”, to follow Pascal’s wording> to count more than three of them, some decades later, in mathematics as well as in physics ; strangely, the problem of division, dealt with by Pascal, and resulting from the tension of interested partners looking for equity, may be matched with a chronologically determined way of considering pleasure, the relation between work and pleasure, etc.: its solution prevails anyway as a definite version among the probabilities, whatever may be their economic or political conceptions. Nobody believes in the steadiness of the states and in the duration of political or economic systems, even though their eternity were claimed; it is easier to feign the eternity of nature, and yet it is a great delusion.

The strong relationship between the mathematical and the philosophical approaches in Pascal’s writings derives from a point not far from the former, though differing from it: Pascal makes dramatic use of dialogues to settle the truth, and we must always pay attention to who speaks and to whom listens the further to know where is the truth in the *Pensées*. A large number of fragments in the *Pensées* spontaneously turn out to dialogue between imaginary and unsteady speakers. I also think that we were mistaken by the meaning of *Les Provinciales*, a text too much neglected by philosophical critics. French philosophers have not noticed enough that the imaginary author, writing imaginary (though dated) letters, addressed from Paris to an imaginary “provincial” addressee, must not be identified with Pascal himself, in spite of the temptation to which the reader can yield. Truth can only be brought forth from dialogical relations in Pascal’s works, however absent or silent the partner may be.

At last, concerning the matter of the staging of the loss, since the famous “object a” of Lacan is a figuration of the loss, the calculation of division makes a particularly interesting scenography possible. Far from being what escapes what is structured, loss is as framed as the gain may be. Lacan saw in the organization of the substructures of the game’s rule the frames of the indefinite loss. Indeed, loss seems to go on forever, but we never lose, no matter how, even though we are not aware of that. Far from going out from the structure, losses are perhaps what is the most framing. The wager still remains to be examined; in perfect harmony with Pascal’s letter, Lacan legitimately locates the wager in the wake of the calculation of division.

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<sup>32</sup> *Pensées*, p. 236. Br. 858, L. 776, Sel. 641.

In fact, the matter is neither to consider the wager from all angles nor from the few that Lacan had selected in his innovative searching. Only three angles will hold our attention; all of them are supported by the previous reflection on the calculus of division.

The first one consists of a complete reversing by Lacan of the ordinary view on Pascal's wager. Faithful to his analysis of the  $\tau\acute{o}\chi\eta$ , faithful to his triptyque (symbolic / imaginary / real) that - though its sense changed from 1952 to 1980- is nevertheless one of the permanent traits of the *Seminar*, Lacan lays down that the real is conceived through the alternative expressed by the antinomy 'God is / God is not'. The God of Pascal is in no way the God of philosophers (February 5<sup>th</sup>, 1969). Of God we know nothing, neither what he is (if he is), nor whether he is, nor whether he is not. The Real is not in the fact of existing on a side of existence, on the "bad side" to know what occurs after the death<sup>33</sup>. To bring forward things in this way amounts (as it is the case for Hume) to making the alternative *God is / God is not* fictitious and, so to speak, delusive. What's more: why the game would not go on beyond death?<sup>34</sup> Now the strength of Lacan's interpretation is to claim that the real is in this probabilistic and contradictory approach<sup>35</sup>. The "*You are already committed*<sup>36</sup> <*embarqué(s), embarked*>" records the fact that it is impossible to escape the above alternative and that it is our real; that we live, act and think only within this alternative which is our real. It is noticeable once more (we could have given many other instances to support this statement<sup>37</sup>) that theology served as a prelude to what occurred a little later in physics, and much later on, when it seemed perfectly clear that probabilistic laws were more fundamental than others, and that the pure Newtonian ideal frames were border-line cases of the former. The mode of existence of the affects is also better framed by an antinomic set of contradictions than by an illusory construction of phenomena. The Real echoes and reasons in a better way in probabilistic speeches than in any other.

The second noticeable topic refers to the logical structure of the wager. Indeed, two characters, perfectly determined though of changeable identity (nearly at every retort), are

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<sup>33</sup> It would be unfair to conceal that some fragments are written in that direction, as fragment Br. 213, Sel. 185: "Between us and the heaven or hell, there is only life half-way, the most fragile thing in the world" (*Pensées*, p. 51). The "infinite distance" of the fragment "Infinity – Nothing" can be interpreted as the separation between life and death.

<sup>34</sup> On February 9<sup>th</sup>, 1966, Lacan said: « The supposition that, after the death, we will know the real key, to wit that the truth will be obvious whether yes or no, there will be to support it the God of the promise, who cannot see that this implicit supposition of all the affair, it is it that indeed leaves it in suspense. Why, beyond death, if ever anything can subsist, shall we not err again in the same perplexity?». The fancy, that behaves as if there were a sort of life beyond the death, uneasily views such a plurality of lives after the death. Then, it is no more likely that there is one life rather than there are many.

<sup>35</sup> In the lesson of February 12<sup>th</sup>, 1969, Lacan asserted: "The matter [of the wager], what could be its matter, is the radical wording that is the formulation of the real, as it can be conceived and as it can be touched with one's finger, that is not conceivable to fancy another limit of the knowledge as the stopping point where we are only concerned with this: with something indivisible, that whether it is, or not. In other words, something that falls in the province of heads or tails". On January 22<sup>d</sup>, he returned to the topic and wrote in the same terms: "The absolute real, on this little page, is what is expressed as heads or tails".

<sup>36</sup> *Pensées*, p. 123. A. J. Krailsheimer, in a rather abstract way, translates *embarqué(s)* by *committed*.

<sup>37</sup> So, if utilitarianism is most often an atheism, it has not always been and is not always so; it may even be considered that the general point of view of utility, understood as the greatest happiness, began by a theological point of view, perfectly perceptible in the theology of Th. Bayes, for instance. See BAYES, 1731 and 1988.

discussing about the advantage to put one's stake on God's existence rather than on the inexistence of God; but, beyond this characteristic, the dialogue brings forward other salient and strange features. *First*, the speech that prevails all along the fragment is, in the reverse order of the calculus of division, a loser's speech (a speech of a person who has more chances to lose than to win) rather than a winner's speech (a speech of a person who has more chances to win than to lose), because the chances for God to exist are weaker, perhaps notably less numerous than the chances that he does not exist. For the moment, it is the loser that is loud of speech and that teaches to the probable winner that has many more chances to win in putting his stake on non-being of God. However, though he holds a master's discourse, the matter is not about forcing the other to obey him; he has, for that, neither strength nor will and he can only, at the utmost, incline to it. The second characteristic, as strange as the former, it is that God is, in this calculation of games, a sort of dumb and invisible partner. The game involved in the wager implies a particular heterogeneity of actors. The partner of the wager appears to the actors as a masked being, about which it is impossible to know if somebody is hidden behind the mask. The *deus absconditus* leads to a particular frame of the wager, which is not without recalling the scene of masks and the last scene of *Don Juan*, whatever in Molière's or in Mozart's work.

Lastly, and on the point where Coumet clearly joins his interpretation, Lacan demands that a plural be read in the famous sentence: "there is an infinity of infinitely happy lives to be won"<sup>38</sup>. It seems that the manuscript points out that this plural does not exist; however Lacan dwells on the existence of one *s* to *vies* (*lives*), since the infinity of lives (in the plural) seems directly in consequence of two, three ... lives that would be to win in staking the single one in ours now<sup>39</sup>. I confess to have always read this series of lives (in the plural) as the impulse of an analogy argument that makes us incline to action with a view to obtaining an infinity of infinitely happy life (in the singular). Lacan's reading is quite different and the Pascalian argument seems, to his eyes, to be matched with the way to prospect life, which permits to sum it up and to grasp it in a sort of complete unity<sup>40</sup>. It is necessary that economic and juridical logic plays one's part, stressed by the principle of pleasure / displeasure, and operates so that I can view my life and that the others look at my life as a sort of sum of events, liable to enter other sums, in the same way that it is possible, in the classical utilitarianism, to add and withdraw pleasures and displeasures.

The advantage of the Lacanian interpretation is that it permits to give a convincing exploitation of the famous "rien" <*nothing*> that would be the weight of the human life on the

<sup>38</sup> « Il y a ici une infinité de vie infiniment heureuse à gagner ». Faithful to what is read everywhere (Brunschvicg, Lafuma, Sellier), Krailsheimer translates : « Here there is an infinity of infinitely happy life to be won" (*Pensées*, p. 123).

<sup>39</sup> On January 29<sup>th</sup>, 1969, Lacan said : « You cannot know no more than on the piece of paper that is tachygraphic, if this infinity of life or lives is in the singular or in the plural. Nevertheless it is clear, by all the following Pascal's discourse, that we must take it in the sense of a plural multiplication, since he begins to argue whether it would be worth to bet only to have a second life, a third and so on. It is indeed a numerical infinity". Lacan had already set the problem two weeks before, in the lesson of January 15<sup>th</sup>, 1969; then, three years before, on February 9<sup>th</sup>, 1966, he had already emphasized the point: "Did you not have noticed that, in the wager concerning beyond, Pascal does not tell us –nobody has ever it remarked- of eternal life. He speaks of an infinity of infinitely happy lives". He underlined, in the same page: "What does occur really and would it be worth to bet in a game, when have only some chances to earn, the stake of a life between birth and death, as ours, to have perhaps a second life? (...) For it is necessary that any of these two lives be between birth and death, but it is necessary too that it be the same subject. All that will have been played in the first life, we know that it could be played otherwise in the second. But we will not always know, for all that, what is the stake".

<sup>40</sup> In the lesson of November 13<sup>th</sup>, 1968, Lacan links together the « renouncement to the enjoyment <*jouissance*> with "this element of the wager when life, in its totality, amounts to a simple element of value".

scale of the wager<sup>41</sup> and that must be counted differently from a zero. To weigh nothing is not the equal of to weigh zero; to hold (one's life) of no account is not to stand and count it for zero<sup>42</sup>. Those who meet with a humiliation or suffer contempt are aware of that. The art of Lacan, which is the art of psychoanalysis, is composed of giving a positivity to what one would be tempted to neglect theoretically on pretext that its being does not look to weigh. To set value to what can be given as trifling to consciousness from a certain point of view is the first stage we can do in analysis when we realize the transfers, carryings and displacements of the unconscious. Now the matter is to know how much the I <ego> weighs: again, the thing is of a subversion, the subverting of the cogito. The real stake of the wager is not the promise of an infinitely happy life: it is to know if the I does exist: "It is necessary to know if I exist. I think it possible to make you feel that it is about this uneasiness –do I exist?- that Pascal's wager is the stake" (January 8<sup>th</sup>, 1969). The cogito fills a trifling position, even though it seems to hold a prevailing situation. The wager is, on this point of view too, a loss; Lacan openly binds the wager and the object a (January 15<sup>th</sup>, 1969). The matter is to accept to lose one's life, to give up the enjoying of one's life to earn an uncertain supplement of enjoyment (a 'plus-de-jour'). Then, the reinvesting of pleasure characterizes "modern morals", as Lacan says, adding these speeches in the same lesson:

"Pascal tells us that (life) is nothing, but what is the meaning of that? Nay zero, since there would be no game; there would be no game because there would be no stake ; he says that it is *a* nothing, what is quite a different matter, since it is precisely that what is the matter when the question is that of "plus-de-jour" [it must be understood that the man who causes the enjoyment, beyond the pleasure, holds one's life of no account: faith can be compared with this "plus-de-jour"]; and furthermore, if there is anything that carries to the highest vivacity and to the most radical pitch of our passion for this discourse, it is because it expresses this matter. Without any doubt, the opposition is always standing. [Lacan speaks of the opposition of the character who shields himself from the one who addresses him to bet in favour of God]. In putting my stake on such a play, don't I bet too much? It is for this reason that Pascal lets it written in the arguing of his supposed contradictor –a contradictor that is not elsewhere than in himself since he is alone to know the content of this little scrap of paper<sup>43</sup>. But he answers him: "It is impossible for you not to wager because you are bound <committed>". In which way? You are not at all bound except if prevails the fact you have to take a decision, referring to theory of games as we call it nowadays. This theory is the absolutely direct consequence of what Pascal inaugurates through his rule of division when the decision is a structure; it is because it may be reduced to a structure that we can labour on it in an entirely scientific way"<sup>44</sup>.

<sup>41</sup> « If you lose, you lose nothing » (*Pensées*, p. 123).

<sup>42</sup> On January 22d, 1969, Lacan explained: « So, when Pascal writes 'nothing', it is not at random; he suspects that this nothing is not a nothing, that it is something that can be weighed on a balance, and particularly on the level where we have to put it in the wager".

<sup>43</sup> Lacan alludes to the fictitious nature of the contradictor, that is nothing but a character created in a dialogue.

<sup>44</sup> We translate this text written in French : « *Pascal nous dit que [la vie] n'est rien, mais qu'est-ce à dire ? Non pas zéro, car il n'y aurait pas de jeu ; il n'y aurait pas de jeu parce qu'il n'y aurait pas de mise ; il dit qu'elle est un rien, ce qui est une tout autre affaire, car c'est très précisément de cela dont il s'agit quand il s'agit du plus-de-jour; et d'ailleurs s'il y a quelque chose qui porte au plus vif, au plus radical de notre passion de ce*

My conclusions will be heterogeneous and, for some of them, more in progress than liable to attain a result. First, speaking of the probabilities, of the theory of games and of the theory of decision, I am far from having dealt *in extenso* of 'Lacan and the mathematics'. It would be necessary, in order to aptly broach the topic, to look at many other departments. The interest he takes in topology, for instance, grows more and more present and is so much invading in the last books of the Seminar that it is not impossible for Lacan to have considered the problem of division as a problem of topology. Really the matter is to project the breaking of a game (from the point of view of the rule) so as to preserve, by equity, the disparity between the scores and to give it a monetary transcription to permit the gamblers to come to an agreement, though the agreement be pronounced only by the winner. Pascal's invention of the solving of the division problem is not without any relation to his work on conics.

Secondly, I am far from having exhausted the subject, yet more restricted, of 'Lacan and probabilities'. I only open up some tracks, already well set by guide marks, owing to the works of the Seminar of the Centre d'analyse et de mathématiques sociales<sup>45</sup>. But I am aware I have left in the dark a lot of perspectives that would be worth considering through a complete inventory and analysis of the Seminar, which is now only partially published, even though it may be considered as a cultural monument of the third quarter of 20<sup>th</sup> century. The Seminar was a sound-chest of the time; it expresses a considerable force of reactivity and an invention that, now again, readers can enjoy. Lacan invented his friends and adversaries as easily as his notions. Of course, it was possible to laugh at *The Thing* <*das Ding*>, the *object a*, and so many fictions or mystifications. The style of Lacan sometimes approached something that was similar to Rabelaisian jesting. Of course Lacan was not a man who refused himself some pun or some joke. But the tree of jests must not hide the forest of the reality of the *finger*, of the making; and truth cannot be another thing than an invention.

I don't know if the essay was already successfully attempted; I only quoted, at the beginning of the present article, the names of Georges Th. Guilbaud and of Ernest Coumet; but would it not be opportune and relevant to open or to open again a front that, under one name or another, would permit psychoanalysis to deal with the calculus of probability or with the theory of games? The interest is clearly double-edged. The inventors of the theory of games could have believed it was possible to remove psychology and so they said. I am far to consider this appraisal as naïve: my experience, though limited and narrow, makes me believe that it is well founded. The show of the reflection upon what is now called, in law and in juridical affairs, the mediation, is disappointing enough and seems to show that the theorization of negotiations is often less known at the beginning of the 21<sup>st</sup> century by some people who claim they teach mediation than by Pascal. The process of negotiations, yet

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*discours, c'est bien parce que c'est de cela qu'il s'agit. L'opposition sans doute tient toujours. Est-ce qu'à miser dans un tel jeu, je ne gage point trop ? Et c'est bien pour cela que Pascal le laisse inscrit dans l'argumentation de son supposé contradicteur, contradicteur qui n'est pas ailleurs qu'en lui-même puisqu'il est le seul à connaître le contenu de ce petit bout de papier. Mais il lui répond : « Vous ne pouvez pas ne pas parier parce que vous êtes engagé ». Et en quoi ? Vous n'êtes pas engagé du tout sauf si domine ceci que vous avez à prendre une décision, c'est-à-dire ce qui, dans le jeu, dans la théorie du jeu comme on dit de nos jours, qui n'est que la suite absolument directe de ce que Pascal inaugure dans la règle des partis où la décision est une structure, et c'est parce qu'elle est réduite à une structure que nous pouvons la manipuler d'une façon entièrement scientifique ».* The last sentence is false: Lacan's tongue is fundamentally spoken and makes of the written text a retranscription as laborious as uncertain and doubtful. The hand of Jacques-Allain Miller will be necessary to give to the text its legibility and, so to say, its classicism. I quoted this text, rather confused by its structure, to permit the echoing of the further topics at a high pitch of logical (if not syntactical) articulation.

<sup>45</sup> This article derives from a talk of its author to the Seminar at the EHESS on December 21, 2007.

entered into and guided by probably competent people in their work, is however perceived by the agents themselves through a thick psychological fog that would not be uninteresting to pierce. We shall be consoled with the arguing that barristers are not psychologists by profession; we shall be more saddened to think that psychologists by profession are not always aware of the logical studies of the time, the space of relations with the other (as we have seen above). Enough for the first source of interest: Lacan probably listened to the call of John Von Neumann and of Oskar Morgenstern<sup>46</sup>. But there is a second sense.

I believe it would be useful for mathematics to understand, *a contrario*, that what they speak of, what they present on stage, is also an affective knot, a rhetorical plot; then, even when mathematics seem to tell far from the sensible world, in a symbolic language, they are though murmuring words of dialogues, argumentations that the mathematicians are not used to exhibit through their writing. Lacan takes the mathematics as a matter of thinking; doing so, he does not necessarily tell of right things and perhaps he only contributes to the creation of a mathematical ideology in which some philosophers or mathematicians, as we sometimes like believing, find the spring of their creation. At any rate, we can risk, when we are interested in affectivity and rhetoric, a brief introduction that is no trifle for the process of an argumentation or a demonstration in mathematics.

To conclude, I will tackle a strange point for which the readers who are the least likely to be interested in psychoanalysts will probably forgive me. Lacan may be enigmatic at times, as it sometimes also happens with Plato: I never entirely understand why the author of *Cratyle* said that language was the goatherd Pan. In the same sibylline way, Lacan defines love for truth <amour de la vérité> as sisterly. Without any doubt, we love in knowledge the place of the transcendental ego as we love the father's situation. But we love truth through an indirect and derived love. "It is neither in vain nor at hazard that I point out as *sisterly* <*sororal*> the position of truth regarding engagement"<sup>47</sup>. It clearly appears that enjoyment and truth don't depend one upon the other through some paternal or maternal begetting; that they depend one on the other only laterally. It could be that one and the other were begotten by knowledge; but the enjoyment so begotten by knowledge must not be taken for truth; truth that can be brought forth by knowledge cannot give it all its enjoyment which keeps separated from this knowledge as a sister from another sister. Unfortunately, Lacan does not enlarge this idea enough. Then, in his reflections on Pascal, Lacan does not fail to notice the importance of his sister Jacqueline in his life and in his spiritual development<sup>48</sup>. It is even the only biographical element that holds his attention in the lesson of January 20<sup>th</sup>, 1965, when the question of Pascal's neurosis is touched on<sup>49</sup>. But he does not go far enough on the subject. It is with this enigmatic remark of the relation between the truth and the sister's function I decide to conclude.

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<sup>46</sup> « The arguments often heard that, because of the human element, of the psychological factors, etc., or because there is –allegedly– no measurement of important factors, mathematics will find no application, can all be dismissed as utterly mistaken”. (J. Von Neumann & O. Morgenstern, *Theory of Games and Economic Behavior*, Princeton University Press, Princeton, 1980, p. 3).

<sup>47</sup> LACAN, 1969/1970, here 1991, p. 76 (January 21, 1970).

<sup>48</sup> Pascal has, on the sister, this very Pascalian notice that she finds herself in “the best condition in order some credit may be given to a testimony: she does not understand at all what she says” (January 20<sup>th</sup>, 1965). Pascal underlines, in the *Pensées*, that the testimony of the Bible was most kept mercy to those who understand it less.

<sup>49</sup> With much prudence, for Lacan adds: « we have no taste for the note of the psychologization of the genius » (January 29<sup>th</sup>, 1965).

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