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15.1. VII The Symposium - or bundles of Mebkhut and Perversity

15.1.1. Iniquity or the meaning of a return

Note 75

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(May 2nd) Decidedly I@ not finished learning! I just got acquainted with two

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texts, which throw an unexpected light (for me at least) on "the retraction" (of the work of Mebkhout) which has already been mentioned ("The unknown service and the theorem of God", note (48)). It@about role played by the two illustrious colleagues and ex-students whose disdainful indifference to the Zoghman Mebkhout, without however questioning their professional good faith. Both texts are part Proceedings of the **Symposium of Luminy** (from 6 to 11 July 1981) entitled **Analysis and Topology on spaces singular**, appeared in Asterisk ◦ No 100 (1982).

The first of these is the introduction to the Symposium, signed by **B. Teissier** and **JL Verdier** (the same who was the official thesis director of Z. Mebkhout). This text, a page and a half, begins by explanations about a certain "Riemann-Hilbert correspondence", which is clearly called to play a leading role in the Colloquium (and which is none other than the "theorem of the good God "alias Mebkhout.) In this correspondence (and that is what makes its charm and depth, and requires the introduction of the derived classes) to a regular holonomic **module** (ie a holonomic complex regular reduced to zero degree) is associated a constructible complex of C-vector beams, which can be characterize (is it said) purely topological properties that keep meaning for complex constructible bundles on a variety not necessarily smooth, defined on any body.

That is, is it explained, the starting point for the "main theme" of the symposium, entitled "**perversity complex intersection, purity**"- the (complex

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de) said beams "**evil**" ¹ (*) being other than p. 286

which, "morally", correspond ("to the Mebkhout") to the simplest of the differential operator complexes regular holonomists, speaking using a single 3-module.

The second text part ² (**) long section of **AA Beilinson, J. Bernstein and P. Deligne** on perverse bundles, which is referred to in the introduction as the central work of the Symposium. As in testify the table of contents and other pages that I have, this article dedicates the comeback force suddenly derived and triangulated categories in the public square, in the wake of the obscure works of Mebkhout and the famous theorem "says Riemann-Hilbert".

Amazingly and yet true, in both text the name of Z. Mebkhout is absent, as he is also missing from the bibliography. I note that not only was JL Verdier fully aware of the works of Mebkhout (and for good reason!), but Deligne was just as much (and it would be difficult even to conceive that it may be otherwise, for someone so well informed about the mathematical news, and when he This is more the subject that touches the closest ³ (***)).

I do not know what it is B. Teissier ⁴ (****) and other participants in the Symposium Luminy, including the two co-signatories with Deligne cited article ⁵ (****). It seems that none of the participants was so curious to know the paternity of the ideas and the key theorem which had the virtue of mobilizing them.

¹ (*) (May 4) See footnote 76 ◦, "The Perverse" about this strange application.

² (**) (May 4) I have since received the full article, confirming what had already shown me the part I had.

³ (***) I remember in particular that the work of Mebkhout and "theorem of God" constitute a decisive advance over to earlier works by Deligne (1969), which he refrained from publishing. See in this regard footnote 48 ◦ @already mentioned.

⁴ (****) (June 12) B. Teissier has long been interested in the work of Mebkhout and was thus one of the very few to have an encouraging attitude towards him. So he was perfectly aware of the scam, to which he lent his

competition with full knowledge of the facts. He justified himself to Mebkhout, assuring him that, in any case, he "would not have nothing could change there."

5 (****) (28 May) I have since learned that AA Beilinson and J. Bernstein were informed of the results of Mebkhout P. Deligne (in October 1980) and by Mebkhout (in a very detailed way in November 1980, at a conference in Moscow). These two authors are used in an essential way the theorem of the good God in their demonstration of a famous conjecture of Kazhdan-Lusztig even before the June 1981 Luminy Symposium - Compare the quote from Zoghman Mebkhout's letter in the note "A sense of injustice and helplessness" (note ° 44 ").

(3 June) For further details on the solidarity of all participants of the Symposium, see the following note "The Symposium ", n ° 75.

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I assume it was self-evident, a little (a lot) like in the Notes LN 900 reading volume that was going spend the next year re-entry patterns on the same "public square" 6 (****); that the pater-nity belonged to the most brilliant among the brilliant mathematicians who had taken the initiative of the Symposium and had animated him. What was sure in any case for all is that it was neither Riemann nor Hilbert, otherwise the brilliant Symposium

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would have taken place in 1900 and not in 1981, two years after the defense of the student's thesis
p. 287

Unknown by Jean-Louis Verdier.

The kind of operation I have seen here today may be commonplace 7 (*) and perfectly admitted, as long as it is practiced by mathematicians who have the upper hand, and whoever in the expenses is a vague unknown figure (which we were kind enough to invite to make him happy). That one of those men who practice it should appear, by his means as well as by his works, of great mathematician (which places him above all suspicion from the start), does not change the nature of the thing. Surely I'm old-fashioned - in my time this kind of operation is called a **scam** and it strikes me as a **disgrace** for the generation of mathematicians who tolerates.

The brilliance of genius does not detract from such a disgrace. He adds a new dimension, unique perhaps in the history of our science 8 (**). he

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can make glimpse, behind the apparent absurdity and gratuitousness of the act
p. 288

(made by someone whom fate has filled beyond all measure, and yet who takes pleasure in stealing ...), the action of other forces perhaps only the desire to shine, or the free desire to humiliate or despair he who feels helpless and voiceless.

As decidedly here I am in full "table of manners", I point (almost as a matter of course) that my name is just as absent from the texts quoted. I was pleased to note, however, that there is not one page of the article cited (among those in my possession 9 (*)), which is deeply rooted in my work and carries the mark, and this even in the notations that I had introduced, and in the names used for notions that occur at every step - which are the names I gave them when I made their knowledge before they are named. There are certainly adjustments of rigor - so the theorem of bidualité I had cleared in the fifties 10 (**) is renamed for the occasion "duality Verdier, "Verdier always the same, there is no mistake... 11 (***). It was not possible, however, that my name appears at least implicitly, by occasional references to still irreplaceable texts (despite SGA April 1

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, which is not quite enough to his vocation), namely EGA and SGA. (In the explanation of the acronym SGA = Algebraic Geometry Seminar of Bois Marie, my name of course does not appear, but in EGA, one is honest or one is not, the complete designation is given, with the names of the authors including the mine. . . Another detail that struck me, and that testifies to the obsessive force of the burial syndrome (in someone who, however, has no "profile" obsessed): the two references I saw at SGA make it a point each time to explain clearly "Mr. Artin's theorem in SGA 4.", for fear that the badly inspired reader may have idea that the said theorem might be due to the person carefully not

6 (****) See in this regard notes ° n s 51,52,59.

7 (*) I think of two other "operations" that go in the same direction, and that eventually resulted in the publication of LN 900 (cf. note of b. from p. above) and APG April 1

2 five years (see notes about ° n s 67, 67 @68, 68@

(May 9) For the third such operation closely bound of the previous, see note "good references" (No. 82 °) on another "memorable article", this time feather from JL Verdier.

8 (**) I have never heard either talk about something like this in the history of another science or other art that the mathe-

matic.

9 (*) (May 4) And the others also, which I have learned since.

10 (**) Same for the duality theory spread, which becomes "Verdier duality" in the writings of his generous friend Deligne!

11 (***) (May 5) compare with the notes $\circ n s 48 \text{ @}63$ ". Throughout this long Burial which continued for nearly fifteen years, and also throughout the discovery that has just made, during the past month, the main "anticipated deceased", JL Verdier definitely seems inseparable from his prestigious friend, who lavishes on him without counting the sheaves of flowers de rigueur

in this funereal occasion.

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named, while it is clear that the presentation was indeed made, thank God, by a nominable author!

(77)

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All this, we must believe, is good war in the "beautiful world" today. Without please me (and p. 289 she is not made for that. . .) this guéguère is not really prejudicial to the anticipated deceased, whose sym-

The body is thus delivered to the hazards of this rat race, which I discover with wonder.

for two weeks now. It does not corrodes my life with a sense of **unfairness** received in the powerless

ciency. She did not break the joy and momentum that bring me to the meeting of mathematical things and those

of the world around, it has not burned in me the delicate beauty of these things. I can consider myself happy, and

I am ...

And I am happy also for my unexpected "return" whose meaning escaped me. If he were not to teach me that what I have learned in these past days, this return will not have been in vain, which has already filled me. (\Rightarrow 76)

15.1.2. The symposium

Note 75

(June 3) I had some details about the other participants at the symposium, which dispels all doubts. While no presentation of Mebkhout had been planned in the official program of the Colloquium, Verdier was forced to ask him on the spot and in extremis to make a presentation, to make up for the shortcomings of a official presentations (which had been entrusted to Brylinsk $\text{\textcircled{c}}$ unaware of the theory of 3-Modules). Mebkhout was thus able to expound his ideas and results, and in particular the theorem of the good God, so as not to allow no doubt about the paternity of this theorem, and the philosophy that goes with it, which allowed the spectacular restart of the cohomology of algebraic varieties, which is concretised in particular by this col-foulbrood. Thus, **all conference participants were made aware of this fatherhood**, for this presentation. I also assumes that all without exception have been aware since the Acts of the Colloquy, and in particular of the Introduction and article cited by Beilinson, Bernstein and Deligne. Not one, apparently, found that he there was something wrong with it - or if he found it, he did not suggest it. Zoghman Mebkhout did not collected no echo in this sense. Thus, all the participants of the Symposium can rightly be considered as solidarity with the mystification that was made during this conference.

This collective mystification was clear already from the moment of the Colloquium, since nobody found something abnormal that in the oral presentation of Deligne on the beams called "perverse", the name of Mebkhout is not pronounced. The lecturer confined himself to stating the theorem of the good God, saying

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that he was not going to prove it in his presentation. He did well out elsewhere (with the modesty which he p. 290 is customary) that "there is no merit" in guessing the extraordinary and unpredictable properties beams he calls "perverse", obviously suggested by the "Riemann-Hilbert correspondence"

he had just spoken 12 (*). Everyone has found it normal that they refrain from naming the person who

had the "merit" of discovering this providential correspondence, and that it gives the appearance that the author was none other than himself, even though they had just learned, or were going to learn in the days

following, that it was not so. It must have been considered that it was by a kind of inadmissible maldonne that a

The wave appearing at the Colloquy was to be the author of such a remarkable theorem, and each one of his own

to rectify the situation and establish a consensus that attributed paternity to the person who was clearly

for this - one that **should have** been the author 13 (**).

12 (*) Compare with pages 10 and 11 of the cited article.

(June 7) For details on the art of the retraction, see the following note "The Magician", n \circ 75 ".

13 (**) (June 5) also everything fits! The reflection which continued in the procession "the Student" (following the procession "The Symposium"), and a certain tone too (especially in a recent and brief exchange of letters with Deligne, see first note Footnote to Note "funeral" n \circ 70) show me that Deligne cohomologists and my other students, it is clear

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Detailed feature **the presentation of Mebkhout does not appear in the Proceedings of the Symposium**. Verdier had asked Mebkhout not to write his presentation, saying that the Symposium was intended to present results while those of Mebkhout had already been published for more than two years.

When we do not let ourselves be imprisoned in a technical discourse, and we look at what really happened passed during this brilliant Symposium, at the level of the forces and appetites which animated the uni and the others, it is believed to be attending a film about the reign of the mafia in the shallows of some distant

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Megapolis, this is

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yet a picture of ours, and the actors are among the noblest jewels of French science

and international. The Grand Chief who regulates the operations to the finger and the eye, is none other than the one who was a modest and smiling spiritual son, or at least a legitimate heir (no less modest and smiling). As for the workable and tailor-made, the "soft" in a world of "tough" that do not make neighborhood, by a strange "chance" that I do not yet fully understand the meaning, it is also closely linked to my person. He is my "pupil" as is the Grand Chief (and like him "pupil" with quotation marks ...) - that who went to school when for years I was declared dead and buried. . .

15.1.3. The conjurer

Score! 75 "

(7 June) We will admire in the "memorable article" (which is mentioned in the two notes previous) the consummate art of casual retraction. The equivalence of categories that was the motivation essential of all the work is introduced for the first time at the bend of a sentence at the fourth rage of the Introduction (page 10, lines 9 to 15), without attributing a name to him, to follow immediately with the string of consequences for the concept of "perverse" beam (pages 10 and 11). It is no longer in question until the end on page 16, where we read ¹⁴ (*):

"Note that the following points, **which would have found their way into these notes**, we have failed to task.

- - The relationship between perverse beams and holonomic modules. As mentioned in this introduction, she played an important heuristic role. The key statement is 4.1.9 (**not shown here**) ... "

(To link up with other "points that would have found their place ...")

I hasten to look, what is this "essential statement" that the authors have not found the leisure

to include in their work, or at least not the demonstration. Seek n ° 4.1.9 ... I came across a

"Note 4.1.9" it does not have to be that, I'm looking for an "essential statement", a theorem in form or scholia, with a reference **where** the authors demonstrated that will demonstrate, as they do not prove it **here** ...

But no matter how hard I look, there is no trace of a "theorem 4.1.9" - there is only one passage that answers the number 4.1.9- So I start reading the "remark" at random (without conviction

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- there must be an error of

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dialing. . . I read that "the analogue of 4.1.1 in complex cohomology is true ...", unfortunately, I will have to

Does it go back to 4.1.1 to try to see what it is? I ignore and walk the following text - and

that it, I did not believe it, eleven lines later, a sentence that starts with "We know that ..." and ends with "induces an equivalence of the category ... with that of the evil beams".

Whew - so that was it, finally! But I can look even further, not the slightest hint

to clarify this sibylline "We know that ...". The reader who does not "know" it already must feel silly, not at the

for a long time that Deligne also should have been the author of the discovery of étale cohomology, and of its

mastery; and to a certain level (the one which controls behavior and attitudes) are penetrated by the conviction that **the bottom**

it is indeed him, beside whom I would be a sort of rough auxiliary and clumsy, which would harm rather than something else the harmonious course of a theory (leading to the Deligne-ex-Weil-conjectures theorem) and to a distribution roles satisfactory to all concerned. . .

14 (*) This Emphasis in the following quote.

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height of the whole situation. What is clear to him in any case (except that he is not up to the task) is that this result "which would have found its place in his notes", which we "remember" here in the bend of a technical remark the reader should know - it is obviously due to the authors of the

"notes" in question, or to one of them; the most prestigious perhaps and who wrote the article (there is a "style"

house "which does not deceive ...), the one who made the oral presentation, and whose well-known modesty prevents him of course to say "it's me!" - but everyone understood without having to say it. . .

It reminds me immediately of memories of my thoughts in recent weeks. The very first,

it is the first work of Deligne in 1968, that I finally took the trouble (sixteen years later) to look at a

closer in the note "Eviction" (n ° 63) April 22 (three days after the discovery of the pot-aux-roses LN 900). I find here the same style, with variations probably due to the "burn-in" intermediate of thirteen years. In the 1968 article, whose main inspiration came from me, he names me by the way and so sybilline near the end of the article, just to be "in order". Here he does not take such care anymore - experience him shows for a long time that it is absolutely no longer worth it! On the other hand, in the article of his young age, since he felt compelled to name me, he compensated by completely dismissing the initial motivation of his work (and weight yoga with, to take him out under a spare fatherhood six years later, in waiting for the exhumation of the grounds eight years later still. . .). Anyway, even hiding (and keeping for his sole benefit. . .) the essential arithmetic motivation of the article, this one "stood", this article was perfectly understandable, live up to the reputation of the author to do things so

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perfect. p. 293

Here, the theory he develops would be incomprehensible without the heuristic motivation. He therefore indicates this one, referring to it by the qualifier "the essential statement", while treating it from below the leg - without honoring it with a name, or a statement in form baptized theorem or proposition, there is not even a "correspondence" (so-called of Riemann-Hilbert) - he left this care to his friends Verdier and Teissier. He does not have to give him a name (given the bit ¹⁵ (*) - surely it would show in five minutes) or appoint anyone - of others will do well in his place and to his complete satisfaction. There is obviously a yoga, a philosophy, that the author uses with perfect mastery and authority, without having to name anything - this "little" that he pretends to disdain ("which would have found its place in these notes"), he knows he will have it in addition, as long as he knows how to keep quiet about and wait. The first time he played this game successfully, this "little" was "weight considerations" which was alluded to by a sibylline remark (waiting to bring out the philosophy of fanfares, six years later) The second time, to my knowledge, was when I left in 1970 - the "little" was the "dream of motives" which did not deserve for twelve years to be honored with a word (think so - a dream, and the dream of a deceased still, and not published by the market!), waiting for discover the real motives this time (and what we can do with them) and wear them, always so modestly, the undisputed paternity ¹⁶ (***)).

15.1.4. The evil

Note 76 (May 4) I well remember the first time I heard the name "perverse sheaves", there must be two or three years old, that he had hit me unpleasantly, it aroused in me a feeling of unease. This feeling reappeared the two or three times I heard this unusual name again. There was a kind of "recoil" interior, which remained on the brink of consciousness and would probably have expressed itself (if I had stopped to examine it

it ¹⁵ (*) (June 14) To put this "little", I recall that Deligne had devoted a seminar IHES to try to develop a translation of discrete constructible coefficients in terms of continuous coefficients, without reaching a satisfactory result. See Note about "The unknown service and the theorem of God", n ° 48.

¹⁶ (***) For further comments on this technique of "ownership contempt", see note next day n ° 59 ©
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then) by something like: what an idea to give such a name to a mathematical thing! Or even

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anything else or be alive, except to a person - for it is obvious that of all the "things"
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of the universe, we humans are the only ones to whom this term can sometimes apply. . . It seems to me (without being entirely sure) that it is none other than Deligne himself who for the first time spoke about the so-called "perverse" bundles, when he came home after the Symposium of Luminy ¹⁷ (*). It even had to be one of the last mathematical conversations between us - there are none had others after his visit. It was during this passage precisely that this "sign" appeared, which brought me a few weeks or months later (as this sign was confirmed in the exchange of letters mathematics that followed the meeting) to end a call mathematically ¹⁸ (**).

(See notes for this episode of "Two turns" n ° 66.)

To return to the so-called (wrongly) "perverse" bundles, it is obvious that "normally" these bundles had to be called "bundles of Mebkhout", which would have been only justice. (More than once I happened to give mathematical notions that I had identified and studied the name of predecessors or colleagues which were bound much less closely than Mebkhout to this beautiful notion - which, moreover, would seem to me more in the "sublime" tones that perverse!) The arrangements in which Deligne was at the time where he discovered and named this notion from the work of Mebkhout, preparing to steal him while himself was already "filled beyond measure" - these provisions can rightly be called "perverse". Surely my friend himself must have felt it in his heart, to a certain level where we are not fooled facades that we like to display. In the attribution of this name (which seems aberrant to first view) I feel an act of **bravado**, a kind of intoxication in such a complete power, he can afford even

display (symbolically, by the display of a provocative name that **no** one will read the true meaning, however, brilliant!) its true nature of "perverse" spoliation of others.

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It seems to me by no means impossible that at a certain deep level I perceived the tone of these provisions
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in my friend, and this has contributed to the malaise that I spoke 19 (*). This discomfort was expressed in particular by inattention to the explanations he had to give me, whereas I do not think there was any opportunity before this meeting, where I followed with a sustained attention what he said to me, and especially when it came of mathematics. There was in me a sort of blockage vis-à-vis this notion called (God knows why) "perverse" - I did not really want to hear about it, even though it was closely related to questions of which I have been (and remains to a certain extent) very close.

To put it all, this whole article by Deligne et al. they were "**grothendieckeries**" typical and all

17 (*) If this is so (as I am now convinced) it is necessary to honor the modesty of my friend, because I did not suspect (at least consciously) that it was none other than him who had introduced and named them. It took that I read the "memorable article" to realize it.

(May 28) Actually, the thing is not more said in the article in question, that it is said that Deligne is the father of the Riemann-Hilbert correspondence. Yet I had no doubt about his paternity on the name "perverse bundles", and this one was confirmed to me afterwards.

18 (**) On a purely personal level this relationship continued in the same tone of affectionate friendship than before, without apparent change. My friend used to come every other year to visit me, during some hike most often. I had his visit again last summer, which was a welcome opportunity to do too knowledge of his wife Lena and their daughter Natacha still very small. It was I believe the return of another Symposium Luminy again, and on which I hardly had any echoes (except some vague and vague allusions of Mebkhout, to whom we had He still does the honor of inviting him and who has found nothing better to do than to enter the game again. . .). They are stayed home two days or three, and the contact was excellent all the way.

19 (*) I would even be inclined to think that this is indeed the case. More than once I have seen in myself how much the perception depth of things is of a delicacy and an acuity incommensurate with what touches on the level conscious or flower of conscience. The man fully "awake" is the one in which these perceptions are constantly integrated into the vision conscious and conscious lived - so he who lives fully according to his true means, and not only on a portion derisory of these means.

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spitting, which could just as easily have been my pen (with the sole exception of the name of the main notion Cipale)! It's a bit what I have already said in the second part of the previous note (n ° (75)), and what I have felt already from the moment I read the article cited - but without this diffuse feeling is incarnated again in this striking observation that I have just made. This one makes me again in a striking way, this profound contradiction of the one who can not help himself (in a certain meaning) to reproduce and assimilate to the very one that we must deny, to to bury, and that is also at the same time

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that we **want to be** and (in some sense) it **is**.

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As early as the day before yesterday, in writing the previous note ("Iniquity - or the meaning of a return"), I had been struck already by this coincidence, that this turning point in the relationship between my friend and me, impoverished suddenly from a

communion into a common passion, which had been its *raison d'être* and the most powerful one, was my friend's very return from this memorable Symposium, whose meaning had just been revealed to me. What had me aback when we met in July 81, which at some level was as friendly and affectionate that other occasions when we met, it was the "sign", discreet by the tone and air, and

Yet a brutal evidence of a deliberate disdain. It was like a kind **of deposit** that

My friend took, at this time of personal relationship, on the implicit disdain and just as "discrete"

(And an equally "brutal clarity") he came to the Symposium Luminy express vis-à publicly

screw me, as a public figure, so in the context of a brilliant technical virtuosity deployment

between the stars of the day. It was the same "disdain" also had just express (but this time with even

a different brutality "perverse") vis-a-vis the one who had dared (ever so slightly) to avail himself of me, and

thus was condemned to be more for my friend Peter (at some level at least) that "another

Grothendieck " 20 (*) that it was now crushed at all costs...

15.1.5. Thumb!

Note 77 (May 5) Another detail struck me browsing this memorable Article 21 (**) that dominated (at this they say) that no less memorable Symposium Luminy June 1981. The last chapter, under the name suggestive "From F to C," describes in great length a remarkable principle that I introduced in geometry

Algebraic there must be twenty years old - it had to be before birth of the concept of pattern (which in gives the most illustrations

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Deep via Weil former conjecture). This principle ensures that for some p. 297 types of statements regarding type schemes ended on a body, you only have to prove on a base body finished (thus in a situation "kind of arithmetic") to deduce the validity of any body, including Body complex - in which case the algebraic-geometric sometimes contemplated result can be reformulated by transcendental channel (eg in terms of integer or rational cohomology, or in terms of structures Hodge etc.) 22 (*). My friend taught by none other than me and through me, in many examples Over the years 23 (**). The authorship of this principle (which in elemental form is very explicit in EGA IV - do not ask me what paragraph and what number. . .) Is also notorious 24 (***). To the point that when 20 (*) In our personal relationship, my friend calls me by the affectionate diminutive (of Russian origin) of my first name Alexander, that also whereby call me since my childhood my family and closest friends.

21 (**) See footnote ° 75 about "memorable article".

22 (*) (May 6) It seems to me that the first example of using such a principle is in the Lazard theorem on nilpotence algebraic group laws affine space E (on any body). His demonstration was very much hit, and I am inspired to many other statements, and to make it a "philosophy" that has dominated my thinking about patterns theory.

23 (**) See note "Eviction" (n ° 63) for one of these examples.

24 (***) (June 5) It may be unfair that I pretend the "father" of a principle which the first application that is known to me is due to Lazard (see Note (*) above). My role, as in other occasions, was feeling the generality of another person's idea, 339

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the award of the Fields Medal to my brilliant friend, the Helsinki Congress in 1978, N. Katz could help the passing reference in his speech in honor of P. Deligne, grinding and (mine nothing) to "forget" routine a bit annoying his illustrious winner. I have read that speech he A few days ago, along with the "memorable article" itself.

Still, in this article, passage of the philosophy of "arithmetic" to the "geometric" is presented in such terms that it can be no doubt to an uninformed reader that the brilliant author main (excuse

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odd. . .) Has just discovered this wonderful principle of such great significance.

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It is true that I have not patented the method, and that my brilliant friend nowhere says that he is the brilliant inventor; nor does it purport clear that he is the father of the famous "correspondence" (Admire the term, smelling his nineteenth century) modestly attributed to Riemann and Hilbert (Men worthy to sponsor the children of such a prestigious successor) - nor does it specify in the "memorable volume" (LH 900) that this is indeed he who invented patterns, Galois groups motivic and a philosophy that goes with it (and he still has left a piece). Nothing to say no more for this famous SGA 4 1

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Where they even made me the honor again to make me appear as a "collaborator"

This volume, which develops so brilliantly ab ovo the étale, by deigning to use (despite their Regrettably gangue superfluous details etc.) to the two satellites volumes 4 and USG USG 5, doomed to oblivion but which generously recognizes the merit of providing some technical additions and digressions (some even "interesting") 25 (*).

In all these cases, and many other micro-event as I've seen in the five or six last years without the idea ever come to me to **understand my discomfort** and give a name to what I witnessed or co-actor 26 (***) - in all these cases, I recognize the same **style**. My friend is always and totally "thumb" - it can be used at home, with good conscience that gives complete admiration (all there has based) of his peers and his odd, guaranteeing impunity.

15.1.6. The Chinese emperor's robe

Note 77

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(May 7) Of course, those who see to my friend Deligne and are so little "in the know"

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for the ins and outs, I mean those who do not disembark and do everything just learned math "that are" in the publications of the person himself, or other bright stars (without always golden) of his generation - those colleagues there (and they are not so rare after all) is well aware, at **some level**, of what is happening. They must have felt good in the case "a bit big" this little particular discomfort I felt myself more than once before these "micro-case" a hundred times less

and systematize the point of making a "jerk" or a "second kind". As part of yoga and weight reasons, probably the first to use this principle was Serre (not me) with his idea of the numbers of virtual Betti me put on the road just a general yoga weights and patterns. (See footnote 46 for the idea of Serre in question.) It is also true that it is common practice to attribute authorship of a "principle" became current reasoning, not to author where we find the first trace, but one that for the first time perceived the general, who systematized and popularized. In this sense, we can say that the rectification of N. Katz (discussed in the following sentence), assigning me authorship of this principle, is justified.

25 (*) For details on "operation SGA AT", see four notes "The clean slate", "Being apart", "The Green Light", "The reversal ment" (notes n s 67, 67 68, 68)

26 (**) The first step to just "understand my discomfort" in a case was made in Crops and Seeds there are fewer three months in the reflection (which proved very laborious - and for good reason) "Note, or the new ethic" (Section 33). This thinking is reflected in a note to this reflection, "The snobbery of youth, or defenders of purity" (note 27), and then again there are less than two weeks (under the impact of the discovery (the day before) of "memorable volume" (LN 900))

with footnote 59: "The new ethics (2) - or the rat race." In writing it, he remained in me like a shade hesitation to use it quite thickly term "rat race". The discoveries which have followed since have shown me no hesitation was not yet in order.

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big as these. But what they felt was so **huge**, so **incredible** that it never have surfaced -

as it finally began to surface in my house, in a **work** that was expressed by these

two texts around a micro case discussed in Note b. p. former. I did not hear

indeed the thing has been unparalleled in the history of our science or other. Instead of doing

surface "in some" it "had more **to school**, or at least be considered **normal** - as long

a man obviously brilliant, admired by all, practiced with the largest natural world, in full view

of everyone and without the thing ever (as far as I know) does not raise any comment.

In recent days, I could not help but well resonger of both the tale "The dress of

Emperor of China", which said Emperor abused by unscrupulous crooks and by his own vanity, makes

announce that appear in solemn procession with the most sumptuous clothes the world has known, that

just prepare it at great expense so-called artists tailors. And when it appears in procession surrounded

with great pomp by the Court in great finery, by "artists" making bows and the imperial family

full complement, or person in the procession or the people together "to contemplate the seventh

wonder, does not dare to believe the testimony of his eyes, and all make a point to admire and go on about the

unsurpassable beauty of these clothes which ready it. Until a child who had strayed into the

crowd exclaims: "But the emperor is naked!" - and then suddenly everyone as one voice

exclaims with this child "but the emperor is naked!".

And I feel like the little child who believes the testimony of his eyes, even though he sees is

quite unheard of, never seen again and ignored and denied by all.

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Whether the child's voice will be enough to bring back some of the humble testimony of their healthy p. 300

faculties is another story. A story is a story, it tells us something about reality - but it is not

not reality 27 (*).

15.1.7. Dating from the grave

Note 78 (May 6) It only been five days since I got to the end of ends, this generous packages

papers My friend Zoghman Mebkhout, including especially the two texts already examined

"memorable Symposium" - that Colloquy built around a **hoax** monumental! The note "the Iniquity -

or the sense of a return, "when I try to assimilate quite incredible sense of this new" event, "

was written on the same day (after the first of May) I received these documents in emotion yet the

Discovery 28 (**).

Since April 19, when I had finally read the "memorable volume" readings Notes (LN 900 -

see notes (51) (52)), this was the third great discovery about the great solemnities of Burial,

it is also one that seems the most far-reaching, both by lighting it provides actions

27 (*) (14 June) After writing this note, the name "The Chinese Emperor's robe" struck me as a subtitle natu-

rel to Burial expressing a particularly striking appearance thereof. Thereafter, the reflection is being moved

all of my students, even "the whole Congregation" of mathematical Establishment, this subtitle appeared less

win. But I finally realized that the parable who first came to me thinking about my friend Deligne, applies

also to all aspects and events of the Burial, which each come short of the grotesque in the incredible

(That everyone is committed to ignore modestly) yet is true. For reflections in this sense, see

particularly notes "You can not stop progress!", "The Symposium", "The Victim - or both silences", "The joke -

or complex weight", "Spoofing", "The Deadman - or the whole Congregation" (n s 50, 75 83, 85 97), including

none specifically for my friend Peter.

28 (**) With the "Note - or the new ethics (1)", this note is the only note or section that I was forced to rewrite several times, because what "out" in the first version (and even in the following) remained weighted any inertia a vision that I was customary, and remained far below the reality that it was considering.

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people to whom I have been closely linked, by its implications as "table manners" of an era apparently unique (but it is true that I am ignorant of history...).

The second discovery was followed closely the first - that of exhumed

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tion of the "reasons" for twelve

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years buried. After the "memorable volume," I got to the "memorable seminar" - this "seminar" which has never occurred, wearing a phony name (SGA as the number 4 1/2), and enriched with "State 0" a thèse-ghost, besides a central exposed the (true) seminar SGA 5 (which is higher figure, while is older than twelve years); exposed "borrowed" for the purposes of the trial without further operation.

This brilliant operation, and the role it played in the strange vicissitudes that have hit the poor seminar SGA 5 (dismantled the head, tail and middle!) gradually revealed during a reflection that continued between 24 and 30 April. (See in this regard the five notes "The crony" "Clean slate", "The Being apart" "The signal", "Reversal", n ° s 63 ©67, 67 ©68, 68©

Just this discovery then digested alongside my retrospective reflection "My friend Peter" pull to an end, and when I came on April 30, proudly putting the final and definitive mark (where it was safe - this time I was finally i) in this endless Burial, with the "final note" on behalf doubling euphoric "Epilogue - or Unanimous Accord" - I get this evil package, which challenges endpoint, epilogue, layout and numbering. . . A quick look at the documentation and the annotations and letters that accompanied it showed clearly that it was screwed up my end point, and beautiful scheduling of a first class burial I was about to fine tune the final details - I was good to return to emcee harness. . .

God knows he© had time to inform me of the situation, my friend Zoghman! It must make it lasts ten years in latent form, and at least three years under "acute" (and still it is a euphemism) - from the Symposium in question, where he has been feeling the wind without waiting for the publication the year after the "Acts" high official under the patronage of his former boss shows and protective.

A few months after defending his thesis (in February 1979), he had come to bring me an exam-please the village where I had lived for six years. Bad luck, I had to leave (never there return, except in passing. . .) A few days before, to retire to solitude. He has met my daughter, who gave me the thesis later. It©a year later I think

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we finally met at college

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Montpellier, where we had a chat for an hour or two. I was not connected to the math at this time and had not so much remind me neither a thesis that I had to flick in a few minutes, or the name of its author. That did not stop the contact was warm. I remember well a current immediate mutual sympathy. We did not so much about math (not that I can remember), but mostly more or less personal things. Zoghman told me later (something I had forgotten) that could still explain a bit the "philosophy" of the 3-Modules, and that he was glad the meeting, for making me feel "vibrate" so little that it is learning from him about things, and yet also (a way) "expected". What I remember most is the feeling that made me the person - a sense of calm and stubborn strength, that of a "go-getter". At that time, much more than in our meeting last year or in the correspondence that followed, I felt a strong affinity of temperaments - from this side "go-getter" in particular. But two or three years that have passed between the two meetings appear to have begun not bad. . .

I do not remember that at our first brief meeting Zoghman has spoken of isolation in which he worked, to the lack of any encouragement from the "luminaries" who were my students. If he has hinted he did not have to insist. Even at that time the thing was not for me

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surprise 29 (*). I can not say whether it was before or after the symposium Luminy June 1981 30 (**). Yes it was after, he would have anyway of all hot things on the stomach - and it really gave not printing. Rather that of a man who knows what he wants to do and what he wants, and following his

quiet road, seeking noise and without him we seek noise.

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We did not then continued to write. But I remember him well, and at the beginning of last year I have him p. 303 writing a word, just in case, to ask perhaps if he was availability situation to tackle a magnificent work of foundations for a "moderate topology" that (it seemed) was waiting only that someone of his caliber harnessed it. Without Zoghman me first say clearly, it turned out that he was not really interested in that perspective - against it by seemed happy to take this opportunity of a new meeting. Then I was too out of it to fully realize the situation, I imagined that 3-modules theory was now done and closed, as is say the duality theory consistent (78 1) and that Mebkhout was perhaps short of "major tasks". With our summer meeting last only that I realized that the same theory that he had started, the "great Tasks "abound - and some have not even begun, because they have only been seen! Still, it was an opportunity all found a second meeting, this time not gale like the first. Zoghman had to stay home maybe one week last summer at June I think. At the mathematical level, our meeting served primarily to inform me as yoga-so 3-Modules. I was slow to me "thaw", having a little lost contact with my cohomological old loves, and being embroiled especially in the writing of "Fields of Pursuit" which fits in quite different registers. Zoghman has not discouraged me a listen ear a little distracted, he returned to the charge tirelessly, with touching patience. I ended my trigger, I think, when I realized that these famous 3-modules were nothing more than what I had long ago called **crystal modules** , and as such it kept a sense of singular spaces. Suddenly, I saw up forgotten depths of a network of intuitions of my past cristallino-differential, and reset a bit rusty reflexes of my past "six operations" ... This is Zoghman which suddenly was a little downwind perhaps, or is it an afterthought rather he decided he would not risk his fingers into gear this one (not more than my friend Pierre has wanted to put the his - when he was all fire and flame as I was around. . .). (⇒ 78)

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Yet there are a number of results "for" consistent duality, including the structural p. 304 ture of "dualisantes differential modules", their relationship to the differential modules "naive", and track applications and residue in the non-smooth flat case, I had developed in the late fifties and who have never been published to my knowledge. This prevents essential to the dualistic theory coherent ity (in the schematic part at least), like that of duality spread (and its variant for the discrete cohomology of locally compact spaces, developed by Verdier Model spreads), or linear algebra or general topology, theories appear as essentially **Acheson Vees** 31 (*), so in the nature of **tools** fully developed and ready for use, and not a **substance** as 29 (*) (May 30) This is not entirely true - I reprojects the past disillusioned latest provisions. I remember when meeting with Zoghman last summer again, he was surprised that none of my cohomologistes students (especially Deligne, Verdier Berthelot Illusie) have shouldered Zoghman in his work. This surprise was renewed when changing Deligne home, about ten days later (I had to touch a word on Zoghman without encountering echo) and the Subsequently, in a telephone conversation with Illusie. (See the note about "Spoofing" n ° 85 © 30 (**)) (3 June) This was before in February 1980, one year after defending his thesis. 31 (*) (June 12) This is not quite true to the duality spreads, as speculation of purity and "bidualité theorem" does will be proven in all generality.

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is little known that it would penetrate and assimilate.

15.1.8. The victim - or both silences

Note 78

Our meeting took place in a friendly atmosphere of trust and affection. this atmosphere yet has not kept its promises. I now realize that from that moment the trust was far from complete my friend. It was two years after the famous Symposium, and a year after the publication of "Acts" in Asterisk 32 (**) - at a time so his whereabouts to the cost of a scandalous spoliation. But he kindly let me know there are just four days! When he came last year, he came from another symposium Luminy 33 (©**) (this time outright themed 3-Modules)

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where it

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still had generously invited and where he was eager to rush. He spoke in terms of both bitter and vague, suggesting that now that he had pulled the chestnuts out of the fire, they were "the others who had everything" I could imagine the picture indeed -. especially Verdier suddenly remembering fatherhood

triangulated categories (and also derived, for that matter!) that he had left out for ten or fifteen, just tolerating his "pupil" Mebkhout uses in its work. . . (81).

No he wanted then explain clearly Zoghman were big on heart it seemed about Verdier, understandable thing given the bleak behavior of his former boss. However, cohomologistes my other students, Deligne, Berthelot Illusie no longer had deigned to look at it and support was more or less. But it was almost as for Zoghman it could self that going, never (would they say) experienced a different attitude than that one from his elders. If he wanted then someone from my former students, it was solely and exclusively to Verdier. According allusions Zoghman (he obviously did not wish to specify), I realized that "we" mini-banked systematically the scope of what he had done - a point and that it. This is after all the thing most common in the world. The appreciation of the importance of something being largely subjective, this is common and almost universal to award more merit and importance to its own work, those of his friends and allies, as those of others, especially those we want to minimize fear one reason or another. (And "reason" in this case does not really had a mystery to me!) Nothing could not let me suspect that far beyond these prevailing attitudes, here there was an operation outright fraud, where there was no question of "minimize", but **to retract** without more paternity Mebkhout on ideas and results that redonnaient life where there was stagnation. . . Yet if there was one person in the world that it was natural that my friend opens, that was me whose work had inspired him during these years of persistent work in the bitterness sometimes against the tide fashion of the day - I affectionately received him in my house, making me a little

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his pupil to my
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round learning my best he delighted in teaching me ³⁴ (*).

32 (**) (October 9) Zoghman tells me that the "Acts" are actually published as early 1984.

33 (***) (May 7) There is a slight memory of confusion here - I rather think he was about to go to the Symposium. From that time many Sure, there were plenty of reasons for these "bitter words" (and waves) which I remembered. But the bitterness was still boosted by its passage Luminy after his stay with me. I have heard echoes a call that he gave me his return Luminy. From that moment I had the distinct feeling he was rushed to Luminy for the pleasure of being bullied by "people" (not too much to ask me which) who had generously invited for fun, them to process it negligible quantity. I had to say or suggest, what has not been so improve the provisions of my friend My respect.

34 (*) No more than his own funeral, Zoghman not also spoke of mine, as soon it was ten years yet he was really a ringside seat to watch the proceedings! In short, its "protectors" (a little reluctant on the banks) had kindly as he carries his hands a small corner of the coffin bearing my body - but they did it not forgiven from alone among the guests who sometimes allows it pronounced all other silent! So, my friend would feel cantilever in his relationship with me, and he could not find in him the simplicity to assume
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After passing my friend in an environment of warm affection, there has also been a "return crank" immediate. I had this impression that he had decided to postpone my person mistrust and bitterness that had accumulated in it over the eight or ten years, spurred on indifference and disdain he had met with some of those who were my students. In the months ensuing correspondence between us never left the aigredoux register - she finally stopped on a new year greeting card, which never received a reply.

It only the end of March I contacted Zoghman to send "The weight of the past" and notes I was then added to this section (n ° s 45, 46, 47, 50). It was asking if he agreed that I do figure as I had done in the short reflection on my work (in the note "My orphaned" n ° 46), then it would be clear to everyone that I was using information he had given me, and he could judge they were confidential. I was not sure my friend would not prefer (as others before him) "crashing rather than offend." That would have made me of the sentence if he had been. I found a long time to have his reply, received ten days only. I was expecting it a little would be even half flesh, half fish - but

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this time it was downright friendly. He gave me his ^{p. 307} agreement without reservations, moved even with the terms in which I was talking about him. It on page 6 of its long letter (eight pages) indicates that, in passing and about the "number impressive" of his theorem applications ("both in the topology frame spreads in the transcendent framework") that it is still in the literature as the "Correspondence Riemann-Hilbert" ³⁵ (*). He says of the way if almost incidental, and that illegible handwriting as pleasure, that it almost entirely pass to ace! I still remembered, it was really something

strange. Strange though it seemed hardly believable, and then maybe my friend was exaggerating, obviously he wanted everyone including me who nevertheless did not want him well, it was still clear enough.

So I added a note (sacred Zoghman, I thought I had done yet!) Called "The unknown service and the theorem of God ", in addition to two other" Instinct and fashion - or the law of the strongest " (I also thought a lot about him, among others, by writing it) and "Weight canned and twelve ". This note on" The unknown secret service, "I wrote to first without full conviction; Zoghman seemed so tied up and full of contradictions that I wondered what I was getting myself just making me its echo, so without knowing the facts for myself. The thought was not me grazed there could be a scam, let alone Verdier or Deligne themselves were involved. Nothing in that Zoghman had said could suggest. . .

But both one and the other were linked so closely to the theorem of God, his paternity could hardly be retracted without at least tacit agreement. It had to work in me in the days followed. I remembered that there was plenty Deligne thought, this problem solved (ten years later) by Zoghman - and then Verdier after all, he was director of research function; even if he was not much tired to his student and he would rather beat cold and discouraged than anything else, it should at least know what the two main theorems in this work - surely it Zoghman explained, during the famous "interviews" Verdier

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agreed to grant him! So I enriched the note p. 308

a commentary on the relationship Mebkhout to work with an earlier attempt Deligne, and a Note b. p. the role of Verdier. It was also a time-even straw poll vis-a-vis my friend a past charged (as was mine) ambiguities, and tell me plainly and clearly. Talking about his funeral, it was also talk of mine and of the role that he himself had played there. . . Still, if I come to find out that famous Burial in all its spendeur, this was against a kind of "conspiracy of silence" that included as much my friend Zoghman my friend Peter - and also probably the most friends I had in the "big world" mathematical. (June 3) For further details, see footnote ° ! 78 "below.

35 (*) See quote from his letter in the note "A feelings of injustice and helplessness", n ° 44 ".
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Zoghman. . .

One might think that suddenly, Zoghman will jump at the opportunity to unveil finally, finally, its batteries, hidden for three years, which will finally bring out the truth and clear triumph of the cause of the oppressed! But not at all ! Fifteen days of silence, followed by a letter which speaks of all (math) unless the Theorem of God - or rather, it merely about him to give me the exact reference in his thesis that I had requested. (I still wanted to know where it was proved that famous theorem on which I was getting into so firmly!)

It took in my response to this letter, I say a few words about "the vast scam with regard to my work "that I had just discovered (with the" memorable volume "LN 900, and more me "promising much pleasure" in the coming days to meet with SGA 4 1

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the library

Fac) - for, after another pause ten days yet, my friend finally triggers!

This time he finally "put the package" - a **large** package, for once, of carefully selected materials, allow me (to me that hardly haunted libraries, or even reprints batteries piling up in my office at the Fac ...) to get a balanced idea of an "atmosphere" in which many are still those who are not involved in my long and solemn Funeral 36 (*). Next to the main "exhibit" (both products of the famous Symposium, breaking the incredible mystification) and another "memorable article" (this time from the pen of Verdier 37 (**)). there was the speech N. Katz on the "Winner Fields" Deligne, in addition to a presentation by Langlands and another of the same Manin Congress Helsinki 1978; then "Hodge Theory I" Deligne Congress Nice 1970 (where it is made still referring to the line 3 in a "speculative theory patterns Grothendieck" (78 1),

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and "Weight in
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Cohomology of Algebraic Varieties "of the same Deligne Congress Vancouver 1974 (where my name is not pronounced (78 2)); more then a match with A. Borel (another old friend, whom I learn while he is back in Zurich. . .) And two notes to CRAS Mebkhout, one from 1980 is a summary of Chap. V of his thesis (passed last year), putting a little more value theorem of God 38 (*). Without even counting a document, hush! statement under the seal of secrecy, and I here will not say another word. . .

Two letters that accompany substantial sending (letters of 27 and 29 April), one very long and both

substantial. Now that he has finally spill the beans (real this time!), Continues Zoghman Yet to urge me to extreme caution, as he did since I had contacted. If I listened, I would keep well to make public my reflection notes, which remain subject to secrecy Absolute between him and me - not the part at least that involves anyone, given that "they" were "all authorities "and that" everyone is with them " 39 (**)! But I had Zoghman well aware that these notes I sent him the extracts concerning him, are intended to be made public, and in most promptly.

All elements seem reunited for the triumph of the just cause of the oppressed, but the "victim" seems to do everything yet possible to continue his muddy the waters as fun - as a

36 (*) (12 June) Still, Katz, Manin, Langlands do not seem to be in it. . .

(March 1985) In another bell sound for Katz, however, see note "The dot the i" n ° 164 (II5) and "The maneuvers "(n ° 169)," Episode 2 ".

(April 1985) Similarly to Langlands, see note "Pre-exhumation (2)", n ° 175 .

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37 (**) see this article about the note "The good references" n ° 82.

38 (*) For a detailed reference for the note, the thesis Mebkhout and the theorem of God, see note "The pavement and the beautiful world - or bladders and lanterns ", n ° 80.

39 (**) (30 May) Carried away by my momentum, I exaggerate a bit here. At no time does Zoghman suggested I refrain from publishing any part of my notes. Lately, he insists it would even appear that these notes indeed as book for the benefit of "posterity", while a limited edition kind preprint it seems a bit "a stab in the water."

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secret regret (would hearsay) of selling the famous "wick" which has had to be Zoghman (until fateful May 2) the sole holder. This ambiguity is reflected in each line (I barely exaggerating) until the last letters again that I just received - including the latest when it sends me dark triumph the "memorable article" in full force (whereas with the "big package" sent First, it was still managed to separate than the first twenty pages of this exhibit Mistress 40 (***)).

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As for the friend I mean Pierre Deligne (not Peter or "friend" for everyone ...) is p. 310 just that he does not sing the heartfelt praise - it looks like once it©not him, Zoghman which is a "victim" but no, but Deligne, the poor, which was influenced so so bad by those who around him - the only ugly, and who so badly surrounded, it is Verdier (and still rather follow my gaze.....)

I definitely "had to do something" Verdier for it to be like that as cow for the sole pleasure to harm, besides it©me who also was her boss and also I who awarded the doctorate and the glory and the rest - the means sum of "absolute power"! 41 (*)

Obviously, if my friend wants to someone, it©not really his illustrious former boss, he had the honor of meeting for a "maintenance" only three times in ten years in all and for all (have I understood he wrote me most recently) - a dizzyingly remote man, completely out of reach - but it is that he can come and see when it pleases him, and share his bread and shelter. . . 42 (**).

Each time when a new Zoghman did not disclose any new element, making me know a little more a situation of theft in which to figure victim (and can help so slightly to untie it), I feel that it is like a **tear** , the culmination of an exhausting inner struggle. There is has a **role** to which he seems to have identified the body and soul, clinging to it as its most valuable asset - this role of **victim**

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he can maintain that now about this role and the situation warrants, p. 311 the absolute secrecy 43 (*). And it can be torn into effect and hate me more than ever now where, with his reluctant cooperation (torn almost by the logic of a situation created by none other me, with these misguided thoughts on a burial without stories. . .), This secret will end, and it can also be the role in which he has been pleased to continue, I can not say since when.

This "burial" My friend Zoghman was carried out under the conjugate **two silences** , each doing response to the other and in turn causing, in a flawless round where the role of each spouse closely the role of the other - the spoilers and the despoiled. If more than once I was struck to see that "the enterreur" was same time and more deeply her own "buried", I was seized much to see in the person of another a friend "buried" which is at the same time more deeply, his own "enterreur" - in close collusion

40 (***) (9 October) Zoghman specified that made me, he had not first in his possession a Xerox of the full article, he drawn only later.

41 (*) This is not the first time I heard this story on the "absolute power", by which we would be convinced of its own powerlessness and justify. If someone invested anyone to "absolute power" over his own person, his Zoghman, it is none other than Zoghman himself!

42 (**) (May 8) It is also surely no coincidence that the unmistakable signs of the conflict, in my friend's relationship I have appeared to aftermath of this same room where he "shared my hand and my house" in an atmosphere of affection unconditionally abolishing a sense of "distance" that our first brief meeting probably could not completely erase. I encounter a situation that is familiar to me long, on which I speak (in relatively general terms) in both notes "The enemy Father (1), (2)" (sections n o s 29, 30). I had no idea, writing in the comment to reflections that preceded, how the situation archetype that I am describing was constantly at the center of a much thought yet to come, when I thought I was almost touching the end of this journey!

43 (*) (30 May) Since these lines were written (May 6), the attitude of my friend has changed dramatically, and I have not recently seen signs of a commitment to a victim role. It is understood that the following lines (as those before) relate some episodes in the life of my friend, and do not claim to understand a temperament or describe an ongoing bias.

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with even those he delights to be the willing victim. And I see that the primary responsibility for its own spoliation is none other than my friend Zoghman himself. Similarly, who for three years nods his silence to his humiliation by those who are at ease with him. He had everything in hand to fight - and he chose three years to forget even that he had hands, and be defeated without having fought 44 (**).

Score 78 1

I had never held hands this short preliminary notice, but only the most circumstantial publications "Hodge Theory II, III" appeared in the Publications Mathematics. That's why I was under the impression that Deligne did not bother to ever refer to

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a role

p. 312

played by the theory of motives in the genesis of his ideas on Hodge theory. I thought if he had the desire to mention a role that I have played with him 45 (*), he would have probably done with "Theory Hodge II" which is his thesis, which was the occasion where ever mention such things 46 (**). I just saw that he was acquitted once and for all the formality of mentioning me by this pithy line 47 (***) referring to "conjectural theory of motives Grothendieck" with same a reference to the key (to the outline of the seminar Demazure Bourbaki).

Nothing to say, again! The idea did not come to him to say that he had learned this theory (all conjectural, do not forget!) by a **source other** than lean Demazure text, which can give no picture of a theory of great wealth (all conjecture!), which is found in filigree through all the subsequent work of Deligne around yoga on weight - meanwhile escalating "Pirate volume" LN 900 which are finally exhumed (after five years) groups motivic Galois (this time without even a terse reference line containing the name of the deceased. . .).

On reflection, this terse quote, I recognize the same style "go!" - a pure quote form, to be left with a reference which is not likely to enlighten the reader (in this case, on the

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obvious and deep relationships with ideas that precisely this is to hide 48 (*) - and that remained

p. 313

hidden during the twelve years that followed), but **to mislead the** .

Score 78 2

I did not have to keep this text 49 (**) the hands (which I learned about it a few weeks ago) to know that my name was not included. This Serre, for that matter, which was the first glimpse of a "philosophy of weight", which I then cleared in great detail.

44 (**) (30 May, This is certainly a subjective vision in someone in whom a wrestler temperament, someone who this fiber-there might seem absent. It would seem that since these lines were written, the combative fiber is woke up my friend, and he is determined to fight against the iniquity which he has paid the price. (18 April 1985) For a different light and less "hard" provisions of my friend, see also note "Roots" (n o 171 3).

45 (*) (30 May) I minimized indeed systematically, until a few weeks ago, this role. On this subject the note "Being apart" n o 67 of 27 May, which I realize for the first time this attitude with me and perceive the meaning.

46 (**) (30 May) I do not remember not being contacted to be part of the thesis committee. Burial was already good train. . .

47 (***) Greenhouse figure also implicitly in the same line with the sign of reference [3] - the curious reader will find his name in the bibliography at Hodge I. This expeditious line-witness is the only likely between 1968 and today, where he is a reference (if cryptic it may be) the "source" it refers to a breath Serre (aka [3]), patterns, Grothendieck. . . (May 28) I nevertheless fallen from another such hint, very interesting for the very special occasion. See

this note, "In Praise of Death (1) - or compliments" n ° 104, and the end of the note that precedes it ("The Gravedigger - or Congregation whole "n ° 97), placing this" special sale ".

48 (*) By writing these lines imposed on the association with a first incident developer around the "weight" which is located two years earlier, which was discussed at the beginning of the note "Weight canned and twelve years of secrecy" (n ° 49) and way more

detailed at the beginning of the note "Eviction" (n ° 63). For the "thumb style!" in general, see the reflection of the note "Go!" (n ° 76). It is a style that is becoming very familiar to me!

49 (***) "Weight in the Cohomology of Algebraic Varieties" by P. Deligne, Congress Vancouver 1974 Proceedings, pp. 78-85.
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15.1. VII Conference - or bundles Mebkhout and Perversity

15.1.9. The boss

Score ! 78 "

(3 June) Zoghman explained that he became aware only gradually, and so confused at first, the "scam" that was around my work. The manuscript given to him Verdier in 1975 (see "The good references" footnote ° 82) was providential for him, including & introduce the concept of constructability and its essential properties, as well as bidualité theorem, he was inspired to bidualité theorem (or "local duality") in the context of the 3-Modules. It was only years later, reading SGA 5 (publishing-killing certainly, but not enough massacred for-as to deceive a careful reader like him) that he began to realize some thing. For a long time he was filled with admiration and gratitude for his older remote, convinced that ideas which he inspired was plenty of it. It even seems that for years, he was indeed convinced that the so-called duality theory "Verdier" was indeed due to Verdier, or at least to "clamp Verdier", and like the idea of duality he called "Poincaré-Verdier" is indeed due Verdier. It was around 1979 (the year of its defense) that only started to realize that there was something wrong - but I suspect it had to keep anything let it show respect to its prestigious "boss", nor with respect to me during our meetings in February 1980 and June 1983. It is with the Pervert Symposium only in June 1981,
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then he began to feel that the retraction was p. 314 in the making of his work for him, he also began to realize more clearly what world he had lost 50 (*)! Surely, for him I had to be part of this world, where my former students (or at least some of them) had the upper hand and were looting the posthumous pupil as casually as the late master. The only difference if it is, it was that I "was deceased and that they, they were all there there live and conclusively proved. . .

I can even imagine that after the symposium Pervert, Zoghman still struggled to believe the testimony of its healthy schools, teaching him quite clearly yet what had happened. He had between hands the famous Introduction to the Proceedings of the Symposium, signed by B. Teissier and his "boss-sic" Verdier in January 1984. After challenged the evidence for nearly three years, the shock was all the more severe, I thought I heard. It was two months later that I contacted, sending the end of March the notes "My Orphans "and" Denial of inheritance - or the price of a contradiction "and that©a month later he still I finally decided to "spill the beans" and make me aware of "Hoax of the Symposium Pervert".

15.1.10. My friends

Note 79 And here I am about to conclude and make public this reflection that will end the secrecy that Zoghman himself maintained around the spoliation which he paid the price, and he also collects the unclear benefits 51 (**). Maybe he does it will be unwelcome, as it may be unwelcome to my friend Peter, to whom I will deliver it by hand once it is completed and the clean text and drawn 52 (***)
What I have to

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best to offer my friend Zoghman as my friend Peter, perhaps both the p. 315

50 (*) Zoghman then ended up so low opinion of his former boss, he was persuaded to kick than anything Verdier had in the sixties (which I reviewed in a note b. p. in footnote ° 81 "Thesis and credit insurance all risks ") it was more or less dictated or at least blown by me.

51 (**) (May 30) I recall that this reflection is inspired by my friend provisions that seem outdated to the present. (Compare two notes of b. P. 30 May in footnote ° 78 ©

52 (***) I do not believe yet that I have the opportunity again in the years that remain to me, in return for some days in the capital. But my friend Pierre has moved quite often, for over ten years to meet me at the bottom of remote countryside, so that in this outstanding opportunity I move, following the same time an invitation often repeated and never again put to use.

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they will be the worst: as a calamity or as contempt. Especially worst, that my testimony is public - just like the silence of the one and the other rites were public documents and engage one as they hire the other.

They reject or welcome my testimony is their choice, and it is the same for Jean-Louis, as I counted among my friends as now Zoghman and Peter. These choices affect me closely, and they are not mine. I have no temptation to predict what they will be. I shall soon find out, and I expect that will bring me the weeks and months ahead with intense interest, suspense - and without a shadow of anxiety. My only concern and my own responsibility, is that what I offer is what I have to offer better - that is, to be true.

It may be that surprised that I speak bluntly of people I call the name of friend and who see in this name a style clause, or even a tone of irony that is absent. When I refer to Zoghman Mebkhout or Pierre Deligne as "friends", it is reminder of feelings sympathy, affection and respect that are in me when I write. Respect says I do not have to "treat" a friend, just as I did in my "spare" - like me, it is worthy to meet the humble truth, and not more than me, he does not need bluntly.

If I am not referring to Jean-Louis Verdier as a "friend", this is not because I consider the least as "good" or less "deserving" my Zoghman and Pierre friends or myself, but because it is that life has distanced us from each other. Feelings of sympathy and affection to me bound to him, there are fifteen years and more, are more or less erased by time and have not had the opportunity to back to life by a contact so little staff. The few attempts I made to restore such contact does not encounter echo, and I do not know if reading these reflections will revive a relationship that was frozen. But even at present it is not for me a "friend", I do not think miss him respect by not leaving the nor me or my friends, and I know that by doing the opposite, I would make the service either to him or to anyone. Besides that both her that my friend Peter, if indeed they are keen to "defend" (or attack) rather than to risk a look at themselves, not not lack the means or downforce. And without also count as where they were able to

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to discourage

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or crush, more than once as the other one did, ruthlessly and without mercy.

15.1.11. The pavement and the beautiful people (or... Bladders and lanterns)

Note 80 (May 9) It is time indeed that I finally gives a reference to the famous theorem Riemann-Hilbert (Deligne that dare not speak its name) - Adam and Eve - God - (especially not Mebkhout) everyone quotes extensively (including myself), and for which no one has apparently thought even to ask the question where it is shown. Having grown understand my friend Zoghman the "Me-rable theorem" was in his thesis, I indeed found in the table of contents thereof, as the (admittedly down-to-earth and worthy of a cad) "An equivalence classes", Chap. III, para. 3, p. 75. To make matters worse, he did not even entitled to the name "theorem" but called "Proposition 3.3" (And what@worse, my name, and stressed again, on the same page). I admit even, not having read 75 previous pages for me to recognize that I was not entirely sure if that was it - I Zoghman confirmed that yes and I trust him ⁵³. The demonstration (it would seem) is the subject of Chapter V to the thesis - which was passed at the University of Paris VII February 15, 1979 before the jury formed D. Bertrand ⁵³ (*) (17 April 1985) It appears that finally the form generally used the "theorem of God" is not that of theorem quoted here, but a shape close to showing by the same methods. See note "Hatching a vision - or the intruder "(n ° 171 1, including the note b. p. dated today contained therein.

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15.2. Vili The Pupil - aka the Boss

R. Godement, G. Houzel, Le Dung Trang, JL Verdier. Interested persons who do not have received a copy of the author@care (who sent his case to anyone he could to suspect Rightly or wrongly they might be interested) have to ask him, and he will be happy ... He has course sent a copy to each of my former students cohomologistes, none sign of life. They had to change the subject meantime, no luck. . .

Admittedly, he did not Zoghman decidedly chic to sell his wares to the present so clear and attractive - it@things that are learned, and he did not have the good fortune of had my Former students learn the knack with a virtuoso in the art and that does not skimp on his time. But he can not complain, he had his "three talks", and perhaps one of the "luminaries" idea will one day accuse himself for his indigestible receiving pad. He must have realized himself that besides the pavement he went wrong (even if it was not lost nor Riemann Hilbert...): he made a note to the SARC, it@still shorter, to draw attention to his famous theorem, I give you a thousand Title:

"On the Hilbert-Riemann problem"! I knew that my friend Pierre Deligne was not stronger in story as me, it was enough to restore the chronological order,

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and contribute pretty bathmat designation p. 317

"Correspondence" and that was it, Zoghman he will really try ... This Note is the 03.03.1980, Series A, p. 415-417.

Verdier he had knowledge of the theorem in a "three talks" he has given to his student-sic (or at the defense), but he has had to notice nothing if it is. Deligne, he ended up noticing something I can not say when, but what is certain is that he was aware in October 1980, Beilinson and Bernstein as also from what he said to himself. Mebkhout is also gone himself to Moscow to explain its results (and extensively) in Beilinson and Bernstein (in case they would have been difficult to read). I do not know if they or have read Deligne said thesis or note to SARC that followed, but we must believe that they finally understand what was in it, since the "memorable Symposium" of Luminy the next year revolved precisely this, by the merest chance.

To summarize, and given the latest information has communicated to me my intelligence service, there were at least five people fully aware of the situation, which participated in the hoax called the "Symposium Pervert", namely (in alphabetical order of the actors) AA Beilinson, J. Bernstein, p. Deligne, JL Verdier and Z. Mebkhout - more whole Symposium people acultes, surely brilliant mathematicians moreover, that apparently nothing better than being mystified and take bladders for lanterns 54 (*). This proves once again that we, mathematicians, the illustrated medal in the dark pupil unknown, it is not a more malignant or hair wiser Mister everyone.

15.2. Vili The Pupil - aka the Boss

15.2.1. credit thesis and comprehensive insurance

Note 81

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(May 8) It seems time to express myself more detailed manner on the case of "thèse- p. 319 ghost", which I had spoken only" in stride "in two previous notes (notes (48) and (63 ")).

A casual reader or ill-disposed could say that I blame simultaneously to my ex-student JL Verdier two contradictory things - to have "buried" derived categories, and have "published"

54 (*) (June 3) In fact, it appears that all participants in the Symposium without exception had been set up aware of the situation. On this subject the note "The Symposium", n ° 75 ©written today.

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(in SGA 4 1

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) And rely on his paternity; as the same player would say that I blame P.

Deligne both have "buried" the reasons, and having unearthed (in LN 900). So perhaps it is not superfluous to give a retrospective of the situation, from 1960 to today.

Around 1960 or 1961 I propose Verdier, working as possible thesis development new foundations of homological algebra, based on the formalism of derived classes that I had generated and used in previous years to the needs of a coherent duality formalism in context diagrams. It was understood that the program that I proposed, there were no difficulties serious technical perspective, but also a conceptual work whose starting point was acquired, and which probably require considerable developments, dimensions comparable to those of the book foundations Cartan-Eilenberg. Verdier accepts the proposed topic. His work continues foundations satisfactorily, materializing in 1963 by a "state 0" on derived and triangulated categories, Mimeo by the care of IHES. It is a 50-page text, reproduced in Appendix GAS 4 1

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1977

(as stated in Note (63 ")) 55 (*).

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If the defense did not occur in 1963, but in 1967, it was unthinkable that the text 50

p. 320

pages embryo of a working foundation yet to come, could constitute a state doctoral thesis - and The question of course was not even asked. For the same reason, when the thesis defense 14 June 1967 (before a jury including C. Chevalley, R. Godement and myself who presided), it was not issue to present this work as a thesis. The text submitted to the jury, 17 pages (+ bibliography) is present as **the introduction** to a major work in preparation. It outlines the main ideas the basis of this work, placing them in the context of their many uses. Pages 10, 11 give a detailed description of chapters and paragraphs planned for this working foundation.

If the title of Doctor of Science was awarded to JL Verdier on the basis of the text of 17 pages, outlining ideas which he himself says that they are not due to him ⁵⁶ (*), this was clearly a contract in good faith

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between the jury and him he was committed to carry out and make publicly available the work he
p. 321

⁵⁵ (*) This text alone may seem a somewhat meager result for two or three years of work of a talented young researcher. But the most of the energy Verdier was then devoted to acquire the necessary foundations for algebra and homological algebraic geometry, particularly following my seminars, and work head to head. His contributions to the formalism duality (see below) are placed later, after I had developed with Artin in detail the formality of duality spreads in SGA (1963-1964), when I suggested to him (in addition to his work foundations derived categories) to develop the same formalism as part of topological spaces "ordinary" and lissifiable morphisms such spaces. That about the time I started with USG 1 series of my "Geometry of Algebraic Seminars" (1960) that I was contacted by Verdier, along with Jean Giraud and Michel Demazure, wondering if I had work for them - and they struck there at the right place! Coincidence struck me, from the time when already wrote the note "My Orphans" (n° 46) when they contacted me all three, they came to be in a small seminar called "Seminar Orphans" (the theme of automorphic functions, approach calculations zinc strand), as their boss (or the sponsor CNRS?) Had just gone for a year without warning, leaving them unsatisfied and a bit in the air. This vacuum was quickly filled. . .

⁵⁶ (*) is read at the beginning of the thesis:

"This thesis was done under the direction of A. Grothendieck. The essential ideas it contains are due. Without his initial inspiration, his constant help, his fruitful criticism, I would not have to complete it. It finds expression here my deep gratitude.

Thank Claude Chevalley for agreeing to chair my thesis Jury and to have had the patience to read this text.

Thank R. Godement and N. Bourbaki introducing me to mathematics.

"The term" the thesis "can hardly refer to the entire foundation work undertaken, the text is submitted introduction - work that was not, strictly speaking, "completed" when the defense.

(30 May) This inconsistency reflects the ambiguity of a situation in which I was primarily responsible, as director thesis and (to believe the cover of the copy in my possession of this thesis) as President of the Jury. There have been at me vis-a-vis a brilliant student, a lack of "rigor", a complacency that goes in the same direction as the one I made vis-à-vis proof of Deligne (see note "Being apart", n° 67) and has contributed its share to bear the same fruit.
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had a brilliant introduction. This contract was not held by the candidate ⁵⁷ (*): the text he announced, a text foundations of algebra homology according to a new point of view which had proven, was never published.

It is clear that if work Verdier between 1961 and 1967 had merely write skeletal "State 0" 1963, the jury would not have thought of accepting this "credit thesis." Writing of his work was then be advanced enough to predict the completion in a year or two, and for practical reasons it seemed appropriate that Verdier could have the title without waiting for the work that had to rely on was completed.

It should be added that between 1964 and 1967, Verdier had made some interesting contributions to the formalism Duality malisme (81 1) which, together with the work he was supposed foundations continue, could justify the credit that was done to him. All of its contributions to the duality could to them only, strictly speaking, constitute a reasonable doctoral thesis. Such an argument would not yet do was in the style of work that I usually offer, which all consist in the development systematic and through a theory of which I feel the need and urgency (82 2). I do not remember Verdier has thought to raise the issue to present such "thesis titles", and I doubt I would have accepted, although such a theory would have corresponded to nothing "contract" that had happened between him and me, when I told him about the beautiful derived categories, charge it to develop foundations wide scale.

I accept my full responsibility as supervisor of JL Verdier and president of the jury for my lightness of having awarded (jointly with C. Chevalley and R. Godement trusting the deposit I gave) the title of doctor on a job that was not yet ⁵⁸ (**).

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I am not entitled to complain if I now see some fruits of my lightness. But this p. 322 does not prevent me to make the statement publicly, and that acts of my former student JL Verdier make him sole responsibility, and that of no other.

Not hold the contract vis-à-vis me and vis-à-vis the Jury who had trusted him, was a how to bury the view derived classes that I had introduced and that he had undertaken to found a major work. This work may have been done, but was never made available to the user. This was a way to "make a cross" on a set of ideas that he himself helped to develop.

The recovery of the concept of class derived from the work of Mebkhout encountered no encouragement from Verdier (nor from any of my other students who figure of "luminaries" cohomology). The boycott is on derived categories seems to have been complete until 1981 environ-ron 59 (*), when they make their return to power in the "memorable Symposium" Luminy (see note (75)), under the surge needs.

Yet the state 0 of the "thesis" Verdier already published four years ago in 1977 as an appendix to 57 (*) It is all the more remarkable that JL Verdier refused my proposal to be part of the thesis Jury Contou-Carrere in December 1983, with J. Giraud and myself doing research director function, believing that the thesis (fully yet written and read carefully by J. Giraud) and the jury would not offer serious guarantees sufficient, without reference to the Control of Universities Theses Commission **Parisian** (Sic).

58 (**) In this responsibility, I should add that he had not watched over the two years that followed (before I left the mathematical scene) that takes Verdier indeed the contract that he had passed. I must say that my energy was so much committed to continuing the work of foundations that I myself had supported, not counting motivic and other reflections that I should not think too unpleasant task to remind the obligations it to others incumbent. I had to learn the decision of Verdier to give up the publication of the work expected to debut 70s to a while so I was absolutely more connected to math, where the idea would not have come to me to "react". 59 (*) (30 May) These forms of somewhat dubious style are in fact inappropriate. As I confirmed Zoghman Mebkhout (which has paid to know) what I dubiously advance the status was made homological algebra "Grothendieck style" corresponds to reality.

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(see footnote ° 63 ☹- so ten years after defending his thesis, and at a time when (to I know (*)) Mebkhout is the only one to use the derived classes in its work to counter current fashion of the seven years prior. Except error (*), it is still the only, until the great "rush" around the famous "Riemann-Hilbert correspondence" to the already named Symposium, where Deligne alias Riemann-Hilbert father figure of this "correspondence" - sic, and Verdier (with his State 0 providential quoted extensively by his generous friend) father figure derived classes and algebra homological 2000 style, without mention of my modest person, much less Mebkhout 60 (**).

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In light of these events, I understand the reason for the unexpected publication of the State 0 p. 323

which (it is said in the introduction to APG 4 1

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by still the same friend) "had become untraceable" and nobody cared then "find", except at most (maybe) Zoghman Mebkhout 61 (*). There was So just what that unhappy in his corner and against all odds; persisted in making use of these concepts of a bygone age, without knowing exactly what he was getting at - if a doubt has finally stubborn began to emerge if sometimes this chap was not going out one day things that would make the weight, never knew. . . After all, to whom he sometimes carelessly refer to as one of his sources inspired (next to the works of the Master), he had proved in the time and found things stuff, things that could not pretend to forget all even if they forgot their author - and the Master himself, Jean-Louis Verdier himself, had he not made his departure to stardom by this formula "Lefschetz-Verdier" it would have been hard to just write and even less prove, without any these good ideas for the trash. . .

While my influential former student for almost ten years (since he had gotten rid of some for-tiresome formality. . .) **Bet against** the derived classes and still would bet against until time X (the Symposium famous), he had to find it prudent (you never know...) to take the lead on events that could occur, a "comprehensive insurance" in sum, publishing (certainly not at work major one day that was supposed to be a thesis but) a "text-witness", a kind of room belief "in case..."; text qui@ttesterait his paternity titles on **orphan** i] had him pleased to take flu, and he continued, until the events, to deny 62 (**).

Score 81 1

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The contributions in question are: 1) Fundamentals of a duality formalism in the context p. 324

locally compact and 2 spaces) that of Galois modules (with J. Tate); 3)

formula fixed points called Leschetz-Verdier; 4) duality in locally compact spaces.

Contributions 2) and 3) are an "unexpected" compared to what was known. The contribution more important seems to me 3). His demonstration follows easily the duality formalism (both for

coefficients "discrete" as "continuous"), which prevents it constitutes an important ingredient in the arsenal formulas "boilerplate" we have in cohomology. The existence of this formula was discovered by Verdier, and was for me (nice!) surprise 63 .

60 (**) compare with the comments in the notes "The gossip" and "Iniquity - or meaning of a return" (n ° s 63 and 75).

61 (*) The fact is that by browsing the bibliography of a working Z. Mebkhout that I had received in late April, I learned the publications of this "State 0", while I had even forgotten the existence of the text of another age. . .

62 (**) If JL Verdier really had the desire to share yoga derived categories, buried for seven years, the introductory text that is his thesis that he would have chosen to publish, rather than a technical text that person did not care and acquires interest and substance of Yoga and its many uses. But we understand that he had no desire attach to the text witness 50 page 17 pages of his thesis, contains statements about embarrassing now the role of the one it is important not to name. . .

63 (*) (19 April 1985) I return to this beautiful formula, its role and its strange vicissitudes during the burial in the three notes "The real math...", "... and the" non-sense "", "graft and creation" (n ° 169 s , 169 e , 169 ©

6) in the fourth
of Crops and Seeds.
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15.2. Vili The Pupil - aka the Boss

The duality of formality in the context of locally compact spaces is essentially adapting "Which required" of what I had done in the context of the étale schemes (and the difficulties inherent in this situation where everything was still to do). Yet there brings a new idea Interestingly, that of direct construction of the functor $f_!$ (without lissification f) as assistant Rf right $!$ With a presence in the key theorem. This process was taken up in Deligne cohomology spreads, allowing him to define $f_!$ within this framework, without hypothesis lissification. These comments make clear, I think, in 1967 Verdier had demonstrated its capacity for original mathematical work, which of course; was the determining factor for the credit that was done to him.

Score 81 2

As another example, I point out the detailed development of the duality formalism in context of locally compact spaces, in the spirit of formalism "boilerplate" six operations Derived categories, the disclosure of the Seminar Bourbaki Verdier be an embryo. same in the context of the only **varieties** topological, it still does not exist, to my knowledge, word of satisfactory reference to the formalism of the Poincaré duality.

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(June 5) There are two other directions where I regret that Verdier did not bother to go to p. 325 After a work he had begun sufficiently strongly to **collect credit** (I mean, the starting a duality formalism in the context of discrete coefficients and topological spaces locally compact), while the essential ideas are not due to him and he does not care (no more than for derived classes) to be the **servant of a task** and to provide the user a Full formalism (as I tried to do it in three seminars SGA 4, 5 SGA, SGA 7).

The duality that I planned program and I suggested him to develop is placed under the general topological spaces (not necessarily locally compact) and applications between such that are "separated" and which are locally "lissifiables" (ie locally source plunges into a $Y \times \mathbb{R}^n$, where Y is the object space). It was suggested that the obvious analogy with part of the étale diagrams **any** . Verdier was able to see, in the context of locally compact spaces, the hypothesis Local lissifiabilité applications was useless (something that came as a surprise). This prevents the context of locally compact spaces (thus excluding "parameter spaces" that would not locally compact) is noticeably short armholes. A more satisfactory context would be one that coifferait both the one chosen by Verdier, and the one I planned, namely, where topological spaces (? Or topos) are (more or less?) Any and where applications $f: X \rightarrow Y$ are subject to restriction to be 1) separated and 2) "locally compactifiables", ie X plunges locally in a $Y \times K$, K compact.

In this context, an application fibers "admitted" would be locally compact spaces SOMEONE conches. Another step would be where we would admit that X and Y , instead of topological spaces are of "topological multiplicities" (ie topos that are "locally as a topological space"), or even any topos by restricting applications suitably (to clarify), so as to find fibers that are of **locally compact manifolds** , subject to necessary conditions Additional (relatives perhaps the point of view of G-varieties Satake), for example (and last must!) be locally of the form (X, G) , where X is a compact space with operator group **finished** G . To my knowledge, the same duality

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Poincare "ordinary" was not developed in the case of multiplicity p. 326

smooth compact topological cited (smooth: which are locally as a topological manifold). The case of a classifying space of a finite group seems to show that one can hardly expect to have a duality theorem that torsion module (overall absolute), more specifically, working with a coefficient ring which is

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a \mathbb{Q} -algebra. To close this restriction, I would not be surprised that the Poincaré duality (style "six operational tions ") market as such in this context. It is not surprising that no one ever has looked (except Surveyors differential unrepentant, pretending to look cohomology "leaves space" a foliation), given the general boycott on the concept of multiplicity, introduced by my cohomologistes students Deligne and Verdier in mind.

To be honest, it lacks a reflection of fundamentals to the following: describe (though this may be) in the context of any topos and beam "discreet" coefficients above, the concepts of "cleanliness" of "smoothness", "local cleanliness" of "separation" for a morphism topo , for releasing a concept of "eligible morphism" $\text{topos } f: X \rightarrow Y$, for which the two Rf operations \lrcorner and $Lf \lrcorner$ have a direction (one assistant to another) to obtain the usual properties of the formalism of the six operations. Here the topos are considered non-annealed, or perhaps as fitted with rings (which are assumed at constant or locally constant need), assuming (initially at least) what morphisms topo annealed $f: (X, s) \rightarrow (Y, S)$ are as $f^{-1}(S) \rightarrow s$ **is an isomorphism** (81 3). The foregoing considerations suggest that when merely the Rings coefficient characteristic zero (ie which are \mathbb{Q} -Algebra), we can be much wider to the notion of "morphism eligible "to encompass" fibers "which are eg multiplicities (or topological schematic) rather than "spaces" (topological or schematic) Common.

A first primer in the sense (aside from cases handled by me and then by Verdier on the same model) is due to Tate and Verdier, in the context of discrete groups or profinite. The memory of this primer had encouraged me to continue thinking in this direction last year, in the context of small categories (Generalizing discrete groups) serving homotopic models. Without going very far, this reflection nevertheless enough to convince me that there must be a complete formalism of the six operations in the context (Cat) in the category of small categories. (See in this regard the

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"Fields of Pursuit" Chap.VII,
p. 327

par.136, 137.) The development of such a theory (Cat), or in $\text{Pro}(\text{Cat})$, as a theory of this type in the context of topological spaces or schematic and multiplicities would like me main interest to be a step towards a better understanding of the "discreet duality" in the context of general topos.

Illusie I heard last year that he had fought with perplexities duality in the case of spaces (Or patterns) semisimpliciaux. This had me well seem to be always the same tobacco - get to detect the existence of a formalism six operations in a case, and understand it. But it seems that the only perspective of a reflection of fundamentals has the gift of icing each and every one of my former students - all at least among my cohomologistes students. If I gave myself a hard time with them, it was with the conviction Yet they were not going to stop battery (the conceptual point of view) at the exact spot where they were went with me, and remain with hand wringing whenever a new situation showed that the work they and their friends had with me was enough. The conceptual work we do is **still** insufficient in the long run, and it is the taking over and beyond, and not otherwise, that the mathematic progresses. Between 1955 and 1970 every year again I realized that what I had done in previous years were not enough to needs, and I changed back to the book as dry, at least when someone else (eg Mike Artin} with the view of "algebraic varieties" in its sense) it was already. But it seems that my students have also buried the example I have given them, at the same time my person and my work.

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Note 81 3

I seem to remember that in the formalism of the six variances in étale (say) the assumption that the beam rings serving as coefficients are locally constant is unnecessary - The key assumption is that these are the first torsion beams to residual characteristics, **and** $f^{-1}(S) \rightarrow s$ is an isomorphism. When we abandon the latter case, one must enter a theory (not explained yet, to my knowledge) that "mixing" the "quiet space" duality, and duality "coherent" (relative to the coefficients of the Rings and their homomorphisms). So, it is envisaged

replace, on the diagrams (or more general topos) X, Y , the coefficients of the Rings s, S by relative patterns (not necessarily affine) X, Y, X, Y , and the morphisms of ringed topos

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$(X, s) \rightarrow (Y, S)$ by commutative diagrams of the type

X

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X

Y

// Y

formalism with a "six operations" in the context of this type. When X, Y , etc. . . are topos ponctual, we should find the usual coherent duality.

15.2.2. Good references

Note 82 (May 8) This section JL Verdier "homology class associated with a cycle" appeared in Asterisk n ° 36 (SMF), p.101-151 in 1976. In a way, this article pretty amazing (yet more nothing should surprise me. . .) Is the counterpart of the "perverse article" Deligne et al. At one reservation, it is substantially **copying** over fifty pages, in a slightly different context, concepts, structures and reasoning that I had developed extensively ten or fifteen years ago - terminology, logs everything is verbatim! I increased my income at a session of the seminar SGA 5 that took place in 1965/66, when these things were explained (apparently satiety participants 64 (*)) for one year whole. After the seminar at least, all these things were in the area of "well known" to people so slightly in the shot 65 (**) Verdier was attended course, as Deligne (the only was never dropped, while this was the first time he put the \otimes to my

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seminar 66 (*) - it was p.329

do it. . .). It true, well, well, that in 1976 it had been ten years since the "writing-sic" of this famous seminary by "sic-volunteers" who had dragged their slap - I see now that one of these

"Volunteers" was still responsible for "writing" in his own way, even before the publication of SGA 5

64 (*) See for comments in this regard, notes n ° s 68, 68 "The Signal" and "reversal" where I examine the vicissitudes Weird writing seminar, and the relationship between them and "SGA operation 4 1

2 Deligne, Reflection follows me

reveals another unexpected aspect of these vicissitudes and dismemberment of the mother-seminar by the combined care Verdier

and Deligne. Publications of the one and the other who dedicate this dismemberment are 1976 and 1977 - they are the "green light" given to prepare Illusie (eleven years later...) the publication of SGA 5 (which, Deligne dixit in SGA 4 1

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be seen as a series of digressions, some very interesting ").

65 (**) For a discussion where I come back to this "hasty" Print see note "Silence" (n ° 84).

66 (*) The year of the seminar was that (I think) where I met Deligne, which was to have then nineteen years. They are

"Put in on it" very quickly, and was even responsible for drafting my duality exposed stretches of the previous year (he had know by my explanation and my notes), and also the presentation on the cohomology class associated with a ring, which he discussed in the note quoted n ° 68 \otimes "Reversal"), and which will be a little issue in it. That with

the means that were his, and complete mastery of the subject, he waited eleven years to writing, to include then in its APG 4 1

2 without informing me, show me now, in retrospect, that from 1966 (and not only

in 1968 as I had supposed - see Note ° 63, "The eviction") - so the first year of our meeting, there was

a deep ambiguity in the relationship of my friend to me, speaking from this time a perfectly clear, I

have refrained from taking knowledge until this day!

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1977! We must believe that the vicissitudes of this unfortunate seminar not contrived that the only Deligne taking advantage of a situation of disarray in his way. But at that time, Deligne still cares, while dismantling SGA 5 of one of its exposed key for join its APG 4 1

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as debt,

mention still in its drafting (the cohomology class associated with a ring) "after

a presentation Grothendieck. "(It is true that there was compensation can rely to me

present as his "collaborator"! - see note "Reversal", n ° 68 \otimes)

To return to the class **of homology** (not to be confused!) Associated with a cycle (which is from the title

the subject of the article Verdier), I developed this formalism with a wealth of detail on several presentations,

during oral seminar before an audience besides asking grace (except still the only Deligne

always dashing and cool. . .). It was one of countless "long periods" I developed this year the duality formalism under slack, feeling the need to achieve full control of all points which seemed to me to be fully understood. The interest here was to have a valid formalism not necessarily on a regular ambient diagram - the transition to class **cohomology** in the case regular, and the link to my old building using cohomology racks and giving immediate compatibility with cups-products are immediate. I also found that

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this part of the seminar is
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part of lot of what was not included in the published version - probably Illusie (on which all the work preparation of a sortable edition (ahem) eventually fall) should be all glad Verdier Either loaded, mutatis mutandis (that is to say here without changing anything!).

Next formula now dedicated, "it is hardly necessary to say" my name is not on the text nor in the bibliography (except implicitly by reference uphill SGA 4, when it would even find replacement. . .). No reference to a "Seminar Algebraic Geometry" answering the acronym SGA 5, the author could have heard - as I think I remember having seen yet, wisely busily taking notes (like everyone else, except of course Deligne...).

I exaggerated just a hair elsewhere saying that my name is missing from the text - it is a unique appearance, mysterious and lapidary, on page 38, section 3.5, "fundamental cohomology class, intersection" (we succeeds, the crux of the matter!). The reference is a cryptic sentence whose meaning escapes me I admit: "The idea of systematically using the complex weight (! ??? even the damn weight) is due to Grothendieck and was shaped by Deligne" - without further explanation of these mysterious" complex weight "of which I would have had the idea and I hear about here for the first time. There will be no question in After all (and it has not been mentioned either in the 37 pages before). Figure it! For what is the content of that section, it is copied without more about the seminar SGA 5 that took place ten years before (and at that time the building was old five or six years, see Note ° 68 ☺ seminar he has custody of quote. The reference to Deligne (which would have "developed" an idea that already was when my friend was still in high school!) is a "flower", the idea probably came to the author because the young and newcomer Deligne was indeed responsible for drafting my presentation on this subject (and failed to do so for eleven years for the benefits we know, see note cited). The "flower" is part of the exchange of good processes between the inseparable friends.

Yet there is a result (probably) new and interesting in the article (th.3.3.1. On page 9) on the stability analytically constructible discrete beams by higher direct images of a morphism analytical and clean. Verdier had learned the concepts of constructibility all azimuths by my mouth a fifteen years ago, and

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stability conjecture, that I asked myself (and had spoken to
p. 331
who would listen) in the late fifties, before he had the pleasure to meet him. AT
read the article, the idea would not come to an uninformed reader (but they are beginning to be rare... I
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15.2. Vili The Pupil - aka the Boss

repeat myself again, I ☹ afraid) that the author is not trying to serve all hot concepts and statements he has just discovered. It does not mean that he is - because that goes without saying. This is the famous style "Thumb" that obviously did school.

To close detail (which, I feel, is in compliance with new guns the art), it should do when even ten pages (fifty) around this interesting result, which present a personal work nel of the author. Relatively speaking, what particularly strikes me as Verdier in Deligne is that it is perfectly capable of making beautiful mathematics. Even in this sad item it shines a sign with the city theorem. But by now (like his friend) in provisions Gravedigger, it works just like its prestigious friend, a paltry portion of its resources. A sign (Which surprised me) of an apparent mediocrity, with a mathematician who gave evidence yet of as-Tuce and flair, was the total lack of instinctive feel for the scope of work of the "student-sic" Mebkhout he was pleased to treat high of its greatness, without ever having been able to work itself deep originality and a comparable 67 (*). This is not than it is perhaps as well as able Mebkhout or me. But it is never ☹ft no chance to do great things, that is to say, to let go the reins to a passion - rather than mathematical and gifts the **instruments** to dazzle, to dominate or to crush. Still far he was content to take as such notions and fertile views everything already cooked. It seems indeed to have completely lost the sense of what it is a **mathematical creation** .

I believe nevertheless remember that when he worked with me, that direction was still present. Nothing ex-

TER AL him Nevertheless this sense

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resurface. As in his friend, in whom I have often felt this p. 332

even eclipse a delicate and lively thing, sealed by the same conceit.

This item Amazing 50 pages, published in a journal of standing, throw me in a new light

the incident "The note - or the new ethic" (S.33). where a note to SARC for **a few pages**, summarizing a

and solid work **original**, on an important topic (IMHO), fruit **two years of work** of a young

highly gifted mathematician, was rejected by two eminences as "uninteresting" 68 (*). One of these

eminences was elsewhere other than Pierre Deligne - the same Deligne who did not disdain copied in toto

and the humble person doctoral thesis of one of my students (there is also a duty to quote). (This

duplicate, enhanced by a prestigious signature, made the biggest item in the "memorable volume" LN

900 in no less prestigious collection! On this subject end of the notes (52) (67).)

Certainly, the "table manners" is expanding day by day, without my having been so far out of my

retirement and pounding the pavement to meddle in the "big world". A few hours here and there to flick past in

some "great works" well chosen were enough to build me. . .

15.2.3. The joke or the "complex weight"

Note 83 (8-9 May) I thought about this "complex weight" referred to in the "reference - thumb" in the

memorable article Verdier 69 (***) - a reference with figure zaniness, outright nonsense. AT

the instant I had before me this absurd reference, an association came to me, which continued

trotting in my head. This is not the first time, far away, I am faced with something

67 (*) The same lack of astounding flair manifested on the same occasion at Deligne, who has "felt the wind" (the importance

Mebkhout ideas) that in 1980 he seems, while Mebkhout working in this direction since 1974. I have had more

once opportunity to see my friend the shutter of his natural flair for complacency, especially since the year 1977 (or

78), which seems to have been a first "rotating" (see notes about "Two turning points" and "funeral" n ° s 66.70).

68 (*) For details on this, see note "Coffin 4 - or topos without flowers or wreaths," n ° 96.

69 (***) See previous note "Good references."

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of preposterous appearance, which seems to defy rational explanation - when the meaning is clear and yet

Net and is clearly perceived, but at another level than the conventional logic. This was

the only one on which most of my life I have worked at the conscious level - with the result that I was

constantly overwhelmed "absurd" incomprehensible - agonizing in their saugrenuité

irreducible! My life has changed a lot from the time (there is that less than ten years) where I started

to live on a broader register of my faculties. I understand that any saugrenuité, while so-called "non-

meaning "has a **meaning** - and the simple fact of the

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know, and therefore to be curious sense behind the nonsense, often

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opens me to the obvious meaning of it.

In this nonsense of "complex weight" I think I feel an act of **bravado** similar in

the designation "perverse sheaves" 70 (*) - the pleasure in this case to prove that we **can afford**,

in a review of standard and in a text that aims to be a standard reference text 71 (**), to tell a

saugrenuité parent and that **person** will notify ask only one question! And I am convinced that

the challenge contained in this bravado, eight years since the article appeared that this bet **was won up**

Today himself: I was the first today to ask the naive question to the author.

Of course, the time (or place) that appears saugrenuité, namely at the precise moment the only

and only reference to my person, is not a coincidence; nor the form it takes, here by

referring to a type of concepts, the "weight", entirely foreign to the theme of the whole article, and improvisation

a composite term "weight complex" that never existed! The association had presented imme-

ment to me may well provide the key to more accurate sense of saugrenuité Beyond bravado, the

demonstration of power. It is the association with a hint equally cryptic and all, as many pure

form (but still have the added dimension of saugrenuité!) in the article quoted Deligne

at the beginning of the note (49) 72 (***). It was just an obscure allusion, in an article where the word "weight" was

rigorously absent and nobody but me Serre would have been able to see them, to "considerations

weight "that had led me to conjecture (in a less general form, it is quite clear) the result

main labor. As I explain in more detail in note "Eviction" (n ° 63) behind this allusion

perfunctory, reflected the intention to **hide** both my role, that ideas (regarding the "weight" and

their relationship to the cohomology in general and in particular that of Hodge) which he intended to reserve the

sole benefit. This intention must have been all the better perceived by Verdier that he mē

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me "works" on the

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same page (in his relationship to me, at least, what I think also the main glue between the two inseparable friends). In both cases, an honest presentation would have been to start article clearly indicating the source or sources for the main ideas, or for or issues Article motivated.

This reminded, here is the sense that I see behind the symbolic language of the apparent nonsense: I am allow, without hindering me in the least, display before all a **nonsense** patent, and simultaneously express this nonsense my real intention, with this absurd allusion-reference to "weight complex": is that I have no more intention to leave anything published about the role of Gr. in this work, that Deligne had such an intention with his allusion cage to "considerations **weight**" - which had alluded then no more sense to the reader now that the "complexes- **weight**" I just imagined

70 (*) See note "The Perversity" n ° 76.

71 (**) And it seems that this text is indeed now a standard reference - at least for years he was one of Zoghman bedside texts (who sent it to me lately). It was there he learned including the notion of constructability (which plays a vital role in his theorem), and for a long time he was convinced that Verdier was awesome inventor of this crucial concept to him.

72 (***) This is the note "canned weight - and twelve years of secrecy." For a more detailed examination of this article of Deligne point of view that interests us here, see "The ousting" notes n ° 63, cited below.

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invented at the time, for the purposes of the case and for my pleasure!

I just copied the net this note written yesterday - I was interrupted sometimes by a call from Verdier

I tried to join in the day to ask him precisely. I explained that

I tried later on to learn a little cohomology, something I never understood it

knew, and Mebkhout spent for my education an old article about him, Verdier, a job that

had long been his bedside text. Now I was trying somehow to read, but there was

this cryptic reference - it was nice of him to give me, of course - but I absolutely understand not to

What he meant it.

He was happy even a little flattered but yes, with a broad smile sticking behind an air of paternal joviality, I finish like that in my old age to learn about this ancient cohomology paper to him. I did not expect that the idea of the effleurerait contradict me when I said he knew that I had never understood the cohomology - obviously this was something heard in beautiful long time. . . With regard to the famous "complex weight", I felt his broad smile again after the wire (it will be said that I affabule!), delighted that someone (and recipient himself as well) has ended up something that had happened to you for so long. At the same time there was also a hint as embarrassment - more than (I think) to have been able to hide a

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pleasure (as the pleasure we take at p. 335

some salacious story ...), that of not knowing what to say. Dropped as I was, it was really not to

bother with that side! Without hesitation, he branched out Deligne (which I had not mentioned the name)

who made a demonstration in one of his articles and in which he quoted moreover, he could not remember very

where well - at least there was question of weight but yes, he had almost forgotten, of course - but not weight

Arithmetic in fact, then I had absolutely right it was not the same. . .

The tone was jovial and unanswerable, and he felt he had already given me a lot of his time - the

tunes in a hurry, without departing from this tone natured, somewhat protective. I apologized

for disturbing-like that, for a slightly stupid question, and thanked him for his explanations. My

apology was sincere and also my thanks - I had indeed learned everything I needed to know

73 (*).

15.3. IX My students

15.3.1. The silence

Note 84

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(9 May) I was perhaps a little sharp yesterday, writing that in "good reference" (see note (82)) p. 337

what author and former student copied shamelessly "was part of the field of" well known "for people

so slightly in the shot. "I tried to explain to my information so what were these" people as either

few in the know" - with the conclusion that **it was neither more nor less, that dear listeners of**

seminar SGA 5 in 1965/66 - listeners besides, as I had occasion to say, often

or less dropped - and judging by the vicissitudes of the writing of this seminar in the hands of volunteers

I did not want to feel the lack of conviction, it was often rather "more" than "less" (always

except the same Deligne; certainly). There was no risk indeed be other people "in the know" as

5 long as SGA was not written and published, to just allow people to "get into the

coup "by reading it! This seminar was in fact published (chance would have it) after the two" memorable 73 (*) Even with my tunes dropped, I have not really had the feeling of playing a comedy (I do not have the gifts to), it was perfectly natural - indeed, I am a bit dropped in all this stuff that I have not manipulated for almost fifteen years! But I think even senile and ripe for the hearse, I still feel the difference between an empty and a full nut nuts. .
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publications "of two of my dearest pupils and comrades, namely Article in question Verdier in 1976 (where he makes no mention of the origin of ideas it published under his pen there and the first time), secondly Deligne with SGA 4 1
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he has already been made abundantly 74 (*). After that, we cordially invite Illusie to take care of the publication of the rest! I do not remember in great detail what the participants of the seminar - for example if there Artin was or not. I think more or less all my students the first period should be good anyway - except when even Ms. Sinh and Saavedra (I had not met at that time there) and perhaps Ms. Hakim. There were more Bucur (since deceased). Houzel, Ferrand - I do not count Serre.- who never had a taste for big cohomological furbished, and had just set foot far by far and carefully. While nobody except Deligne not felt perhaps exactly where all this was leading, it seems to me that there must have still ten or twelve listeners (not very participants) who followed at least enough to be considered "in the know"

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The thought that I trotted through the head
p. 338

yesterday, is that among all these people "in the know", thus making authority figure cohomological (If not all of "luminaries" as Illusie and Berthelot, with their theses: "cohomological" which decidedly did weight), and even apart Verdier and Deligne - there must have still a lot that had This article Verdier hands! A certain air Verdier convinces me that nobody him has never suggested that something may be amiss. And I also know that no one ever drew my attention to the thing - I learned of this article May 2 today there are exactly one week with Mebkhout ., which was of course aware of the scam for years. This gives a concrete meaning to the euphoric finding of "the Unanimous Agreement" (to bury my modest person) made it ten days ago (note (74))! This agreement encompasses many (if not all) of my students "pre-1970" that is to say, many of those who now set the tone worldwide mathematic; and includes (or has included) my friend Zoghman himself treated Cinderella beautiful people and clinging against all in a kind of "fidelity to my work" (to use his own expressions sion 75 (*)), which he had the temerity and persistence to ask sometimes, with the consequences that knows. Go to understand something!

In short, I was wrong to imply that such a luxury magazine published a kind of cage section, which merely to copy the "well known". What the author was copying the full knowledge (if not all but) many witnesses was neither published nor "well known" (except the cohomology class of a cycle in the coherent framework, where I had published long ago); and it was more of the ideas I would be ungracious to minimize, because I did not consider wasting my time by spending a year developing these ideas and others in a seminar, before a large audience. Probably Article Verdier is a "digest" useful and well is a small part of the ideas and techniques I had developed: so precisely that they spend in the field of "well known", the daily bread of the one who uses the cohomology (or homology) to the objects that deserve more or less the "varieties".

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From this point of view therefore, Verdier did what he was useful
p. 339

to 76 (*), and I have not finally held to be dissatisfied. Yet from what I felt dice my ex-student 74 (*) See in particular notes n ° s 67, 67 ©58, 68©

75 (*) (June 7) Reading all notes Burial during a recent visit. Zoghman tells me that this expression he used to "fidelity to my work" did not properly thought. He had to trust his rather own judgment and instinct in his mathematical ability. who told him that my work brought him some ideas he needed. So this is a loyalty to **oneself** , which is essential thing indeed to truly work innovative.

76 (*) He did, indeed, at the expense of the "dismantling" of the original seminar SGA 5, dismantling he was with Deligne the main actor and "beneficiary".

(June 7) Reflection of May 12, three days later (see note "massacre" n ° 87) showed quIllusie was associated so even more direct Verdier what appears as a "massacre" in effect a dismantling - even if

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and friend today, on the phone, and many other things that I could feel his person (which most "big", or at least the most "spectacular" is the mystification of the Symposium Perverts) - I feel **is something wrong**. This memorable Symposium was certainly very bright, mathematically speaking, in many ways. This "bell" is at a different level than this. I could try to identify it with words, but I feel that it makes little sense. Whoever does not feel what's wrong this symposium and in many other forums as surely without deception or anything - it does not feel one hair again, when I bring this essay to "understand" and that I am the same happened to my satisfaction. . . The open question for me is whether this "sign" that represents this news item probably relatively commonplace today (one author, presenting as his own unpublished ideas of others) - if this sign is that of a general deterioration of morals, so if it's just a typical sign of a "zeitgeist" in the mathematical world today, or has rather to give me instruction on my person special - the one I was and now returns to me, through my attitudes towards those who were my students.

The two possible meanings in no way exclusive. The relationship of my former students I could not find this way there to express, if a certain state of morals is not encouraged. I have also seen even before this "sign" many others that seem more eloquent at a "table manners". What hit me in this sign it is this characteristic that distinguishes from all the others is that it seems **involve both most of my former students**.

That fact can not be coincidental. To put no more on account of a "degradation morals" (everything is real) would be a way to evade his most personal sense, which involves me as it involves every one of my former students. If I say "everyone", which seems to go beyond the am

This real plitude p. 340
p. 340

sign is weighing my words. For this sign reminds me opportunely that it is hardly conceivable that a is my former students at least been faced with such situations. I felt for years a "wind" about myself, blowing in the world of mathematicians I left (wind I see clearly now the source and reasons, it seems). It is not possible that of them had never felt the breath of this wind, either on the occasion of an "incident" as the publication This article-gravedigger, or any other occasion. That the person wanted or not, such a meeting inevitably asked him (or rested him) the question of his relationship with me, who had taught him his craft. And the sign that I see, beyond that which comes from me bring is that **I had echo on it by none of those who were my students** 77 (*). This is a "coincidence" whose meaning still escapes me - but which can not have no sense (84 1).

The day dawns - I feel it is time to stop. I'm not sure this is the time place in Crops and Seeds, to pursue further the meaning of this striking coincidence. It's a Harvesting can be reserved for other tomorrow, as long as my thinking of that night encounter an echo in one or the other of those who were my students. ⇒ 85

Score 84 1

(May 16) This perfect match between my former students, in this complete silence vis-à-vis me, going in the same direction as other signs. One is the complete silence which also hosted the episode "Aliens" (see section 24) - silence about which I have already asked myself somewhat in Note ° 23v. has not been "beneficial" and that he acted for the account of others.

77 (*) (May 31) Interestingly, the only person who ever suggested to me the existence of a funeral is African friend who had spent with me a thesis of 3 ° cycle there ten years (thus "student after 1970", and status modest), with whom I remained on friendly terms. The letter in which he suggested should be there two or three years, at a time when it had nothing to surprise me. I have not asked details about his impressions on which he returned only very recently.

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On the other hand, except Berthelot who sent me many reprints and Deligne that me sent four (over fifty publications) and of Illusie, I have received no reprints of my former students. This speaks volumes about the ambivalence in their relationship to me. Send prints hand, even though it was doubtful if I can do

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never use in my work 78 (*), was how the
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obvious to inform the one who taught them their trades, as this business into their hands not remained inert, he was alive and active. But it is also true that for at least some of them, publications also demonstrate their participation in a tacit whose funeral it was better not informing the anticipated deceased, trade or not trade against by ... I received numerous reprints several authors working in crystalline cohomology ⁷⁹ (**), and even many reprints of Analysts colleagues that I do not know that name, when their work resumed (and sometimes solve) questions I had asked thirty years ago or more, when it was obvious that I would not return about that I had left and that the point of view "utility", they were reprints wasted. But these colleagues had to feel something that my students did not want to feel. - Of course, in the years sixty, my students were first served for all my publications, as my articles that large EGA and SGA series, and each of them (except Ms. Sinh and perhaps Saavedra) must be in possession of my Complete work published between 1955 and 1970 (in ten thousand pages I presume). It is true that my former students are in good company: none of my former close friends in the "big world" mathematical, even among those whose work is closely tied to mine or who have been role in the development of my work program in the sixties, have found it useful to continue to send me reprints after I left the common medium ⁸⁰ (***) . Lately even among fifteen or twenty old friends

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(Including some students) to whom I sent the Outline of a Program

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(Which among others spoke the resumption of intense research after a break of QUATORZE years on research topics closely related to those that we continue together once) only two (Malgrange and Demazure) took the trouble to send me a few lines of thanks. The echoes a little more detailed (and more warm) I received just me young mathematicians I know recently, and my friend of long standing Nico Kuiper, who nevertheless is NULLEMENT connected to the stuff I do. He had knowledge of the text through intermediaries, and showed all happy with my "comeback" unexpected ⁸¹ (*).

⁷⁸ (*) (May 31) It might even seem excluded until 1976, while in the early 70s I said quite clearly that I thought not ever take a mathematical activity. The conference held in 1976 at IHES on complex De Rham with divided powers, then showed quite clearly that I continued to be interested in mathematics. ⁷⁹ (**) (May 31) It is young authors I do not know personally, and I presume that they followed the example of Berthelot, which to them must groin figure. The slightly odd thing here is that at least two years (since Symposium Luminy from 6-10 September 1982), Berthelot actively put your own to bury me (on this subject see the note b. p. May 22 in note n "joint heirs..." ◊ 91) - is it a recent turning point in his relationship to my person? I do not remember not received the print of the article-survey on the crystalline cohomology and others, where it passes under my name

silent - he has had to keep sending me!

⁸⁰ (***) (May 31) Of course, the psychological reasons that could prompt them to send me were much weaker than in the case of my students - but, one might think naively, much stronger than my analyst colleagues, or even among many algebraic geometers which I received reprints, and I do not know or little personally. Apparently, after I left the common medium, having been friends created or strengthened, with my old friends in the mathematical world, the rejection of automation that I had the opportunity to see. (See about these attitudes, which he is alluded to in passing here and there in Crops and Seeds, the note "The Gravedigger or the whole Congregation" 24 May n ◊ 97.)

⁸¹ (*) (May 31) This is almost the only echo from one of my old friends (or one of my former students), in the sense of acquiescence to my "comeback". It certainly did nothing to surprise, while the appearance of the deceased so breaks the normal conduct unbecoming of a funeral ceremony. . .

(June 17) Yet I had the pleasure most recently receive a warm letter of Mumford, who said he was "thrilled" and "Very excited" by the ideas outlined in the Sketch, which confirms that the technical key-result I needed

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15.3.2. Solidarity

Note ⁸⁵ (May 11) The story of the unfortunate seminar SGA 5 continues to trot my head. The maid reference " ⁸² (***) definitely illuminates the story of a new day, and suddenly also gives new meaning to bright "APG 4 operation 1

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The more I think, over the history of SGA 5 seems **big**. My first impression when I "disembarked" there are only a few weeks (see notes n ◊ s 68, 68 ©) was a situation of disarray among the

poor former listeners of the seminar in 65/66 was put to use in his own way by my friend Peter, for his famous operation, and in it no one else was for nothing. And for the misfortunes of SGA 5, this was neither he nor anyone, but rather "ut other than me, who had not known alas inspire my listeners volunteer editors, nor do for them the

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work they persisted in not doing while saying they p. 343 would put it quickly. Then turned in recent days that he is found, though, that enthusiasm woke up ten years later, to publish (without referring to the seminar) it pleased him to take it, thus creating a good reference for its own account, at a time when other "volunteers" were still not yet decided if to fire.

What becomes me increasingly clear since yesterday is that these are not just two "villains", but **each of my students "cohomologistes"** directly involved in the retraction that occurred in this seminar. Unless I am mistaken, all of them attended the seminar - namely (in chronological order appearance of my students "cohomologistes"): Verdier, Berthelot Illusie Deligne Jouanolou. (I account not Jean Giraud, who worked on quite different registers of those this was mainly in SGA 5 or its predecessor SGA 4.)

The seminar, which I did **for the benefit of my students** in the first place, and even though sometimes they asked, thanks - **I consider that it was not shit**. Each of them during that year, learned a bunch of his trade "user mathematician cohomology"! Things I their did, by taking part and spreads much more detailed ideas that I had first developed within the coherent framework - these things, they could not find anywhere else in this single seminar is for their benefit, as no one before me had ever bothered them do - and nobody but me not even feel what there was to do, and why. (Except always Deligne who has learned over the months in the same seminar, with the quicker thinking-as the others.) It is have followed the seminar (and the previous) and have worked with them somehow, and nothing else, that fact that they were now "in the loop" for the duality formalism and they were **the only ones** to be. This **privilege**, it seems, was creating for them an **obligation** and that is to ensure that this privilege does not rest in their own hands, and what they had learned from my mouth, and that was an indispensable baggage in any subsequent work to date, is made available to all, and this in time reasonable and customary - of about at most a year or two in a pinch.

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We say, not without reason, that it was to me before any other to ensure that. But if I accepted p. 344 good faith when students and other listeners offered their assistance in writing (writing that, for those who would put it in a serious way, could do them the most good) - it is not for the benefit of power twiddling my thumbs while they would do a job that was my responsibility. I have for my combinatorial description of the Teichmüller tower is indeed proved. This is the first time since 1978 one of my friends old clinging to my ideas "anabéliennes" whose exceptional range (comparable to yoga reasons) is obvious to me from the beginning. . .

(28 March 1985) Since these lines were written, I also received a very warm letter of IM Gelfand (dated of 3 Sept. 1984), in response to the sketch.

82 (**) See footnote ° 82.

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continued with the help of Dieudonné and others (including also with Berthelot and Illusie in 1966/67) to develop **@xts** foundations that also seemed to me urgent, and that no one else would have done for me or without my help ⁸³ (*). These texts themselves become indispensable references, even for my "cohomologistes students" who are happy as anyone to find any ready when they need it.

With control of cohomological ideas and techniques they have acquired through their work at my touch and my seminars they have taken or which they participated, the writing of this seminar by their joint efforts represented a paltry dimensions of task, when compared to the service that was rendered the famous "mathematical community," or perhaps later a duty of loyalty they could feel vis-a-vis me. I have already said that to me (who have a hand), it must be a job the order of a few months to write the entire seminar. By sharing the work with five the writing experience they have each acquired in those years, and having my manuscripts Notes detailed investment to make for each was about a month or two to break everything. They were much better position to do that other editors, as Bucur, who would not have asked better than to entrust a task which clearly exceeded the, at the hands younger and more directly motivated. As long as I was in the area (so in the three years that followed yet), I understand a reflex to stand by me could play - it was I who was supposed to coordinate everything and get by with "volunteers". It is likely that if I had asked everyone to do two or three presentations

in a short time, a burden to me to do the same, to finish last, they would not have objected. It is from

0 when I retired from the mathematical world that the situation has changed dramatically. They p. 345

found themselves so **unique custodians of a legacy**, both implicit (will negligence) and very concrete. It is true that practical point of view, my departure amounted to a **loss** - I was actually although "late" in the sense that there was nobody outside of them to have knowledge of the inheritance, able to use and to be concerned (for better or for worse...) to his fate.

If during the seven years since I left this legacy remained secret (besides "good reference" in 1976!) is that **my students have not taken it to become public during that time**. All Relatively speaking, the situation does not seem very different from the "yoga of reasons" which yoga was known fully only by the Deligne (besides me), and the latter saw fit to keep in his possession for its sole benefit. If there is difference at first glance, is that in this case there is only one "beneficiary" instead of five, and there is no comparison between the depth of what was concealed by one, and which was concealed jointly by five.

I certainly know the underlying motivations of each one - even if Deligne I have an apprehension which remains unclear and probably will remain so. But in "practice", the game Deligne (with SGA operation 4 "s" - and everything else) is clear and what is also clear is that these operations could not be done.

without the solidarity of all. I think Jouanolou yet not too in the game - it seems do not figure of "luminary" I feel that he has long since left sloughs cohomological (85 1). But I can not imagine that Illusie and Berthelot did not have both hands SGA 4 1

2 that the good reference, "and they can read like me and are no more stupid than me.

If Illusie has suddenly busy publishing SGA 5, just when Verdier has used where Deligne has used and where Deligne needs a logistics base for its famous SGA 4 1

2 (In débinant there

as befitted the two seminars which this text and all his work come from), so that was Illusie

83 (*) Between the years 1960 and 1970, I had to run at an average of a thousand pages per year of texts (EGA, SGA, articles), which almost everyone would become current references (something that was very clear to me by writing, or encouraging such employee to do with my assistance).

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had ten years to do it, it is surely no coincidence. If the presentation of closing on open problems and conjecture that I has

0 will made in 1966 "has unfortunately not been written, any more than [sic] that p. 346

his beautiful introduction, which reviewed the formulas Euler-Poincaré and Lefschetz in various contexts (topological, analytic complex algebraic) "is surely not a coincidence - but

This is a funeral where I do not know what is. And it is no coincidence either that he also seemed natural to Illusie to Deligne (and barely worthy of note passing among the "detail changes") to amputate the seminar presentations of its key, which happens in SGA4 1

2 without further ado 84 (*).

I do not know what were the intentions (conscious and unconscious) of Luc Illusie, I have affection as Pierre Deligne, who (like him) has always shown me great kindness 85 (**). But

I see he has done alongside Deligne co-actor in a **shameless hoax**: the one that makes pass the parent seminar SGA 5 1965/66 (the same one where Deligne has heard for the first time patterns, étale, duality and other "digressions") as a kind of appendix informs, vaguely ridiculous, a collection of texts on behalf trompe l'œil SGA4 1

2 written eight years later, that pretends to present as anterior (both the number listed in the title, by the issue number in reading notes, and finally by the unusual comment from the author "His existence (SGA 4 1

2) will allow soon publish SGA 5 **as is** - that is my emphasis) - which affects more to deal with a undisguised disdain the work which this meager collection is coming around.

Without those jobs processed with this beautiful casually, **no** major work of Deligne, who base

its well-deserved prestige, would be written at this time, or whether it is in a hundred years (and without such doubt Illusie cohomologistes and my other students). There are in

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took this "SGA operation a 4 V p. 347

impudence, which is Illusie (without even realizing it probably) deposit, which could spread well with the tacit approval of a **consensus**. The first involved in this consensus, outside Deligne itself, are the very people who were my students and the main beneficiaries of a legacy, delivered their eyes to the hazards of the rat race and disdain.

And these tunes peremptory sufficiency, these fatherly and protective air that I enjoyed in my former student nor the day before yesterday in our phone conversation ⁸⁶ (*), and also those most discreet tunes condescension that I enjoyed in my friend Peter from the aftermath of the brilliant double operation

"SGA4 1

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- SGA 5 "(which I was away and then for another seven years to have the slightest suspicion) - these tunes then are **not** the products of loneliness, but signs still a consensus **that has never seen questioned**. These tunes are telling me something not only Verdier and Deligne, but also on all those who were my students, and before all others, on those (of their working themes and the tools they handle each day) the first concerned.

The term "hoax" that came without seeking it, opportunely reminds me that other mystical fication, which is the same cynicism spreads - that of the symposium said "Pervert". The two appear to me now **intimately, inextricably linked - it@the same spirit that made possible the both**. With the exception tion Jouanolou perhaps that is not so much involved in "big world", I consider these former students ⁸⁴ (*) (May 16) In fact, as I finally find out the next day (see Note ^o 87), there was a real "massacre" of Seminar-mother (or father) SGA 5, in the hands of Verdier, Deligne and Illusie.

⁸⁵ (**) Even after I left in 1970, Illusie was to me the delicate attentions - and for a long time it sent me a very beautiful greeting on the occasion of the holiday season. I@ afraid I did not have to answer very often to thank him and show signs of life - these signs of a true friendship were like messengers of a past which seemed infinitely remote, and with whom I had lost contact.

(May 16) By cons, there was no hint at Illusie to continue or resume contact at mathematical level, and again last year (when I contacted him to mathematical questions) I felt his reluctance. I received in these fourteen years since I left, a single print of him, dated 1979.

⁸⁶ (*) See footnote to this conversation "The joke - or" complex weight "" (n ^o 83).

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cohomologistes co-responsibility and solidarity in this disgrace there. To Berthelot and Illusie nothing to me per-
perts prejudice a malice or bad faith (which can not be in doubt
Verdier@case as in that of Deligne). But I see at least a blindly blocking
in the use of healthy faculties, including the underlying reason of course escapes me. If there were in them about a
deliberate indifference and disdain, surely Zoghman Mebkhout, as the only person in the years
70 that claims openly to my work, and on matters affecting them closely both (without
they deign to notice) would have had the benefit of "bias" minimum so that they take
at least as knowledge

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little bit of what he does, and therefore are aware of the interest of management

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in which he undertook in 1974, interest was **obvious** ! Neither one nor the other deigned to notice
nothing, coming from an unknown wave that is still mine out of Grothendieck. They received
thesis unknown wave by him, I do not know if they have open, or if they have traveled the shorter texts
and more digestible that explain what it is about - the fact remains that they have not deigned only
acknowledge receipt (no more than Deligne, who obviously sets the tone).

It certainly has not prevented with the other participants of the memorable Symposium ⁸⁷ (*), they took connais-
sance with interest the remarkable "Riemann-Hilbert correspondence," without thinking of asking any
questions about the origin or paternity or less (solid mathematicians) on where is shown is
(85). But then I trust that Deligne was happy to explain this elegantly demon-
stration, surely all that is obvious for people like them - the kind of demonstration precisely
singularities in resolution shots at Hironaka, they learned long ago and by none other than
Me (85 2). Riemann-Hilbert, Hironaka abracadabra - that was it!

Obviously, as Verdier and Deligne as they have completely forgotten what it is that **creation
Mathematics** : a vision that gradually settles over months and years, updating the thing
"Obvious" that no one had been able to see taking shape in a "clear" statement that no one had
thought (whereas in this case it was a Deligne tried for a whole year ...) - and

the first comer can then show in five minutes, using all techniques he had cooked the advantage of learning seated on the benches of a distant seminar which he refuses (or is kept) is memory. . .

If I spoke bluntly Berthelot and Illusie, it is not that I want to especially load opprobrium (after a first settling of accounts with their two friends). I know they are not "worse" or more stupid than most of their colleagues or me, and that lack of flair and sound judgment that I see in them in this case (and sometimes, that of the necessary respect for others...) is not inveterate, but the effect of a **choice**. No doubt this choice he offered them

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Returns that their accepted him - and perhaps
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be that other "back" that comes with my thinking there will be unwelcome to one or the other. If it were thus, it would be simply reproduced it again the same choice, which is that also run on a fraction of its driving, even take bladders for lanterns and vice versa, and confuse no empty hope nuts (the boyfriend) and full nuts (a foreign wave). Each of knowing what wants ! (⇒ 86, 87)

Score 85 1

Jouanolou is the only one of my students, with Verdier, who has not been keen to publish his thesis. This strikes me as a sign of disaffection with the work of foundations he had developed, namely that of χ cohomology - adic perspective derived categories. As his work on this theme is placed largely **after** my departure, so at a time when my students Deligne and Verdier 87 (*) (12 June) I learned meanwhile that one nor the other participated in the Symposium (Luminy, June 1981). However, see note "Spoofing" n ° 85.
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head, had given the signal for a general disaffection of the ideas I had introduced homological algebra, including that of derivative category, the context does not encourage Jouanolou to identify to work and to do him the honor (well deserved) to publish. As these Deligne and Verdier in the wake of the work of Zoghman Mebkhout (aka Student Unknown (Verdier) alias posthumous student (of Grothendieck)), eventually discovered (with big fuss and mutual advertising) the importance of categories derivatives (see notes n ° s 75,77,81), the despised thesis Jouanolou resumed since Pervert Symposium, any timeliness; a news that she never ceased to be, if the development of the theory cohomologic diagrams had continued normally after my departure in 1970. Retail striking that illustrates certain "turn" draconian in Deligne options after I left: it is Deligne himself (who had well understood the importance was to develop the formalism of χ -adic cohomology in framework of triangulated categories) which provided Jouanolou a key technical idea for a definition shaped triangulated categories χ -adic it was studying idea that is developed in the thesis. (See this my "Report" of 1969 on the work of Deligne para.8.)

(May 30) See also, about the work of Jouanolou, note the "heirs...", N ° 91.

Score 85 2

"Coincidence" significant, it is precisely in the same seminar SGA 5 that all world learned this principle demonstration, used both to demonstrate bidualité theorem in cohomology spreads (where it has the resolution of singularities), the theorems

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finitude for p. 350

$R_i f^*$ without clean hypothesis on f , and even for Rohm, Lf_1 . (These finiteness theorems have also retracted from the published version of SGA 5, to be joined SGA 4 1

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Without that Illusie J.

only useful to point out in his introduction - I realize that just by writing this)! Zoghman, who has not had the advantage him to attend the seminar (he was entitled to "good reference" instead) learned the process at another location where I had used (for the De Rham theorem for schemes smooth on C).

He could also learn in the as "the good reference," where my demonstrations are copied in the analytical framework, to establish what my students and listeners of SGA 5 delight since then call the "Verdier duality" (which was known to me before he even had the pleasure to meet him). Decidedly everything fits! **The same demonstration** (copied to me along with the statement) is used to Verdier such as paternity for a duality he has learned anywhere else in the seminar SGA 5, dislocated and delivered contempt - and is used **against** Mebkhout becoming (by its "evidence" itself) excuse (tacit) and means to deprive the credit without shame a significant discovery. (30 May) I think the first time I used the resolution of singularities to Hironaka, and

I realized the extraordinary power of resolution as a demonstration tool, was for a demonstration "in three shots ladle" of Grauert-Remmert theorem describing a structure analytical complex on certain finished coatings of a complex analytic space, and the analogous statement in the case of type schemes finished C. (It is not impossible that the principle has been blown me in this same time, by Serre.) This result is the main ingredient of the proof of Theorem comparing the cohomology spreads and ordinary cohomology (the rest was reduced to the unscrewing through formalism $Rf_!$, Even a little resolution to spend $Rf_!$ the $R^* \dots$)

15.3.3. spoofing

Score ! 85

(3 June) Actually, I learned that they did not have to ask the question that paternity seen Berthelot as Illusie learned the God of the theorem by the mouth of Mebkhout the first
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in February 1982, the second in 1979 (year of thesis defense Mebkhout). While they have not attended the one nor the other in the Symposium in question, however, they are fixed to the mystification that had place at this Symposium, as it is

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not that they have not been aware of the retraction is done is to

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paternity Mebkhout on the theorem of God in particular. I can imagine that with elsewhere all participants in the symposium, they were eager to be duped every first mystification collective organized by the care of their friends and Verdier Deligne (mystification including four from my five cohomologistes students appear solidarity). Regarding Illusie at least, I was struck at a telephone conversation with him after passing Mebkhout home last summer, the few cases it obviously made him - he was quite surprised (almost pained by his old master, from whom he would have expected better judgment surely. . .) To see me give a leading role in Mebkhout restarting the cohomology theory of algebraic varieties. Consensus of considerable force decided to put Mebkhout among the unknown waves, and my friend lives happily with this Illusie triple contradiction, without asking any questions: the role of the theorem of God and philosophy that goes with it; retraction around the authorship of these things (which itself retraction even participates in numerous company); and the low esteem he has for the size and role of Mebkhout (Which he knows he is the author never named these things, who renewed a field where mathematics itself Illusie out as an eminence).

I find here the complete blockage of common sense and sound judgment, even in a seemingly thing as impersonal as the judgment on scientific matters, blocking which I had occasion to referring more than once already, and each time again baffles me. And this contradiction that I see here the relationship of Illusie (and surely many others) to Mebkhout my "posthumous pupil" is not something surely one of the many effects of a crucial contradiction, which is in his relationship with me. It is this contradiction in him especially and my other students also, that appears more clearly in the reflection continued in the notes of this procession to Burial, formed by my former students. . .

15.3.4. The deceased

Note 86 (May 11) As often happens, it is with some reluctance that I made this New thinking on the theme "SGA 5 - SGA 4 1

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- Perversity, "which might seem to have been considered and reviewed ad nauseam: "It will make a deplorable impression on a drive that must have its slap from he hears; It©not elegant at all yet go into details, SGA SGA Ci 5 4 1

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that is

past all that and does not deserve to still other sandwiches. . . "

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Fortunately I am not intimidated by this kind of familiar refrain myself, who would

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prevent me from going to the bottom of something (at least as far as I am able to go on time) on the grounds that decidedly "it is not worth the trouble," he has only let it run ... If I happened to find out things that I consider useful and important, it is always in moments I knew not to listen to what is as the voice of "reason" or the "decency", and follow this indecent desire in me to see even what is supposed to be "irrelevant" or of poor appearance or same crappy or indecent. I do not remember a single time in my life where I had to regret looking for something a little closer against inveterate reflexes that would prevent me. These

inhibitory reflexes were even stronger in Crops and Seeds on other occasions, because this reflection is to be made public, which immediately imposes certain constraints discretion (When I involve third parties), and brevity (in deference to the reader). I do not feel yet
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finally, that these constraints prevented me have any time or to address something that I wanted address or to deepen as far as I felt the desire. In cases that could appear at a time borderline cases, I started forward with this insurance in case of need, I still had this resource does not include in Crops and Seeds which would "come out" of my indiscreet reflection. These "Borderline cases" presented themselves only when I hesitated to involve others, and never when he acted to involve my own person. But even in the first case it is (and the thing came to me as a surprise) that I never had to make use of this "resource": the text Crops and Seeds represents the full version of my thinking - at least the portion of this reflection that has found the way writing to express.

I feel that with the short reflection of the previous note 88 (*), the situation has clarified. I mean that a critical aspect of a situation that had been confused with pleasure, and I just to evoke the triple name of a "theme" (SGA 5 - SGA 4 1

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- Perversity), appeared to me in full light:

that of a "solidarity", a "collusion" that was still perceived as a confused before. it does not mean that I guess have searched me and understood all the springs, ins and outs of complex situation, involving directly and particularly evident at least seven people: Zoghman Mebkhout (acting in a sense as

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a "revealing" of a certain situation), my five former students p. 353
cohomologistes and myself. I do not even flatter myself to have collected all the springs and motives played in my own person, in relation to the situation "SGA 5 etc ...", for nearly twenty years that "Unhappy seminar" was held! But I feel much better condition-that only yesterday (or only this morning), to understand and locate echoes, I hope, will succeed me about this by either at least of key stakeholders.

The main question to me (I think she already has another stage reflection, and now reappears with a new force) is (I think) this: what Burial passed this by my students (more or less) in full force, is it something quite **atypical**, related to certain peculiarities of my person and my singular destiny (as I left the scene mathematical ago nearly fifteen years, the circumstances that surrounded him, etc. . .)? Or is it rather a thing "all natural", due to a simple combination of circumstances - following the principle that "the opportunity is the thief? "I hesitate to believe, without discern right now, or glimpse, what aspect especially in my person has had the virtue of creating an **agreement** as perfect and as unanimous among my former students, and to bury the "master", and those who claim him or whose work clearly bears brand (without being "their"). Is this kind of "aura" of Father surrounding my person, which I have had occasion to speak? Or is it the implication that constituted for each of them the mere my departure ? Right now, I would not be able to say, lack of eyes that know see. . . Perhaps the me coming months they will learn something about it 89 (*).

More than once during the past three weeks, I thought of that other "coincidence" strange: it is the discovery of Burial "at its best" (with the four-time LN 900 - SGA 4 1

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SGA 5 - Symposium Pervert, then back on SGA and SGA 5 4 1

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) - that this discovery was made at the time between all that I had to complete a thorough reflection on my past and my mathematician relationship with my students. This was the moment where I came so to me "clear with myself" about what happened to the best of my abilities and to the extent where allowed me the facts that were me then known, as they were returned

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by memories often foggy. Or to put it another way: it was the p. 354

88 (*) This is the note "Solidarity" n ° 85, the same day.

89 (*) (May 30) To reflect in this sense, see note "The Gravedigger - or the whole Congregation", n ° 97.

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time exactly where I was **ready** at last to learn things, and for profit.

The "chance" so well done things, there is not even got to break in meditation. The reflection that began with this short retrospective on the fate of the most important concepts (according to my feeling) I had introduced 90 (*) (thinking that was left in a blur, where a certain tone based only emerged emphatically. . .) - this reflection has continued quite naturally Thursday 19th April. That was true even under the influence of emotion aroused by the impression of "impudence" (To use the term now, which although described as something that I felt then), reading the "Memorable volume" LN 900.

In this new beginning "same" reflection, the main driver was the "boss" - I was hit in my pride, my sense of decency, and writing my emotion I am in a libérais to some extent. That@the "me", "boss" who apparently led the dance in ten days follow - days marked by the absence of smile as laughter, for a serious flawless. It took no doubt that I pass by, by this detour ten days before the reflection back to the center she had left - to my own person. I still remember the relief it has been back - as if out of a tunnel when the day appears again! Then I found laughing and smiling, as if we had never left. It was on 29 April. The next 30, the last day of the month, I was happy to end point final in this final stage of reflection.

It was time, too, surely, I was ready to receive the next "package" sent this time under the care of my friend Zoghman - Package "Conference" received two days later. Today is the tenth day I work to assimilate the substance of this package there. But at this stage, as I have eaten my Brake yet to finish with this twist that does not end re-bounce, smile not me not parted company one day. And today I really believe (for the umpteenth time, it@true!), Is the last day of the period.

There are already five days I had that same feeling to have arrived at the end, he remained only work Stewardship: add some footer notes here and there, retype the net too overloaded pages

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tures (sign every time a thought that had remained so slightly confused, and asked to get in p. 355

up by this work in mechanical appearance, but the text still comes out with a new face. . .). . .

That was when the had just written what is now the note "Friends" (n ° 79), which went to linking all spontaneously @nal agreements. " Yet I ended up separating these agreements the beginning of the note. Indeed, it turned out that this famous work stewardship erupted: the "footer notes", typed without spacing, became real notes (**no** footnotes) nice size, it took retyping with spaced, and then try somehow to squeeze here and there. It took days before I even make me Obviously another procession, after the one named "The Symposium" was being formed to join the procession - and the last processions would not (as I had decided in my head) said Conference but would be led by **the student** . And just today, while the first procession, reduced to a single note, had just enrich a second ("A sense of injustice and impotence"), I knew as that would take him: it is " **The student posthumous** ". Thus the procession opened by a student (and posthumous with tiny, as befits its humble state) and closed by a host still (not humble this time), finally seems in full force!

It is time also to me it seems, after a first "false arrival" to return to the agreements of Final Profundis better coming today they were not there the five days. Here they are, as I have noted then, and also express my feelings in the present moment.

90 (*) See notes "My orphans" and "Denial of inheritance - or the price of a contradiction" March 31 (n ° s 46.47).
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(May 31) Finally, it was another "false arrival" - "final arrangements" were premature this time again ! Twenty days have passed, during which the ongoing "housekeeping work" erupted in a resumption of reflection on such aspects as others who had been neglected. Six other notes have joined the procession "The Student", which was supposed to close the show. The Van Funeral has emerged in the wake of the student, carrying four coffins accompanied the Gravedigger. Definitely missing to give body and meaning in a funeral procession that seemed to convey person.

Become wise by experience, I expect coming events and would not venture yet to predict whether the procession finally at full strength, or if a procession forgotten yet it will come sneaking the

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last minute, do not miss the ultimate Ceremony 91 (*).

15.3.5. The slaughter

Note 87 (May 12) ⁹² (**). For the edification of the reader so slightly cohomologiste, and especially mine, I would like to review the details of the looting in good standing of a splendid seminar, the hands of two of cohomologistes my former students and under the watchful eye of the other ⁹³ (***) - the same seminar where they learned, twelve years before anyone else and the hand of the worker himself the basics and tricks of the trade that made their reputation.

Two of my oral statements were never made available to the public in any form is. One is the presentation of closing on open problems and conjectures that "unfortunately did not was written "in the limited - and the author of the introduction to the edition-killing found it unnecessary indeed men-dinner only **what** open problems and conjectures it was. And why would he take this barely, when they were only problems (that everyone is free to land at will!) and conjectures (not even proven!) (87 1). The other is the presentation that opened the seminar, and placed immediately into a broader context (topological, complex analytical, algebraic) and reviewed the types of formulas Euler-Poincaré, Lefschetz, Nielsen-Wecken, some of which constituted one of the main applications seminar. The "... Any more than that..." With which the author of the introduction goes on to report, at turn of a phrase, the disappearance of this presentation speaks volumes about the provisions of **casualness** that this time obviously taken for granted, while the author of the seminar had disappeared from circulation since September years.

There are a series of presentations that I made on the formalism of homology classes and cohomology associated with a cycle (ambient regular pattern in the cohomology case) ⁹⁴ (****). They have been equitable sharing: for Deligne cohomology, homology to Verdier - overflowing anyway a little on the cohomology, even back to the small

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reverence Deligne with the famous "complex ^{p. 357}
weight " ⁹⁵ (*). (Not to mention that he has won the finiteness theorem for Rohm and bidualité theorem, copied text message on the seminar - in any case, the lion@share will be for Deligne, which was normal ...) The author of the introduction not only sees fit to mention the presentations on homology. There was not no reason in fact, since the year before his friend Verdier was responsible for providing the "right benchmark" that missing (without referring to a seminar or me).

⁹¹ (*) (12 June) Caution was good to put, since a new procession "My students" was separated from that first called "The Student" become "The host - aka the Boss".

⁹² (**) This note goes on with the thinking of the day "Solidarity" (n ° 85).

⁹³ (***) The following reflection is also revealed that one of these "other" has lent a hand effectively for this operation for the account of others.

⁹⁴ (****) See for details footnote ° 82 "Good references."

⁹⁵ (*) See Note (83) "The joke - or complex-weight".

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There were oral statements on the theorems of finiteness for operations Rif^* (f unclear), and as a corollary, for Rohm operations $*$; and $Lf!$. The Key Theorem was proved by technical resolution of singularities to Hironaka (therefore valid only in cases where it has the resolution). These arguments I had used have become widely used since the seminar (see note (85 2)). Line got to prove these theorems of finiteness, and that of bidualité under other assumptions more helpful, checked now in most applications. One would expect that he would ask include these improvements in the seminary where he had the privilege of learning the étale, and the ideas and techniques in the basis of all his subsequent work. But that fact has served as "Reason" to amputate the seminar that part. As for bidualité theorem, so he becomes under the pen of Illusie (and within diagrams) "bidualité theorem of Deligne" (introduction to the presentation I). It was only fair, since in the Verdier analytical cases was already awarded paternity in the year Previous (without having even had to put in charge to find another demonstration).

There is the statement developing a "generic Künneth formula", which was written by Illusie. No one before had ever thought to release this kind of statements, inspired by the intuition that "generically" ie the neighborhood of the generic point of the base, an outline acts as a "locally trivial fiber" in the topological context. On a nearby elegant demonstration of his demonstration indicated above, Deligne manages to eliminate the resolution of singularities assumption I made. It is awarded - exposed deleted and "replaced" by a reference to a presentation of the same in the seminar Illusie said "previous"

APG 4 1

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There is a series of presentations on the formalism of non-commutative footsteps, developed as a means to p. 358

explain local terms of the Lefschetz-Verdier formula in cases that had never been processed.

These presentations have come to be written, it seems, by Bucur, whose manuscript "got lost in a moving house ment "providential - it turns vaudeville! 96 (*) In the introduction to SGA 5, written by Illusie these presentations indeed become "the Grothendieck theory traces **commutative** , generalizing [brightly] that Stallings "(which they were **not** commutative!). The slip 97 (**) can only be due to a bad secretary (Or too much...) Inspired, she was having links with movers My friend Ionel Bucur. (Word "Brilliantly" is an interpolation of my pen, to better render the thought inevitably suggested by this slip, also angel).

I did not complain because Illusie has typed the job of redoing the work (and, he says, a Version "more sophisticated", as it is made sheaf sauce - there seem to remember yet Illusie, you made innovations more "sophisticated" than this in my time. . .). He had to spend a Proud same time, if I remember that I had spent weeks to put the machine to the point; if it is find my manuscript was also lost in the same providential move, and God knows if one of dear listeners, overwhelmed by my oral fluency, knew at least understandable taking notes. . .

Remarkably, that I had not noticed before, it does not fit this presentation instead of the presentation where XI it was expected (which is probably the place as he had in the oral seminar), preferring to leave a gaping hole there and make its exposed a spurious exposed, called "local terms Calculations".

The title seems to correspond yet that I seem to remember having done in the oral seminar -

96 (*) It is this circumstance that probably had to inspire Deligne, the improvised, the brilliant criticism of SGA 5 that the terms Local formula Lefschetz Verdier (which "remained conjectural" remind him!!) there were not even calculated! (See Note "clean slate", n ° 67, about saugrenuité of this criticism, which to a neighbor informed reader to that of the famous "complex weight" Verdier last year (see Note ° 83). So it is Verdier who made school!)

97 (**) This is the slip assigning me authorship theory traces "commutative" (for which we had not expected me) instead of "non-commutative". It is preserved even in the published edition is even more remarkable is qu@lusie was one of my students may be the one who was most meticulous in work, to the last detail.

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strange. But from line 1 of the introduction to this paper, the author hastens to us

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disabuse "This p 359.

presentation, written in January 1977 **yielded no oral presentation of the seminar** . "And with chaining formulas Lefschetz-Verdier (though that name sounds familiar, and I had grown well and develop well far and wide theory traces noncommutative specifically, to calculate in some cases "local terms". . .), Then a formula of Langlands and demonstration Artin-Verdier 1967

(Yet it was one year after the final agreements oral seminar, which has not been without influence these authors, including at least one if not both of the following). Towards the end of the last page, we learn in passing, contrary to what had been announced earlier, there is also a "second part

This presentation of more technical nature "(I@ already read this language somewhere...) which is (admire hue) " **inspired by the method used by Grothendieck** to establish the Lefschetz formula some cohomological correspondence on curves ", with reference to the statement XII to the seminar and especially the indispensable SGA 4 1

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; Obviously, there was no reason for so little, to include

this presentation instead of gaping hole - the "more sophisticated version" of sometimes have done things. It was even nice to Illusie and Deligne cite me as a source of "inspiration", while Example their friend Verdier previous year had shown yet that it was absolutely worth the trouble to have such scruples.

I return to the introduction to the volume Illusie posing as the SGA 5. We learn to

Again, as already announced Deligne in his introduction to SGA 4 1

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That it is indeed **through**

his friend that the seminar is finally released:

"Thank P. Deligne for convincing me to write in a new version of the presentation III, a demonstration of the formula Lefschetz-Verdier, **thus removing one of the obstacles to the publication of this Seminar** ".

Again we are in farce - taken as such by the docile Illusie in the introduction to

APG 4 1

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! If the seminar was not published for more than ten years is (the whole was thinking about it) because

that person (Deligne before rescuing the situation in 1977) had not yet thought it might be a good idea to write a demonstration of the said formula (rightly) "Lefschetz-Verdier", which no other

However, that

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his inseparable friend and former student Verdier himself proudly fatherhood **for at** p. 360

least 1964 (87 2), ie for at least two years previously when my seminar ended, and only waiting more than good will to be available to all!

Finally, as a further and final (?) Mutilation of the seminar, there is the disappearance of the beautiful presentation that Serre had the "module (Serre) Swan" - presentation entitled "Introduction to the theory of Brauer." He is happy Serre that, seeing the turn of events, has had the good sense to include his statement in his book "Linear representations of finite groups" (Hermann, 1971), and put to the public

Math. (87 3)

This time I think I've been around this table. The picture of the fate of a seminar where I had put the best myself (88) 98 (*), and I found twenty years after unrecognizable massacred by the very people who had been the exclusive beneficiaries - or at least three of them, and with the consent of all other participants.

I do not regret taking the time, again, to go through what had progressively

tively imposed to my attention. This "turn of events" 99 (***) I noted that, after a long retrospec-

98 (*) For the meaning of the phrase "the best of myself", see the following notes "The remains ...", "... and the body"

n ° 88, 89. The first of these is the seminar SGA 5 with SGA 4 which is inseparable from, as the centerpiece of the Part of my work "has fully completed term."

99 (***) See the note of the name (n ° 73) of 30 April.

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spective on my relationship with one of my former students, of foreseeing even then that it was not the only to "bury me with enthusiasm" - I have now only to be aware of his breath, his

"odor" (to use an expression that then appeared in a dream of mine) - the breath of **violence** .

This breath is hidden and revealed by both the speech 100 (***) (seemingly detached and emotionless) with a highly technical material. What is meant by this violence, through a "corpse" delivered to thank you, is the same person of the one who was the "master", the "Father" - at a time yet where "students" from long ago took his coveted place without any resistance; and

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long as they

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elected from among them the new "Father", to replace the old and to rule over them.

I feel that breath, yet it remains for me something foreign, misunderstood. To "understand"

it would probably blow it then live in me, or has lived in me. But four years ago, I have to the first time felt and measured the scope of a thing in my life that I had never thought that

always seemed to me self-evident: that my identification with my father in my childhood, has **not** been marked by conflict - that at no time of my childhood, **I have neither feared nor envied my father** while he vowing unconditional love. That relationship, deeper perhaps that has marked my life (without

as I knew it before this meditation of it four years ago), which in my childhood was like

relationship to another myself both strong and caring - this relationship has not been marked by the seal of the division and conflict. If, through my whole life often torn, knowledge of the force based

in me remained alive; and if in my life not free from fear, I have not known fear nor a

person or an event - it is this humble circumstance I owe, still unknown to beyond

my fifty years. This circumstance was a priceless privilege, because it is the intimate knowledge of the creative force in his own person, which **is** also the force, allowing it to speak freely according to his

Nature through the creation - by a creative life.

And this privilege, which exempted me from a trademark among the deepest of the conflict, is currently

also as an obstacle, as a "void" in my life experience. A hard vacuum to be filled, where

many others have a rich web of emotions, images, associations, offering them the way (for some they are curious to take) a deep understanding of others along with themselves,

in situations that I can (by dint of repetition and overlap) to understand somehow,

but before which I remain yet as a stranger - with the desire for knowledge in me which remains hungry.

Score 87 1

(87 1) (May 31) The presentation of closing, surely one of the most interesting and most substantial with the opening statement, has clearly not been lost for everyone, as I see taking

read the article MacPherson "Chern classes for singular algebraic varieties" (Chern classes

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for

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singular algebraic varieties, *Annals of Math.* (2) 100, 1974, p. 423-432) (received in April 1973) - I found, under the name of "conjecture of Deligne-Grothendieck", one of the main conjectures I had introduced in this schematic presentation in the frame. It is taken by MacPherson in the framework of transcendent algebraic varieties over the field of complex numbers, the Chow ring being replaced by the homology group. Deligne had learned this conjecture 101 (*) in my presentation in 1966, the same year so that he had made his appearance in the seminary where he began to learn the language patterns and techniques cohomological (see note "Being apart" n ° 67 ©- It's still nice to have done me the honor to include me 100 (***) This is especially the speech in the nature of introductory texts accompanying SGA 5 (written by Illusie) and SGA 4 1 2

(Written by Deligne).

101 (*) (June 6) Under a slightly different form it is true, to see beyond following note dated today.

(March 1985) For details, given by Deligne itself, see note "The dot the i" n ° 164 (1 II).

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in the name of conjecture - some years later it would have been more appropriate. . .

(June 6) I take this opportunity to explain here what had been conjecture that I had stated in the seminar in the schematic part, surely there pointing the obvious variation in the analytical framework complex (or even rigid-analysis). I conceived as a theorem of type "Riemann-Roch", but discrete coefficients instead whether consistent coefficients. (Zoghman Mebkhout said also that his view of the 3-modules should allow to consider both Riemann-Roch theorem as contained in the same theorem of Riemann-Roch lens, which therefore represent in characteristic zero the natural synthesis of the two theorems of Riemann-Roch that I introduced in mathematics, one in 1957, the other in 1966.) is fixed a ring of coefficients Λ (not necessarily commutative, but for Noetherian simplified and more twisting first the characteristics of the proposed schemes for the purposes of étale ...). For a scheme X designates

$K(X, \Lambda)$

the Grothendieck group formed with Building beams stalls of Λ -modules. Using the functors $Rf_!$ This group depends functorially X, X noetherian schemes and morphisms which are separate and finite type. For regular X , I applied the existence of a group homomorphism Canonical, playing the role of "Chern character"

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in the coherent RR theorem,

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$$ch_x : K(X, \Lambda) \rightarrow A(X) \otimes_{\mathbb{Z}} K(\Lambda)$$

(15.1)

wherein $A(X)$ is the ring of X and $K(\Lambda)$ the Grothendieck group formed with the Λ -modules finitely. This homomorphism was to be solely determined by the validity of the "Riemann formula Roch discreet" to a morphism **own** $f: X \rightarrow Y$ of regular patterns, which formula is written as Formula Riemann-Roch consistent with the "multiplier" Todd replaced by the Chern class total relative:

$$ch_Y(f_!(X)) = f_*(Chapter_x(X) \vee(f))$$

(15.2)

where $c(f) \in A(X)$ is the total Chern class f . It is not difficult to see that in a context where has resolution of singularities in the form of strong Hironaka, the formula RR well determines the ch_x uniquely.

Of course, we assume that we are in a context where the Chow ring is set. (I did not have knowledge that someone just tried to write a theory of Chow rings for or circuit diagrams Regular farmhouse that would finitely on a body.) Otherwise, it can also work in the scale ring associated with the ring "Grothendieck" $K \circ (X)$ in the usual consistent context, filtered in the usual manner (See SGA 6). You can also replace $A(X)$ by the ring of l -adic cohomology peer, direct sum of $H_{2i}(X, \mathbb{Z}_s(i))$. This has the disadvantage of introducing an artificial parameter l , and give formulas less fine "digital purely", while the ring Chow charm to have a continuous structure, destroyed passing cohomology.

Already in the case where X is a smooth algebraic curve over an algebraically closed body, the calculation of c_x involves delicate local invariants type Artin-Serre-Swan. This means that the general conjecture is a deep conjecture, whose prosecution is linked to understanding similar in size top of these invariants.

Note. Pointing to the same $K(X, \Lambda)$ "the Grothendieck ring" formed with complex constructive

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patible of Λ -beams stalls finite tor-dimension (which ring acts on $K(X, \Lambda)$ when A is commutative
tif. . .), We must still have a homomorphism

$$\text{ch}_x K(X, \Lambda) \rightarrow A(X) \otimes_{\mathbb{Z}} K(\Lambda)$$

giving rise again (mutatis mutandis) to the same Riemann-Roch formula (RR).
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Be now cons (X) the ring of entire functions Building X . way is defined more or
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less tautological canonical homomorphisms

$$K(X, \Lambda) \rightarrow \text{Cons}(X) \otimes_{\mathbb{Z}} K(\Lambda),$$

$$K(X, \Lambda) \rightarrow \text{Cons}(X) \otimes_{\mathbb{Z}} K(\Lambda)$$

If we now merely patterns **characteristic zero**, then (using features

Euler-Poincare to clean surfaces) it is seen that the Exec group (X) is a covariant functor compared to
finite type morphisms noetherian schemes (in addition to being as contravariant functor-ring,
which is independent of characteristics), and previous tautological morphisms are functorial. (This
corresponds to the fact "well known", but has not been proven I believe in oral seminar SGA 5, that
characteristic zero for a locally constant beam Λ -modules F on an algebraic scheme X ,

his image

$$f: K(X, \Lambda) \rightarrow K(e, \Lambda) \simeq K(\Lambda)$$

equals $d\chi(X)$, where d is the rank of F , $e = \text{Spec}(k)$, k base body assumed algebraically closed. . .).

This suggests that once the homomorphisms Chern (1. .) And (1. .) Must be able to deduct homomorphism
phismes tautological (2. .) (2. .) coping with a homomorphism Chern "universal" (independent of
any ring of coefficients Λ)

$$\text{ch}_x : \text{Cons}(X) \rightarrow A(X)$$

so that both versions "to Λ coefficients" of the formula RR appear as contained formally

LEMENT in a formula RR-level constructible functions, which is always written in the same
form.

When working with drawings on a basic body set (typically one again)

or more generally on a basic diagram **regular** set S (e.g. $S = \text{Spec}(Z)$), the shape of the
Riemann-Roch formula most consistent with the usual writing (in the familiar coherent framework from
1957) is obtained by introducing products

$$c_x(x) c(X/S) = c_{x/S}(x)$$

(where X is a $K(X, \Lambda)$ or $K(X, \Lambda)$ interchangeably), could be called

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Chern class of x

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relative to the base S . When x is the K unit element (X, Λ) ie the class of constant beam

value Λ , the image is found from the total Chern class relative X with respect to S by 1 "homomorphism
 A canonical $(X) A(X) \otimes_{\mathbb{Z}} K(\Lambda)$. Given this, the formula of RR equivalent to the fact that the formation of
these Chern classes on

$$c_{x/S} : K(X, \Lambda) \rightarrow A(X) \otimes_{\mathbb{Z}} K(\Lambda),$$

for a regular scheme X variable over S (finish on Type S), with S fixed is by functorial

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compared to specific morphisms, and similarly for the variant (5. .). In characteristic zero, this reduces to
functoriality (for proper morphisms) of the corresponding application

$$c_{x/S} : \text{Cons}(X) \rightarrow A(X).$$

Under this form of existence and uniqueness of an application "Chern class" absolute (6), in the case

where $S = \text{Spec}(C)$, that this conjecture in the work MacPherson, the relevant conditions (here

as in the general case of characteristic zero) being a) functoriality (6) for proper morphisms

and b) $ac_{x/S}(1) = c(X/S)$ (in this case, the total Chern class "absolute"). Compared to my guess

Initial, the presented form and proven by MacPherson is distinguished in two ways. One is a

"Less", since it is located, not in the Chow ring, but in the whole cohomology ring, or

more exactly the entire homology group defined by transcendental path. The other is a "more" - and that©

here maybe Deligne contributed to my initial guess (unless this contribution

is due to MacPherson himself 102 (*)). Is that for the existence and uniqueness of an application (6),

need not be restricted to regular X patterns, if we replace $A(X)$ by the group

of complete homology. It is likely the coup that the same is true in the general case, denoting by $A(X)$ (or better in $A(X)$) the **Chow group** (which is no longer a ring in general) of noetherian scheme X . Or to put it another way: while the heuristic definition of invariants $h_p(X, \Lambda)$ (for X in $K(X, \Lambda)$ or $K(X, \Lambda)$) used in an essential way the hypothesis that ambient pattern is regular, once you multiply the by the "multiplier" $c(X/S)$ (when the scheme X is finitely generated on a fixed regular pattern S), the product obtained (4) seems to keep a sense without regularity assumption on

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 X , as a component of a tensor product p. 366

$A(X) \otimes K(\Lambda)$ or $A(X) \otimes K(\Lambda)$, where $A(X)$ denotes the Chow group of X . The spirit of the demonstration MacPherson (that does not use resolution of singularities) suggests the possibility of building a "computational" explicit homomorphism (5) "doing with" the singularities of X as they are, and with singularities beam coefficient F (whose class is x) for "collecting" a cycle X with coefficients in $K(\Lambda)$. This would also be in the spirit of the ideas I had introduced in 1957 with the Riemann-Roch theorem consistent, where I made self-intersection calculations including, keeping me well to "move" the considered cycle. A first obvious reduction (X obtained by dipping in a S pattern) would be the case where X is a closed subscheme of the regular pattern S ...

The idea that it should be possible to develop a Riemann-Roch theorem (coherent) odd to me was also familiar, I do not know since when, but I never tried to seriously test. It is just this idea (except the analogy with the formalism "cohomology, homology, cap-product") that had me conduit in SGA 6 (1966/67) systematically introducing the $K(X)$ and $K(X)$ and $A(X)$, $A(X)$, the Instead of just going to work with $K(X)$. I do not remember if I also thought something kind in the seminar SGA 5 in 1966, and if I have suggested in the oral presentation. As my notes handwritten disappeared (in a move perhaps?) I know it probably never. . .

(June 7) In Article browsing MacPherson, I was struck by the fact that the word "Riemann-Roch" there no position - this is the reason also why I did not immediately recognize the guesswork I had made in the seminar SGA 5 in 1966, which for me was (and still is) a theorem type "Riemann-Roch." It seems that at the time of writing his article, MacPherson does not even be made 102 (*) (March 1985) It is indeed the case, cf. footnote ° 164 cited in the previous footnote page. 379

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account this obvious relationship. I suspect the reason is that Deligne, that after my departure has this conjecture outstanding form that pleased him, took care whenever possible to "erase" the obvious kinship with the theorem of Riemann-Roch-Grothendieck. I think I feel the motivation to act so. First, it weakens the link between this conjecture and my person, and makes plau

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 sible the call-
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lation of "conjecture Deligne-Grothendieck" under which it is currently circulating. (NB I do not know if it is circulating in the schematic case, and if so, would be very interested to know under what name.) But the deeper reason seems in the obsessive idea home to deny and destroy, in whole Wherever possible, the fundamental unity of my work and my mathematical vision 103 (*). This is an example striking how, in a mathematician with exceptional means, however, an idea completely fixed foreign to all mathematical motivation can obscure (or even close off completely) what I called the "Healthy instinct" mathematical. This instinct can not fail to perceive the analogy between the two statements "Continuous" and "discrete" a "same" Riemann-Roch theorem, I had also obviously highlights in the oral presentation. As I said yesterday, this relationship will probably be confirmed shortly by a shaped statement (conjectured by Zoghman Mebkhout), at least in the complex analytic case, permet- As to deduct either a common statement. It is clear that in the "fossoyantes" provisions in which was found Deligne vis-à-vis the Riemann-Roch theorem 104 (**), it was not likely to find the only statement that links the analytical framework, let alone the question of a statement similar in the general schematic framework. Nor has it succeeded in such provisions clear point fruitful for the 3-ons in the cohomology theory of algebraic varieties under way too natural ideas that it was buried - or even acknowledge, for years, the fruitful work of Mebkhout succeeding where he himself had failed.

Score 87 2

(May 31) This is the year of my presentation Bourbaki on the rationality of L-functions, where I UTI heuristically read the result (???) Verdier (and especially the form provided local terms in the case species), without waiting that wants Illusie well demonstrate thirteen years later, at the invitation of Deligne. he I thought also when Verdier showed me his formula ultra-

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General who came as a surprise,
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he demonstrated to the formalism calls "six operations" in a nutshell - it's the kind of formulas where (almost) the write is the show! If "hard" there was, it could only be at most only level verification of one or two compatibilities ¹⁰⁵ (*). In addition, both Illusie know that Deligne perfectly as the demonstrations that I had given in the seminar various formulas traces Explicit **were complete**, they were dependent in any way the general formula Verdier, who had simply acted as a "trigger" to incite explain and prove traces of formulas in cases as general as possible. The bad faith of one or the other here is obvious. For Deligne it was already clear to me when writing the note "The clean slate" (n ° 67) - but it probably was not a uninformed reader, nor of course to a knowledgeable reader who renounces the use of his faculties healthy. ¹⁰³ (*) compare with the comment in the note "The body" (n ° 88) deep sense of SGA4 operation 1 2, for the same

to burst into an amorphous set of "technical digressions" the profound unity of my work around the cohomology spread by "violent integration" of USG foreign text 4 1 2 between the two parts 4 and indissoluble APG APG 5 which develop this work.

¹⁰⁴ (**) These provisions vis-à-vis precisely the theorem of Riemann-Roch-Grothendieck, manifested in a particularly clear in "In Praise of Death"; see note "In Praise of Death (1) - or compliments," n ° 104.

¹⁰⁵ (*) (June 6) It seems more than via the bidualité theorem (promoted meantime "Deligne theorem"), demonstration the initial Lefschetz-Verdier formula dependent on a resolution of singularities hypothesis, which reaches Deligne happen in the case of type schemes ended up on a body. This is a good opportunity to fish in troubled waters and give SGA 5 feel that would be subject to "seminar-sic" SGA 4 1

2 that the "above" (which was indeed published before him !).

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(June 6) As for Illusie, it is entirely within the game of his friend, trying to muddy the waters for give the appearance of a ultratechnique oral seminar did not give even complete demonstrations All results, including traces of formulas. These however were indeed demonstrated there (And for the first time) in 65/66, and this is where both he and Deligne have been privileged to learn, and a delicate technique that goes with ¹⁰⁶ (**).

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This reminds me that of course, I had taken the trouble to demonstrate the formula Lefschetz- p. 369 Verdier in the seminar - it was the least, and a particularly striking implementation of formalism of local and global duality that I proposed to develop. The question came to me these days why on earth it, while there were good ten presentations including writing remained distressed by care of my dear students, so Deligne and Illusie were really spoiled for choice to name their "obstacle" technical -SiC publication SGA 5, they chose between all the theorem of their good boyfriend Verdier, who at the time was in fatherhood as his due, like that of categories Derived and triangulated he had never bothered either write (or, at least, to the available to the public). There is a sort of **challenge** in absurdity (or in a kind of collective cynicism Group cohomologistes my former students, I consider all united in this operation-killing) which reminds me of "complex-weight" Verdier brilliantly invented by the previous year (see Note that name, n ° 83), or (in the iniquitous register) with the name "perverse" given by Deligne to the beams which should be called "bundles Mebkhout" (see note "The Perversity" n ° 76). I feel in such inventions so many acts of domination and vis-à-vis contempt of the mathematical community as a whole - and also a **bet** that clearly was won until the unexpected appearance of the deceased, which almost seems like the only awake before a sleepy community ...

Note 87 3

(June 5) After the balance sheet of a massacre, we appreciate its value this declaration of the Illusie Line 2 of his introduction to the volume named SGA 5:

"Compared to the original version, the only significant changes concern the presentation II [formules generic Künneth] which is not reproduced, and the presentation III [Lefschetz- of formula Verdier], which has been completely rewritten and expanded a numbered Appendix III B ¹⁰⁷ (*). Apart few changes

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details and additions footer notes, other presentations were

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left **as is** "(my emphasis).

Again, Illusie is complaisant echo of another good joke sent his friend hilarious,

that the existence of SGA 4 1

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"soon will publish SGA 5 **unchanged**" (see note "Table

tabula "n ° 67) - Illusie and did everything possible during his presentations and introductions to accredit this

106 (**) In the second paragraph of the Introduction to the book published under the name of SGA 5 Illusie this as "the heart of

seminar "the three presentations III, IIIB, XII around the Lefschetz formula étale, then we saw that in

the introduction to the presentation III B, he takes care to specify (contrary to reality) that "this statement does not match any oral presentation of the seminar "and in the introductions to the presentations III and III B, it is possible to give the impression that they are subject to SGA 4 1

2, and that the presentation III is introduced as "speculative"! In fact, the entire seminar

SGA 5 was technically independent of the presentation III (Lefschetz-Verdier formula), which acted as a motivation

heuristic, and exposed IIIB is none other than the "hole" (exposed XI) created by the removal of Bucur, which was the pretext welcome to this additional stripping.

To accredit the version of a seminar "technical digressions" (his friend blown Deligne), has taken Illusie

care to blow the introductory, where I gave a preliminary summary of the major key themes were

be developed in this seminar table where the formulas traces form only a small part (taking an important

particularly because of their implications arithmetic in the direction of the Weil conjectures). For an overview of these "great Themes", see sub-grade n ° 87 5 further.

107 (*) Which is presented as part of the "heart of the seminar!" (See note b. Previous p..)

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fraud (that SGA 5, where he and his friend learned their trade, depend on the volume-pirate SGA4 1

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, made of

Bries and gleaned brac or looted during the twelve years that followed) by a luxury references to SGA 4 1

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each page visit. . .

The final word comes (as it should) to Deligne, he wrote me a month ago (May 3), in response to a

terse request for information (see about the beginning of the note "The Funeral", n ° 70):

"In summary, if there was seven years than you did more math [?] When the text SGA 4 1

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appeared, this is simply [?] long time for editing SGA 5, **which was too**

incomplete to be useful is issued .

I hope these explanations are acceptable to you. "

If they have me "approved" at least they will have edified me. . .

Score 87 4

(June 6) It might be time to indicate what the main themes that were devel-

oped in the oral seminar, and the published text which makes it possible to get an idea as by subtraction.

I) local aspects of duality theory, whose main ingredient is technical (as in the case

coherent) the bidualité theorem (supplemented by a theorem "cohomological purity"). I have the impression

sion that the geometric sense of this last theorem as a theorem of duality of local Poincare that

though I had clearly explained in the oral seminar was completely forgotten for by those who were my

students 108 (*).

II) traces formulas, including traces of formulas "noncommutative" more subtle than the formula

usual traces (where the two members are integers, or more generally ring elements

coefficients as Z/nZ or ring l -adic Z_l or Q_l) which fits into an algebra

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finite group operating

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on the intended pattern, with coefficients in a suitable ring (such as those contemplated in the parenthesis former). This generalization came very naturally, that even in the case of formulas

Lefschetz the usual type, but for beams of "twisted" coefficients, one was brought to replace

initial pattern by a Galois cover (usually branched) for "untwist" the coefficients, with

the Galois group operating above. Thus formulas like "Nielsen-Wecken" creep

naturally in the schematic context.

III) Formula Euler-Poincare. There was a detailed one hand an "absolute" formula for study

of algebraic curves, with blows of Serre-Swan modules (generalizing the case of moderately coefficients

branched, giving rise to the formula of Ogg-Shafarevich-Grothendieck more naive). On the other hand there were

new and profound conjectures of the Riemann-Roch type of "discrete", one reappeared seven years later,

in a hybrid version, under the name of "conjecture of Deligne-Grothendieck," proven by MacPherson

by transcendent way (see Note ° 87 1).

The comments that I could not fail to make the deep relations between the two themes (formulas Lefschetz, formulas Euler-Poincaré) also lost without trace. (As it was my habit, I left all my handwritten notes to volunteers editors-sic, and I am left more no written record of the oral seminar, which I of course a set of handwritten notes complete, although some were succinct.)

IV) formalism detailed homology classes and cohomology associated with a cycle arising naturally general formalism of duality and the key idea, of working with the cohomology "to Media "in the proposed cycle, using the theorems of cohomological purity.

108 (*) After verification, this geometric interpretation has at least been preserved in writing Illusie.

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V) finiteness theorems (including generic finiteness theorems) and theorems of generalized Künneth RIQUES for cohomology to any support.

The seminar also developed a technique for passage of twist coefficients to the coefficients l -adic (Exposed V and VI). This was the most technical part of the seminar, which generally worked with torsion coefficients, then left to "go the limit" to derive the results corresponding l -adic dent. This view was a stopgap pro

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visional, pending thesis Jouanolou (still not published at p. 372 present) giving the formalism that was directly under the l -adic.

I do not count the number of "themes" key, the calculations of some classic patterns and cohomological theory of Chern classes, that Illusie rises hairpin in his introduction as "One of the most interesting" of the seminar. Since the program was loaded, I had not grown needed in oral seminar to dwell on these calculations and this building, as it was enough to resume almost verbatim, the arguments I had given ten years before in the context of the Rings Chow, at the Riemann-Roch theorem. It was obvious the other hand that it should be included in the seminar written to provide a helpful reference to the user of the étale. Jouanolou had responsible for this work (statement VIII), he had to look not like a service he rendered to the community while learning mathematics are critical core technology for its own use, but as a chore, since its drafting has dragged on for years 109 (*). It has not been otherwise, he must believe, for his thesis, which remains a ghost reference like that of Verdier. . . The "passage to the limit" should not be counted as either one of the "major themes" of the seminar, in that it does not associated with a particular geometrical idea. Rather, it reflects a particular technical complications the context of the cohomology spreads (distinguishing the transcendental contexts) that theorems key on étale primarily concern the coefficients **torsion** (the first waste characteristics), and that to have a theory that fits the rings coefficients characteristic zero (as it should for the Weil conjectures) must pass to the limit on rings coefficients $Z / l_n Z$ for results " l -adic".

All this said, the only one of the five main themes of the seminar oral form seems to appear full in the published text, is the theme I. Themes IV and V have disappeared altogether, absorbed SGA 4 1

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With the benefit can refer to them thoroughly and give the impression that SGA 5 depends Deligne a text presenting as anterior. Themes II and III appear in the published volume in mutilated form, and always maintaining the same sham of a dependence on text

APG 4 1

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(Which is in reality out of the entire mother-seminar SGA 4, SGA 5).

15.3.6. The remains

Note 88

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(May 16) The set of two consecutive seminars SGA SGA 4 and 5 (which for me are like p. 373 a single "Seminar") develops from nothing, both the powerful instrument of synthesis and discovery that is the **language** of the topos, and **the tool** fully developed, perfect efficiency, which is the cohomology spread - better understood in its essential formal properties, from that moment that it was even cohomological theory of ordinary spaces 110 (*). This set represents the contribution deepest and most innovative I have made in mathematics, at a fully completed work futures. At the same time, and without wanting to be, so that at every moment everything is going the natural of 109 (*) (12 June) Looking through the statement in question, I could convince myself also perfect collusion with Jouanolou cohomologistes my other students.

110 (*) Even by restricting the most neighboring areas of "varieties" such as triangulables spaces.

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obvious things, this work represents the "tour de force" the largest technical I completed my Artwork mathematician ¹¹¹ (**). Both seminars are for me inextricably linked. They represent, in their unity, both the **vision** and **the tool** - the topos, and a complete formalism of étale. While the vision remains challenged today, the tool for nearly twenty years deeply re-Nouvele algebraic geometry in its aspect for me the most fascinating of all - the "arithmetic" aspect, apprehended by intuition and by a conceptual and technical background, nature "geometric". This is surely not only intend to suggest a **grandfathering** his "digest" cohomological on the part SGA 5 Deligne motivated to dress up the name sham SGA 4 ¹

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- nothing prevented

after all, for that matter, to call SGA 3 ¹

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! In the "SGA 4 operation ¹

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"I feel intends to present

the work which all hers comes from (this work which he happens to come off!) - a unit of work

obvious and apparent deep well across two seminars 4 and USG (the real) SGA 5 as

thing **divided** (as itself is divided...), **cut in two** by the violent insertion of a foreign text

and contemptuous; a text that would stand as the living heart, quin

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tessence a thought, a

p. 374

vision which he had no hand ¹¹² (*), and the two "neighborhoods" surrounding it as a kind of appendages vaguely grotesque, like a bunch of "digressions" and "Technical supplements" at work isgiving as a central and essential, from the pen of Deligne and where my humble person is graciously allowed (before burial total) to the number of "collaborators" ¹¹³ (**).

The "chance" had done things. This "remains delivered to thank you" - this "unfortunate seminar" always left behind by the "editors" and stayed when I left in the hands and at the discretion of my

cohomologistes students - it was not there **any** part of the master©work! It was not SGA¹ and ² SGA (which I developed in my corner without even suspecting me the tools that would be both

technical aids needed for the "off" the main work to come) or SGA 3 (where my

contribution consisted mainly of endless scales and arpeggios - sometimes difficult - for honing the technique "all

azimuths "diagrams) or SGA 6 (systematically developing my old ideas around ten years

Riemann-Roch theorem and formalism intersections) or SGA 7 (which, by the internal logic

a reflection derives from the possession of the central tool, controlling the cohomology). It is indeed

the **mistress part** of my work, the drafting was unfinished (and by them ...), I

left, at least in part, in the hands of my cohomologistes students. It is this part of a master

work they chose to slaughter and in which they are suitable pieces, forgetting the unit which is

the meaning and beauty and creative power (90).

And it is not by chance that, armed with assorted tools and denying the spirit and vision that the

had created from nothing, none has been able to discern the innovative work where it was reborn, ¹ "against

their indifference and their disdain. Neither that after six years, when at the end of the fine new tool was finally

apprehended by Deligne, they have unanimously agreed buried man who had created in solitude - Zoghman

mebkhout

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the posthumous pupil of the master denied! And it is not by chance that after the spin momentum

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Initial Deligne (which in recent years had led to the strong start of a new theory

¹¹¹ (**)) Some difficult or unexpected results were obtained by others (Artin, Verdier, Giraud, Deligne), and parts of

work was done in collaboration with others. This takes nothing (in my mind at least) the strength of my appreciation

on the place of this work throughout my work. I also think back on that more detailed manner,

in an appendix to the Sketch Theme, and to dot the i where obviously it became necessary.

¹¹² (*) The thought had reached full maturity, both the main ideas as the essential results, even before the

Deligne young man appears on the scene, to learn algebraic geometry and cohomological techniques my

contact, between 1965 and 1969.

(30 May) On this subject the note "Being apart", n ° 67.

¹¹³ (**)) See notes "Green light," "Reversal", n ° s 68, 68 ©

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Hodge, and to demonstrate the Weil conjectures), and despite his prodigious ways and means cohomologists my brightest students I note today that "gloomy stagnation" in a field of prodigious wealth where everything still seems to do. There is not surprising, since as soon fifteen years the main source of inspiration and some of the "big issues" ¹¹⁴ (*), even though they are present and we are faced with every step carefully bypassed and remain retracted, like Messengers from the one for fifteen years he acted constantly burying.

15.3.7. And body ...

Note 89 (May 17) The thought, the vision that lived in me and that I had grown communicate, I see it as a living body, healthy and harmonious, lively renewing power of living things, the power to design and create. And this living body become **remains** shared between them others - such member or duly stuffed district serving trophy in one, another, dismembered, as puzzle or like boomerang in the other, and another still, who knows, as is for home cooking (We@ not close to it!) - and everything else is good to rot in landfills. . .

This, in graphic terms but one that many seem to express a certain reality of things, the table which eventually reveal itself to me. The puzzle in a pinch, it well fracture a skull here and there ¹¹⁵ (**)
- but never those scattered pieces, trophy or puzzle or family soup, will not have the power yet so simple and obvious of the living body, that of the loving embrace that creates a new being. . .

(May 18) This image of the living body, and the "body" to pieces scattered to the four winds, had to form in me throughout the past week.

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The comical form in which it is presented under my plume- p. 376

typewriter does not mean that this is the least an **invention** , a tad

macabre, a burlesque improvisation on the momentum of a speech. The image expresses a **reality** , perceived pro-deeply when she took material form in a written formulation. This reality, I had already take note snatches here and there throughout the fourteen years since my "start", and perhaps even from before. Bits of information recorded first on a superficial level by distracted attention absorbed elsewhere - but all went in the same direction, and that had to be assembled, at a deeper level, a certain image - unformulated picture I did not care to take knowledge, while I had other fish to fry. This image has grown considerably and specified in the reflection that has continued since the end of March, for six or seven weeks hence.

Rather, scattered pieces of information, then reviewed by the care of conscious attention fully present, came together gradually into **another** picture, the most superficial level of thought which examines and probe, for a job that may seem independent of the presence, in more layers deep, from the first. This work culminated aware there are six days in the sudden vision of the "massacre" held - when I felt the "breath", "smell" of **violence** , for the first time I think in all reflection ¹¹⁶ (*). This is the time where also had to appear in layers close already to the surface, ¹¹⁴ (*) The "main source of inspiration" is of course the "yoga of reasons". She was active in the only Deligne, who kept it written before itself for its only "benefit", and in a narrow form deprived of much of its strength, rejecting some key aspects of this yoga. Among the "big issues" inspired by it, which were ignored or quietly discredited, I see now (any outsider that I am) standard conjectures, and development of the formalism of "six operations" for all the usual types of coefficients, more or less close to the "reasons" themselves (which play their respect the role of "universal" factors - those that give rise to all the others). Compare with comments to topic in the note "My orphans", n ° 46.

¹¹⁵ (**) (May 31) And even it will serve well to prove such a theorem "of proverbial difficulty!"

¹¹⁶ (*) (June 12) It happened to me in recent years to feel at such a violent intent of my former students vis-à-vis such my "co-buried" but never a violence that is felt as coming from a collective desire (grouping five

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feeling of a living body, harmonious, which is indeed "massacred" - and that too when the diffuse image deeper had to start to surface, perhaps to bring in image formation dimension carnal, a "smell" that the thought is powerless to give.

This aspect of "carnal" proved again in a dream that night - it@under the leadership of the dream

I return now to the lines written yesterday. In this dream, I was notched deep enough in several parts of my body. At first they were cuts to the lips and in the mouth,

bleeding profusely, while I was rinsing the mouth with water (strongly reddened by the blood) before an ice cream. Then injuries stomach bleeding profusely too, especially one of them whose blood out

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jerkily, as if it was an artery (the dreamer does not care anatomical realism). Thought

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I even came that I might be left behind if it continued to bleed like that, I pressed the hand over the injury and I curled up to stop the blood - this is indeed stopped flowing waves, and eventually form a clot and a very big crust. Later, I raised this carefully crust, delicate healing had already begun to do. I was also nicked a finger, and was surrounded by an impressive doll-dressing. . .

I do not intend to get into a more delicate and detailed description of this dream, or the probe thoroughly here (or elsewhere). What the dream "as is" already reveals to me with startling strength is that the "body" of which I spoke yesterday, and that in writing as I could away from me, as a child might I have designed and procreated and that would have left in the world to go his own way - this body remains still an intimate part of myself: this is **my** body, made of flesh and blood and a life force that allows him to survive deep wounds and regenerate. And my body is the thing The world also, probably, to which I am most deeply, more indissolubly linked. . . Dreamer does not follow me into the image of the "massacre" and sharing the spoils. This image was restore a reality intentions, provisions in **others** that I strongly perceived, not how myself lived this aggression, this mutilation which I had been through something that I remain bound from close. How well I stay bound, the dreamer just let me glimpse. This ties what I perceived (certainly with less force) in the reflection of the note "Return of things - or foot in the dish" (n ° 73) I tried to identify myself so little sense of this "deep connection between one who designed one thing, and this thing, "appeared during the discussion that day. Before this reflection from April 30 (there are only three weeks) and during my whole life, I pretended to ignore this link there, or at least minimize, thus following the slope mapped out clichés in force. Worrying about the fate of such a work that left our hands, and especially of course be concerned if our name is attached to it so little, is felt as a smallness, pettiness one - so it seems natural to all that is yet deeply touched when a child of flesh that has raised (and is believed to have loved) chooses to repudiate the name he received at birth.

15.3.8. The heir

Note 90

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(May 18) I do not know if in the sixties, no student (except Deligne) was able to feel this p. 378

essential unity, beyond the limited work he pursued me. Perhaps some did they felt confusion, and that this perception was lost without return soon after the years since I left. Which is safe by cons is that from our first contact in 1965, Deligne had foreseen this living unit. It is this fine perception of a unit about a vast plan which was probably the main stimulus for the intense interest in him vis-à-vis all I had to communicate and pass. This interest (people) and directed against my person, through my work.

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expressed, never falter throughout the four years of constant mathematical contact, between 1965 and 1969 ¹¹⁷ (*). He gave mathematical communication between us this exceptional quality that I spoken, and I have known with other mathematicians friends in rare moments. It is this perception the essential, and this passionate interest it stimulated in him, which allowed him to learn like playing all I could teach him both the technical means (technical zinc strand patterns, Yoga Riemann-Roch and intersections cohomological formalism étale, language topos) that the **vision** of all that unites us, and finally the **yoga patterns** which was then the main fruit of this vision, and most powerful source of inspiration that have ever previously discovered. What is clear is that Deligne was the only one of my students until today, which in some time (from the year 1968 it seems) had fully assimilated and endorses all of what I had to transmit, in its essential unit as in the diversity of its means ¹¹⁸ (**). It was this circumstance of course, I believe felt by all, which made it appear as the "legitimate heir" designated all of my artwork. Obviously this legacy not encumbered or restricted the - it was not a burden, but gave him wings ; I hear he fed his force these "wings"

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he was born, like other visions and p. 379

other legacies still (less certainly.. personal.) would feed her. . .

This legacy which he has nurtured in the crucial years of growth and development, and the unit that makes the beauty and creative power and that he knew so well felt, which had become like a part of himself - My friend has the later ¹¹⁹ (*) disowned, trying tirelessly to hide inheritance, and deny and destroy creative unit that was the soul. He was the first to set an example among my students to appropriate tools, "pieces" while persisting in breaking up the unit, the living body from which they come. His own creative impulse has found braked, absorbed and ultimately dislocated by this deep division in him, the pushing to deny and destroy it himself that was his strength that nourished his momentum.

I see this division by three express solidarity effects inextricably linked. One is the effect of dispersion of energy, scattering in the effort to deny, disrupt, displace, to hide. The other is in the refusal of some ideas and some resources, which are essential for the "natural" development of the subject he has chosen as its central theme ¹²⁰ (**). The third is attachment to this theme between all when it comes supplant, evicting a master present cha

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not that clear and must always - precisely the theme p. 380

which is invested more intensely the fundamental contradiction that has dominated his life mathematician.

What I know first-hand, and an instinct or elementary flair that never deceived me make

117 (*) This period includes five years spent with my friend has one (1966) in Belgium to do his military service.

118 (**) When I say "all" means: for all that was essential in the vision as in the means. it

does not mean, of course, there were ideas and unpublished results of which I have never thought of talking to him. For cons, I do

not think there is no mathematical thinking from 1965 to 1969 years of which I have spoken "hot" to my friend, always with fun and profit.

119 (*) Strangely, this division has been present from the first year of our meeting (already speaking with an attitude ambiguous vis-à-vis the seminar SGA 5, which was his first contact with diagrams, technical style cohomological Grothendieck and étale) and later and in a form unequivocal in 1968 (see note "The eviction", n ° 63)

- at a time so that mathematical communication was perfect, and where the development of his mathematical thought seems yet have been marked by conflict. He brought so ("passing") many interesting contributions (I make me great pleasure to ride hairpin in the Introduction to SGA 4) on topics he did his best, from my Initially bury.

120 (**) This refusal was manifested in particular by the funeral derived and triangulated categories (until 1981), formalism six variances (until today), language topos (ditto), and by a sort of "blocking disdain" the vast Program foundations of homological algebra and hoinotopique, I try now (twenty years later) to give sketch with Continued Fields, and he had certainly not failed to also feel the need. Finally, even it was based yoga designs (buried until 1982), it remained yoga mutilated part of its strength, being detached from the formalism of the six variances, which is an essential formal aspect. This has been strictly banned, too, he told me appeared, the Hodge-Deligne theory.

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clear to me that if Deligne had been torn apart by this profound contradiction in the same job,

mathematical today do not look like what it is ¹²¹ (*) - it would have been in several

its essential parts, loose renewals like the one I had myself been the main

instrument - the very one that the same Deligne was hard to counter and deflect! ¹²² (**)

No doubt he also was the obvious choice to be the soul of a powerful geometry school, continuation

the one that had formed around me - a school nourished the force of that which it originated, and

the creative power of the one who took my notes. But this school that had formed around me, this

feeder matrix that surrounded intense years of training - she broke up after

of my departure. If that was so, it is precisely to find fault in one who obviously took my

succession ¹²³ (***), it also would be the core of a group

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united by a common adventure, for a task

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whose dimensions exceed the resources of each.

I feel that after my departure, each of my students ended up in his corner, with work

in shambles certainly there is no shortage anywhere in math, but this "corner" is part of a whole and without

this "work" is carried by a current, @with a broader purpose. Surely, since my departure, if not

even before the eyes of most of my students or former students are brought to the "successor" any designated

the most brilliant of them and also the closest to me. In this sensitive moment, my friend had to feel for the

first time perhaps in his life, the power over others that suddenly was in his hands, for this power

of life and death that was on the fate of a certain school, he came from, and whose friends he had there

rubbed shoulders for four years waiting probably assure her that continuity. The situation was all

whole in his hands, it was he who set the tone. . . He gave it in effect, destroying the heritage and all

First this trust and expectation ¹²⁴ (*) that could not fail to bring him those who, with him,

were pupils of the same master. . .

Many are surely those who are impressed by the work of Deligne, and not without reason. But I

know also that this work, beyond the impressive initial impulse (ending with the demonstration

Weil conjecture) is giving away "his measure." It certainly demonstrates a technical mastery

and uncommon ease, placing it among the "best". But she did not humble virtue

121 (*) In writing these lines about "mathematical today," I am not only thinking of the more knowledge or

shallower than we have mathematical things today. There was also behind the fund, the thought of a certain **spirit** in the world of mathematicians, especially in what might be called (without sarcastic tone or mocking) "the great world" math: one that "sets the tone" to decide what is "important" or "lawful" and what is not, and the one who also control the media and, to a large extent careers. Maybe I exaggerate the importance that can have only one person in figurehead position on "the spirit of the times" in an environment given at a given time. This Deligne seems comparable (for better and for worse) than that to me Weil seemed to have in the middle that had welcomed me twenty years ago, and which I had identified myself for twenty years. (May 31) Compare with reflections (complementary) of the note "The Gravedigger - or the whole Congregation", n ° 97. 122 (**) (June 16) I am convinced that the mere fact that already the main ideas that I introduced in mathematics develop Normally, the momentum gained in the sixties (cut short by "chainsaw effect" which it will be discussed in the following two notes. . .), Mathematical today, fifteen years after my departure would have been different from what it is, in some of its essential parts. . .

123 (***) This **series of fact** was expressed by concrete signs unmistakable: he took my estate to IHES (I went the year after its entry - see note "The eviction", n ° 63), and he took over, with the means I had developed this end for fifteen years (1955-1970), the central theme of the cohomology of algebraic varieties.

124 (*) (26 May) In the following reflection, I detected a different "expectation" even vis-a-vis my tacit heir from this time not only my students, but "the whole Congregation" - see about the end of the note "The Gravedigger - or the whole Congregation" (n ° 97). I have little doubt that these expectations in opposite directions, one linked to a time very particular, and the other continuing throughout the fourteen years of burial, are real one and the other. Much more, I would be inclined to think that in more than one of my former students, both expectations had to be present simultaneously: that of finding in the most brilliant of them that also would ensure continuity to a school in a work where they had their place and their hand - and the view cleared (if practicable could) any trace of him whose starting with the sudden interpellait such force, in the quiet channels all plotted. . .

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I perceived in him in his youth - the under renewal. This virtue within him, this freshness and innocence of the child, has long been deeply buried, disowned. I was going to write that by this "virtue" and its little gifts com

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Muns, as also by the exceptional circumstances in which he p. 382 deployment received for his gifts, Deligne was called to "dominate" the mathematics of our time, as Riemann, or Hilbert had "dominated" everyone mathematics of his time. Habits thought inveterate, rooted in everyday language, suggested to me by the image of "domination" which however gives a distorted perception of reality. These great men were probably full "Seized", "assimilated", "made them" known mathematics of their time, which gave them probably also exceptional control of technical means. But if rightly they seem to us "big" is not not by their technical prowess, "snatching" difficult demonstrations to a surly substance. It is by renewal that each brought in several important parts of mathematics, by "Ideas" simple and fruitful, that is to say, for wearing them look simple and essential things, which no one before them had deigned to pay attention. This childlike ability to **see** things simple and essential, however humble they may be, and despised of all - what is **it** that lies the power renewal, creative power in each. This power was at a rare degree in the young man I have known, unknown to all, humble and passionate lover of mathematics. Over the years, this humble "Power" seemed to disappear from the person of mathematician admired and feared, enjoying unfettered its prestige, and power (sometimes discretionary) that gives it on others.

This **choking** in my friend a very delicate and very strong thing, neglected by all and who has power Creator, I felt many times since I left, and increasingly in recent years. But it took discoveries of recent weeks, and thinking that I follow since late March (the momentum of Crops and Seeds), to begin to feel the full extent of the devastating effect this choking in the life of my friend, among many others I have known closely. Not only on some my students "after" (and similar), who were treated to his ill (perhaps unconsciously in some cases), which was exerted against each and weighed heavily on three of them; but also, it seems now the glimpse, among my students "before" by the destruction of **continuity** in the way, and the feeling of a whole, a unity, giving a deeper and broader meaning to their work that

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it p. 383

an accumulation of reprints with their name (91) 125 (*).

More than once during the past seven years, and over again in the past weeks and days, I felt a sadness to what is felt, at some level, as

a huge **mess** - when is squandered or suffocated wantonly what is most precious in itself and

others. Yet, I have finally learned also that such a "mess" is a base note of the condition human, which in one form or another be found everywhere, in the lives of people, of the humblest the most famous, as in the life of peoples and nations. This "mess" itself, which is nothing other than the action conflict, the division in everyone's life, is a substance of a richness, depth I barely begun to probe a food that for me to "eat" and assimilate. By this mess, and other mess as I meet at every step, and everything that happens to me too at the turn of way and that so often is misplaced - this mess and other unwelcome things carry in them a **blessing** . Yes meditation makes sense, if it has renewed strength lies in that it allows me to receive

125 (*) (16 June) The second aspect occurred to me that during the reflection Burial. If I was able to see prestigious mathematician to use the "power to discourage" it is in the same one that appeared to me once as all my designated heir. Writing in "The Power of discouraging," I thought a lot about it (before reflection comes back on me), but are not yet any suspicion (at least not at the conscious level) how that power had found opportunity to practice among the very people for whom he had to figure (as for me once) to model of the perfect mathematician. . .

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the benefit of which (by my inveterate reflexes) is as "evil", it allows me to me **feed** what seems made to destroy.

Feed on his experience, was renewed by him instead of constantly evade it - that's it, take full life. I have in me this power, to free me every moment to use it, or leave it to the discarded. The same is true of my friend Peter, and each of those who were my pupils - like me free to feed the "mess" that I end to tour in these days of long meditation. And he The same as for the reader who reads this, for him.

15.3.9. the heirs

Note 91

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 (19 May) echoes that reached me here and there on my former students were more than sparse.
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Almost none have wanted to give me a sign of life after my departure, not least by sending prints hand 126 (*). However, collecting the little that came to me, I can get an idea, it very rough is right. It may specify in the following months, so this thinking leads some of them to manifest.

I have already had occasion to note the profound break in the work of Deligne after I left, then that in some ways it appears, against his will, as a successor, so as enrolling in continuity. And I had the feeling that the break had to pass deep in work all my other students. This is the impression that I would understand a little closer.

Only those students whose work appears enroll obvious (at first glance at least) in the extension of the work he had done with me, seems to be Berthelot 127 (**). He is the one who also during long has sent me numerous reprints - perhaps even all reprints. They are placed all in the difficult subject of the crystalline cohomology, the startup routine is the subject of his thesis. It seems to me that, like my other students "cohomologistes" (commutative), his work is marked by the disaffection of some of the main ideas I had introduced: derived categories (and triangulated categories, generated by Verdier) formalism six operations, guides (91 1). As we say Zoghman Mebkhout himself, his own work, so close by the theme of the Berthelot (91 2), ranks in line with these ideas, together with the ideas of Sato School. If they had been repudiated by my students cohomologistes, Deligne and Verdier in mind, there are chances that from the very beginning of the seventy years, Mebkhout crystal theory (which he began to develop only in 1975 and against disinterest of these same students) would have reached full maturity of a formalism of the six

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 operations
 p. 385

it has still not reached today 128 (*).

I remember also talking to Verdier of the question that intrigued me, the link between coefficients discrete and continuous coefficients, without it look to hang. It had subsequently hang

126 (*) (May 31) See in this regard footnote ^o 84, according to the note "Silence" (n ^o 84)

127 (***) Based on the theme of duality Verdier continued for some years after I left, in the context of spaces Analytical neighbor from where I had developed, there is a sense of continuity as in the case of Berthelot. But he I think it was a bit of a "routine continuity", while that which I seek above all the signs (or lack of signs) is a creative continuity, continuing an initial impetus into the unknown. . .

128 (*) (June 7) I had a reluctance to venture this assessment, which could be interpreted as minimizing the originality of the Mebkhout theory. This in no way consistent with my thoughts, and this especially since I have an excellent opinion

means each of my students cohomologists (when they are not blocked by foreign prejudice to good mathematical sense). My friend Zoghman himself dispelled the qualms I might have had, thinking himself convinced that "normally", were my students should have developed his theory from the very beginning of the 70s some level, they are also convinced every first, surely: it's them or Deligne, which **ought** to be the author - and the general deterioration of morals helping, it does not take longer to behave as if they were (or as if Deligne was) indeed! See the notes about "The Symposium" and "mystification", n ° s 75 and 85

15.3. IX My students

Deligne since devoted a seminar a year (in 1969) to establish a dictionary, which was not "satisfy him, since he abandoned later in the profits and losses. (See note "The unknown service and Theorem of God ", n ° 48) It is then also so much "blocked "by his burial syndrome he does not perceive until October 1980 the importance of working Mebkhout - and when he ends up in account is in fossoyantes provisions we know (see notes n ° s 75 to 76).

As far as I know, the work of Verdier for his thesis defense was limited mainly to rebuild in the analytical context (which sometimes presents additional technical difficulties) that I had done in the schematic coherent framework, without introducing new idea. It is even quite extraordinary, with the reflexes he had supposedly developed and knowledgeable as he was, he is not himself across the Mebkhout theory in strength to turn his crank - and he did not know at least recognize that his "pupil" was making things interesting my faith, and that had escaped him him (as they had escaped Deligne).

Indeed, while intrigued by the question of relations between discrete coefficients and coefficients Continuing, I had not really had suspicion of crystal theory Mebkhout that would hatch in decade after my departure. By cons, there was a broad topic, from my re

ending cohomology p. 386

As commutative and non-commutative fifties (1955-1960), which was just launched (in context "commutative" ie in terms of additive categories) in the working Verdier, started at the beginning sixties and left behind after his presentation (see Note ° 81). The appearance was not commutative started later in the thesis Giraud, who develops a geometric language, in terms of 1-fields on a topos for noncommutative cohomology in dimension ≤ 2 . From the second half of the sixties, the failure of these two primers was well evident: both the inadequacy of the concept of "category triangulated "(released by Verdier) to account for the structure of wealth associated with a category derivative (concept called to be replaced by the considerably richer notion of **shunting**), by the need to develop a geometric language for a non-commutative cohomology in dimensions one, in terms of n-fields and ∞ - **fields** on a topo. We felt (and I was) the need for synthesis of these two approaches, which would serve as a common conceptual basis for homological algebra and the homotopy algebra. Such work is also placed in direct continuity with the thesis of Illusie, wherein one and the other side are represented.

Via the notion arrester (valid both in a non-commutative commutative framework), work fundamental Bousfield-Kan on Homotopic limits (Lecture Notes n ° 304), published in 1972, was located Also in line with this diffuse program, which since at least 1967 only asked for arms developed. In January last year, without even suspecting that I was going to throw me a month later Continuing in the fields, I submitted to Illusie reflections on "integration" of homotopy types (That is familiar to homotopistes as the "limits (inductive) Homotopic"), at a time when I did not know yet fully the existence of the work Bousfield and Kan, and that this type of operation had been reviewed by other than me. It appeared that Illusie did not know as much as he is nevertheless supposed staying in homologico Homotopic-water the entire time since my "death" in 1970! It is say how he seems to have lost touch with some realities registering naturally in reflection foundations, in line with the one he himself continued in the sixties 129 (*). He had to do his little hole, which he hardly ever comes out. . .

With disdain that hit the very notion of topos and all the "categorical nonsense", it is not surprising p. 387

129 (*) The concept of "integration" of homotopy types was imposed again to me, in the context of structures unscrewing laminated, I took over in late 1981.

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15. C) THE BEAUTIFUL WORLD

Giraud has now a total disaffection for what was his first major work theme. he Although Deligne, with the exhumation of the reasons there are two years, pretends to suddenly discover the benefits

the arsenal of non-commutative cohomology, sheaves, links and others, as if he had himself from the introducing at the same time that the patterns and Galois groups motivic ¹³⁰ (*). It is doubtful that this kind Circus will to restart a flame that is itself hard to extinguish. . . I had sent to Giraud in February last year, a copy of the letter of twenty pages, which became Chapter 1 opening Fields pursuit. This is not a technical discussion, during which I managed to "jump feet "above the" purgatory "that had stopped in time Giraud (and many others) to handle the notion of n-category "not strict" (I now call "No-field"), which remained heuristic and yet was obviously fundamental. It was the start of the Fields of Pursuit. When we encountered (in mutual arrangements all he has to be friendly) last December for the thesis defense Contou-Carrère, I learned Giraud that he had not had the curiosity only read this letter! I had the impression he had made a big mark on this stuff. The idea that there could be a rich substance in a direction he had long abandoned, seemed not even touch. I tried, unsuccessfully I fear, to make him see that there is a lucrative job and vast dimensions waiting for nearly twenty years to be made, and which I ended up on my harness old days, to at least give a sketch in broad at the mouth of the things themselves, a rich substance that the "deceased" I still feel strongly, as my students have since long forgotten.

Jouanolou also abandoned a direction of research he had just begun with his thesis. This direction had become object of scorn of a fashion introduced by the very man who had provided a mistress technical idea for the theme he had chosen. With the "rush" on triangulated categories the Symposium Pervert it three years ago, this same Deligne suddenly pretends (no kidding) to discover large foundations working in perspective, whose lack is suddenly feeling from every angle, and that had

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was the first to discourage decade - The need for such work was obvious to me from p. 388

the year 1963 to 1964 with the debut of the étale; Deligne and equally, from the moment it began to hear of l-adic cohomology and triangulated categories, that is to say when he landed at my seminar the following year. It was, beyond building "triangulated categories Plot "on the ring Z_s , (above a basic pattern, say), and the development of formalism the "six operations" in this context (accomplished fact, it seems to me, in the thesis of Jouanolou) to similar work by replacing the base ring Z_1 through Z the algebra noetherian (roughly?) arbitrary, eg Q_s or extension (algebraic?) Q_s . This is part of why things the time is ripe for twenty years, and are still waiting to be done, when it quieted the contempt of wind that blew them. . .

The natural continuation Mrs. Raynaud work (theorems Lefschetz low in étale, in terms of 1-fields) will be placed in the context of strictly taboo ∞ -fields, do not talk! Same for the work of Ms. Sinh, began in 1968 and eventually led only in 1975 - a continuation Natural was the notion of ∞ -enveloping category Picard a category called "monomial", or triangulated variants of such a category ¹³¹ (*) - do not let us think! Another was to translate his work in terms of fields on a topos - the horror! As for Monique Hakim, she had the misfortune of too do his thesis on a subject that, for these days since my untimely departure is a bit ridiculous on ¹³⁰ (*) See "Memory of a Dream -... Or the birth of the reasons," notes n ° 51.

¹³¹ (*) See "Memory of a Dream -... Or the birth of the reasons," notes n ° 51.
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the edges - diagrams on a locally ringed topos, I ask you a little! His little book on topic, published in Grundlehren (Springer) has to sell at the rate of three or four units a year - it is not surprising that I have bad press in this house, and they are no longer hot to accept a text that I could recommend them. For me it was a first step to test a "relativity" of all "absolute" terms "varieties" (algebraic, analytic, etc...) on the "basics" General, including the need is obvious to me (91 3). We say we did very well until today. But it is also true that we are very well to do math for two million years we here. Still Monique Hakim, who had not the same motives for his thesis than I the offer it has certainly been no hint

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keep some contact with a theme which (detached from p. 389 context of a favorable consensus, or an obstinate thought continuing against all odds vision tenacious and safe) can not have it for the least sense.

For Neantro Rivano Saavedra, he seems to have completely disappeared from circulation - I no trace his name even on the global directory (and all that was official) mathematicians. What is certain,

is that his thesis some very catégorisard could hardly have a good reputation among the gentlemen who decide what is serious and what is not. The most natural continuation of this thesis, I think, would have been nothing less than "wide array of reasons", definitely a bit broad to the more modest aims of the student. Yet he ended up with the unexpected honor of his thesis redone ab ovo and in toto by one of these great gentlemen himself, there is only two years. (See the notes about "The Burial - or New Father "and" clean slate ", n ° s 52 and 67.)

The only finally among my twelve students "pre-1970" which is not too clear to me whether or not there was in their work a **break** more or less severe or profound, compared to they had to follow my contact are Michel Demazure and Michel Raynaud (91 4). All that I know, is that they have continued to do math, and they are part (as was to be expected, given their means brilliant) of what I called earlier "the big world" mathematical.

The brief discussion above, sometimes from very thin data, is of course largely hypothetical and very rough. I hope those who are mentioned will forgive me errors of judgment may be rude, I'd be happy to correct if they want me to sign in this direction. Again, I realize that if everyone is surely different from that of all others, and is a much more complex reality that a person as remote than I can reasonably comprehend, let alone express in a few lines. These reserves do, yet I feel that this reflection was not useless, to me at least, to identify so slightly by some hard facts printing still diffuse which was released yesterday (which was probably present at a level for unformulated

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many years): that of a **fracture** which is made p. 390

many of my students in the aftermath of my departure, and that reflects the level of the individual sudden disappearance, overnight, a "school" they have felt part for crucial formative years in their profession mathematician.

Score 91 1

(May 22) I have just read an article-survey of the symposium "p-adic Analysis and applications "CIRM, Luminy (6-10 September 1982), by P. Berthelot, entitled "rigid geometry and cohomology of algebraic varieties since. p "(24 pages), which outlines the key ideas for a synthesis cohomology Dwork-Monsky-Washnitzer and crystalline cohomology. Initial ideas (and even name) of the crystalline cohomology (inspired by that of Monsky-Washnitzer), and the complete these by introducing sites formed of rigid-analytic spaces, ideas I had introduced in 393

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sixties, have become the daily bread for everyone working in the subject, starting with Berthelot, whose thesis was to develop and flesh out some of the initial ideas. This prevents my name is rigorously missing both the text itself, as the bibliography. This is a fourth student undertaker clearly identified. Who's next ?

(June 7) It is remarkable that more than fifteen years after the introduction by me ideas START UP rage of crystalline cohomology, and more than ten years after the thesis Berthelot which established the theory was indeed "good" for clean and smooth patterns, we still do not reach what I call a situation of "control" of the crystalline cohomology, similar to that developed for cohomology spreads in the seminar SGA 4 and 5. "control" (first degree) of a cohomological formalism including dual phenomena, I mean neither more nor less than the full possession of a formalism six operations. While I am not so "in the know" to appreciate the specific difficulties Crystalline context, I would not be surprised that the main reason for this relative stagnation in the disaffection Berthelot and others to the very idea of this formalism, which makes them neglect (as the Deligne did for his Hodge theory, remained in its infancy) the first "tier" essential to achieve to have a fully cohomological formalism "adult". Those are

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the same kind of provisions

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surely that made him ignore also the interest from the standpoint of Mebkhout for his own research. NB When I speak here of "crystalline cohomology" in a context where assumptions is abandoned cleanliness (as it is necessary for a formalism "fully adult"), it is understood that works with a crystalline site whose objects are "thickening" (power divided) that are not purely infinitesimal but are topological algebras (in divided powers) "suitable". The need for Such an extension of the original crystalline site (which for me was a first approximation to the "right" crystalline theory) was clear to me from the start, and Berthelot has learned (with the initial ideas) by none other than me. A written reference to this link is in Sketch Theme, 5th.

Score 91 2

It's a pretty extraordinary thing that nobody except me seems to have noticed that the Mebkhout theory-not-named was another essential component of a crystal theory. I, who have completely "hook" of the cohomology for almost fifteen years, I am yet realized from Mebkhout that last year took the trouble to explain somehow what he had done. Still when I mentioned the thing (for granted) to Illusie, he seemed to see a rapprochement a little "absurd around the edges" of things (3-modules and crystals) that really had nothing to do one with the other. Yet I know first hand that he has a flair mathematician, and my other students (cohomologists in this case, starting with Deligne) too - but I find that in certain situations, he did not use to them. . . The more I think, the more I find it extraordinary that in such an atmosphere, Mebkhout has still managed to work without let defuse its own flair for mathematics total incomprehension of his elders, so over him. . .

Note 91 ³

This is especially since my exposed Cartan seminar on the fundamentals of the theory of es-complex analytic spaces, and the geometric interpretation accurate "modular varieties level" to the Teichmüller, in the late fifties, I understood the importance of a double generalization common notions of "variety" with which we worked so far (algebraic, real analytic or complex differentiable - or

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thereafter, variations in "moderate topology"). One is to élar-

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gir the definition so as to admit "singularity" arbitrary, and elements in the beam nilpotent structural "scalar functions" - along the lines of my foundation work with the notion of schema.

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15.3. IX My students

Another extension is to a "relativizing" above topo Suitable locally annealed (notions "Absolute" is obtained by taking as a base point topos). This conceptual work, ripe for more twenty-five years and started in the thesis of Monique Hakim, still waiting to be resumed. A case particularly interesting is the notion of a rigid analytic space relative, which allows to consider Common complex analytic spaces and rigid-analytic spaces on local body characteristics residual teristics, such as "fibers" of the same rigid analytic space relative; as the notion of relative diagram (which eventually enter the morals) allows to interconnect varieties algebraic set on bodies of different characteristics.

Score 91 ⁴

While the thesis Demazure, such as Raynaud uses essential way technical consumption patterns they learned to my contact, the essential ideas of their work respectively are not part of the toolbox "grothendieckienne", which distinguishes their work from that of my other students in the first period. It is possible that this circumstance has resulted in a continuity in their work, free of a break with the effect of "burial syndrome master". It does not necessarily mean that this syndrome have hit either a different way. I was struck, there three years of Raynaud's attitude vis-à-vis Contou-Carrère work on local jacobians on. The results announced are deep, challenging, and beautiful, and go far beyond a simple generalisation of things "well known". There is an unexpected link with the theory of Cartier typical curves, beautiful explicit formulas - all entirely in Raynaud strings (and mine). The freshness his home had to weigh decisively in the strategic withdrawal Contou-Carrère, abandoning the profits and door a subject in which he had invested unreservedly and that it might seem, would do him Reporter but trouble. . . 132 (*). My letter to him where I am sharing my surprise (pained) about this insensitivity the beauty of these results, remained unanswered.

15.3.10. ... and the chainsaw

Note 92

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When I came to settle in the region, there are almost four years, there was not far from p. 393 me a beautiful cherry orchard. Often when I walked I was going to be a ride. I enjoy seeing the cherry trees thick, in the prime of life, the powerful trunks that seemed always to be one with the piece of land where weeds proliferate freely. They have not been aware of fertilizers or pesticides, and season cherries, it was there that I was going to pick who have taste. There had to have twenty or thirty, trees.

One day when I returned, I saw all the trunks cut at breast height, the sprawled crowns on the floor next to the trunk, stumps in the air - a vision of carnage. With a good chainsaw, it must have been quick, time to break everything. I had never seen anything like this - when you cut a tree, you take usually bother to drop, to cut close to the ground. There are the poor sales of cherries, okay, and this cherry orchard she was not giving tonnes, is understood - but these stumps trunks were saying something else

that poor sales and returns. . .

Yesterday I had that feeling again, a strong trunk with powerful roots and the generous sap the strong and multiple branches extending its tracks - Net sawed, at eye level, like for fun.

It is to have bothered to watch the limbs one by one, and see each truncated, which ended up making me see what happened. What was done to deploy in continuity of momentum,

132 (*) For details, see footnote under ° 95 1 to Note "Coffin 3 - or jacobians too much on" n ° 95.

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an inner need to deep roots, was settled net by a cut without burrs, to see refer to everyone as derision.

It reminds me of the "misunderstanding" was talking Zoghman, which took place between my students (except Deligne) and me. What is clear, in fact, is neither Elan vision is to press me to one of my students (Putting aside Deligne decidedly "apart" indeed!). Everyone has assimilated a technical background, useful (and even essential) for a job well done on the subject he had chosen, and might even serve him even later. I can not say if there were any other bait thing beyond. If there begins had she had no chance anyway before Chainsaw, which ratiboisé it quickly. . .

I know that if it continues to have people doing math -

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and less than completely abandoning

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the kind of math we have done for over two millennia - they will help one day or the other revitalize each of these branches I see lying inert. It is certain that already have been taken to their account by my friend-with-the-chainsaw, and it is quite possible, if God gives him life, he will do the same yet with some other or even with all. Most are not yet at all in his style him. But perhaps eventually he got tired of replacing constantly someone else, something surely very tiring and not more profitable possible to just be himself (which is not bad).

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16. D) THE BURIED

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16.1. X Van Funeral

16.1.1. Coffin 1 - or 3-Modules grateful

Note 93

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(May 21) It@be two weeks my thinking lingers on my students@good complexion "ones p. 395 "Before". Every day, thinking herself as a "latest addition" for conscience, a reflection that seemed (almost) finished. More than once, it was a trivial footnote page embranchée recklessly on the reflection of the day before or the day before, which stretched and stretched to the dimensions of a "note" autonomous. Each time, it quickly found its name, distinguish guant of all others, and fitting into his funeral procession, just in the right place, as if it was always summer ! Every two days, I have been to remake (each time with pleasure) at least the end of the table materials, which seemed close and suddenly stretched two or three new participants in the Procession, when it was a whole new procession. . .

The procession ends up taking on worrying dimensions, never one will want to read this! But and if it grows, it is not, indeed, for the dubious benefit of a hypothetical player, but in any First for my own benefit - like when I do math. These "last additions" in which I embark every time as against my will, I have never had any regrets

me be launched. By dint of recent additions, I learned many things that I could have learned otherwise, making the economy a reflection "on parts." And these things are assembled one by one a painting with bright colors, large proportions and multifaceted. Even now, I see it is not entirely completed - there are two places that seem still claim a last brushstroke.

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It seems to me time after my "good complexion students" speak now too, so slightly, the **buried** -to those who "with me entitled to the honors of the funeral by silence and scorn." Not more than me or those who bury cheerfully, these saints are buried and have vocation to martyrdom. There is not one, I think, who has not wanted me

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trouble that I drew him involuntarily (simply because

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he had the imprudence to bet on me, a certain approach to mathematics and some style. . .) - or he has at least tried to stand out from me, once recognized decidedly setting was losing 1 (*). I could also see that this is a waste - once spotted, damn it, and stand is supplying disregard him provide tacit justification, instead of disarming the . More than times and also in many ways, I saw the roles of enterreur and buried mingle and merge 2 (**). This these are undoubtedly aspects that are ambiguous because of a long reluctance in me to talk about the "buried" in a somewhat more detailed than the allusions that I already have done them in passing. It is possible that except perhaps Zoghman, none of the other three that I know I know will make him here "advertising" as if I had not already caught him enough trouble as it is.

Like many times in Crops and Seeds, I also finally going to such reluctance in me. I tell myself that even vis-à-vis those who have had to suffer because of me (by choice they made at a given time and where, for one reason or another, they found out their account, then they do doubted any more than I disadvantages attached to their choice) - even vis-a-vis them my role is not help them avoid a situation all that is real, in which they are involved they want or not, and that surely makes sense even if it has serious drawbacks.

Before branching to the black series of four coffins regretted my co-dead and co-buried, I perhaps should brighten the reader with a less funereal note. First, in my relationships at "Local" of the Institute of Mathematics of my University, I have not experienced that although I could tell a job applicant, or the fact that a candidate is part of my students (from 1970 needless to say), or that his work is influenced by the mine, has necessarily played against him. A Such an attitude of systematic boycott only characterizes the relationship of the "big world" in mathematics my person, and by extension, those who

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appear to be related to me "after 1970". This boycott was

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virtually flawless during the fourteen years since I left, as far as I could find out, to two small exceptions however. One is a student who, after the promising start, was supposed prepared me a status doctoral thesis on a subject more attractive, and whose application for a lecturer post at the USTL had been dismissed by the specialists of my University Commission.

He was "drafted" at the national level, with the help of Demazure to whom I had written about the work of this student 3 (*). Moreover, on two occasions, the newspaper **Topology** accepted articles of students to me: a article "Factorizations Stein and cuts" by Jean Malgoire and Christine Voisin, and a forthcoming article for Yves Ladegaillerie containing the central result of his 1976 thesis (see footnote ° 94).

I have had occasion especially Zoghman Mebkhout already talk about, and I will come back here only "to Me-moire " 4 (**). Mebkhout began to inspire my work from 1974 I believe, and continued to

1 (*) (February 1985) I have learned in all seven or eight (short) publications outside my University, with (from summary form) a labor of me and inspired me since I was in Montpellier. My name is absent from all.

2 (**) (September 2) In different ways from one to the other, each of them at some point eventually internalize and take on his own disdain vis-à-vis employment, to acquiesce to the consensus that retracts this work or class as "without interest".

3 (*) At the "practice" of a promotion or accession to a position and status, the results of my teaching activity since 1970 reduced, all in all, two accessions to a position with status key once lecturer and another time assistant. By a strange irony, both times, this accession has been a sudden and dramatic end to all activity signal Research at the person.

4 (**) Apart from the Introduction (6) (Burial), discussed in the notes to Mebkhout "My orphans," "The unknown service

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be inspired against all odds until today. I have not heard that one of my students "Official" has produced a work of comparable scope - while that Mebkhout yet feels necessarily the conditions of adversity she had to continue. As I said in the Introduction (6) for four years the ideas and results Mebkhout are used by all, while his name remains carefully ment retracted 5 (***) . It@a mystery to me how my friend was able to continue to do math while undergoing disdain and lawlessness as a kind of inescapable fate - a fate-which came to him through people he had (and still has) feel like vertigineu

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ment over him 6 (*), people he p. 398

must have heard for the first time as a kind of "Gods of the stadium" at a time when it was (Like myself once) a modest student emigrated to scarce resources. At the time of his defense in 1979, he had a lectureship in Orleans. He did everything possible to then enter the CNRS, returning borne three times - the third time (in October 1982) was kindly finally give him a job Research Fellow (equivalent to an assistant or lecturer at the University). This gives it, otherwise a statutory guarantee at least some relative safety.

Of the four mathematicians "co-buried" that I know, Mebkhout is the only one who continued to continue to work towards and against all, relying on its mathematical instinct undeterred by prudential considerations and opportunity would have been able to inspire him no thank you fashion. There was in him, that is not combative nature, a **faith** elementary in his own judgment, which is also a **generous** and which (much more than the "average" brain) is the first condition for innovative and profound work. The idea that I can have its work surely remains incomplete. From what I know of the game mistress of his work, it seems to me that with the brilliant ways that are his, placed in an atmosphere warm and active sympathy, he could have done, and lead to greater maturity in three or four years instead of ten, and in joy, not in bitterness. But three years or ten, and "maturity" or not, the remarkable thing is that the innovative work appeared, and she could appear in such conditions.

16.1.2. Coffin 2 - or cut in pieces

Note 94 Yves Ladegaillerie started working with me in 1974. It was "just in case" in a moment hollow home - I submitted then some naive thoughts on dips 1-complex in topological surfaces, at a time when I knew nothing on surfaces (except the term kind), and it even less. It was a bit grothendieckerie (home anyway it always starts days like this. . .), And it hung

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home more or less, until it ended up making "tilt" I do not know p. 399

more too when and why. It was perhaps when emerged visibly juicy question

some conjecture-key on the determination of isotopy classes of a compact-1 complex in a surface to compact oriented edge. Right wrong ? It was the suspense, which is extended for six months, and the theorem of God ", " The Iniquity - or sense of a return, "" The Perversity ", " Dating from the grave ", " The Victim - or both silences ", " Le Pavé and beautiful world ", " credit Thesis and comprehensive insurance "(Notes n ° s 46, 48 @75, 76, 78, 78@

80, 81).

5 (***) Legion are those who acted as gravediggers in this funeral there, which is practically part of the Colloquium Luminy (June 1981) as a whole. Apart cohomologistes my students (see the note about "My students (2): solidarity", n ° 85) those whose good faith is professional here directly and seriously involved and that I know are JL Verdier, B. Teissier, P. Deligne, Beilinson AA, J. Bernstein.

6 (*) Of course, Zoghman Mebkhout is no more stupid than me and is enough in the game to have a clear idea on the work of each of my students cohomologistes, and to realize its scope as its limits, without any propensity to idealize. This only prevents inhibitions of considerable power have chosen to have the same idea he can publicly call into question any of them, even where malice is obvious.

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one year, during which Yves was made aware (and filled me in on the heels) theorems key the theory of surfaces, while pushing the parties "foundations" of his work. Known results made the conjecture rather plausible, but were clearly off the mark - and conjecture impliquait Baer cows results and Epstein, and other things that had unusual aspects see suspects. It finally came to prove the key guess in summer 1975. It amounts essentially to a complete algebraic description in terms of fundamental groups of all classes of isotonic embeddings pie of a compact space triangulable (say) in a compact oriented edge surface 7 (*). From the moment when Yves was "hung", he wrote his thesis in a year, a year and a half, results, writing,

all, and to the nines again. It was a brilliant thesis, thinner than most of those who had do with me, but no other significant of these eleven theses. The defense took place in May 1976.

The thesis is still not released today. She might not be thick, it seems she was still too much to be publishable, among many other excellent reasons that you gave me. I noted some in the note "You can not stop progress" (n ° 50). The history of my efforts to "Place" this unfortunate thesis, one of the best I have had the good fortune to inspire, would make a small book that would surely be instructive but I give up writing. Among the relatives of old friends who had so good reasons to forget to see the results and to bury all eyes closed, he are (in order of appearance on stage) Norbert A. Campo, Barry Mazur, Valentin Poénaru, Pierre Deligne

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besides B. Eckmann interposed by Springer house s (*). The main result will finally appear, p. 400

nine or ten years later and reduced to the bone, in a short article Topology (shhh - I have an accomplice in the Committee Writing of this estimable paper. . .). The rest of the, work, first showed that all things world has always used without proof (and we was well spent indeed!), secondly develops typical grothendieckeries, quite contrary to the customs and morals. I know that if my Deligne friend does charge of the "discover" loudly in the next ten years, others will help rebuild the next thirty years or fifty, as my healthy instinct tells me that these are things fundamental. They were a valuable thread in my cogitations anabéliennes, and God willing life, I will have ample opportunity to refer to it in the part of developing Mathematical Reflections Yoga anabelian algebraic geometry.

This adventure was a revelation to me, the first of its kind - the revelation of something I have ended up with reflection fully aware the Burial. I tended elsewhere to forget since my mind is absorbed elsewhere. Yves Ladegaillerie, one of the brightest students I have had, meanwhile understood from that moment that to be accepted in the mathematical world today it is not enough to invest heavily and do a job that meets all the requirements of excellence.

Having more than one string to his bow, for seven years he has engaged in more down to earth and tasks 7 (*) The statement "analog" in the undirected case is wrong - it is definitely a delicate result, "cut" carefully in a set of assumptions, findings also "plausible" but still wrong! For others Comment Working Ladegaillerie, see Outline of a program, including the beginning of para 3.

8 (*) I do not personally know Eckmann, and my correspondence to publish Yves thesis by reading notes was made with Dr. Peters, responsible for LN Springer. I think by fifteen LN volumes that were published by me (including SGA) or students (theses) in the sixties, I was among those who contributed deposit their credit and unprecedented success of this series still in its infancy. The reason given for refusing the job I recommended (they did not publish theses) was a joke.

My first experience of New Look for correspondence also dates from this episode with a whole really impressive, A. Campo, B. Mazur, V. Poenaru and Dr. Peters abstained to honor me with a response to a second letter, when naively (I am thinking-slow ...) I returned to the charge, after their reluctant response showed that they had not bothered to read the results discussed in the introduction to the work Ladegaillerie.

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Returns less problematic. He is fortunate to have held, even before his unfortunate encounter with me,

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a post of lecturer, assuring him that his security mishap has not jeopardized. The year p. 401
Last mathematical spark seems to have woken up again, on a nearby theme of those which I was interested in recent years - hyperbolic geometry to Thurston and relationships group Teichmüller. You can even make it a little way together again, or he does his personal ride, just for fun and without expecting any return other than that that mathematics itself can give. He knows that if he waits for others, it had better change interlocutor or companion (and even past...).

16.1.3. Coffin 3 - or jacobians too on

Note 95 My first encounters with Carlos Contou-Carrère were made in the halls of the Institute Math, from the aftermath of my arrival in Montpellier in 1973. He jammed me in some obscure corner to dump on me year flood of mathematical explanations, before I had time to apologize politely and slip away. What he poured me mixed up with an impressive speed passing me entiè-surely over the head, but he does mine to notice, nor to be the least disturbed when I let him hear shyly. There was a compelling need to contact and I was not his only "Interlocutor in spite of himself." It was a time where I absolutely was not connected to the math.

For a year or two, I fled as soon as I saw his silhouette (easily fixable) appear after a corridor. It was like that until Lyndon, who was in Montpellier for a year as associate professor, made me understand that Contou-Carrère were unusual ways and that he was about point of shipwreck, not knowing how to use them. Until then the question if what Contou-Carrere poured I was standing on or not, and if he or n is the means, had not even touched me, so it was all off. Perhaps the suggestion of Lyndon did it come at a time when I began to take some interest in mathematical questions. Still, I have then taken the bit by the teeth I asked Contou-Carrere if he wanted to tell me something he had done, so that I can understand. I suspect that I was the first to ask such a thing, at least from the bunch of years he was already in France. It was not easy to explain something to him, but it was not not impossible, and it was worth it. I quickly realized that Lyndon

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had not deceived - that p. 402

Contou-Carrere was full of ideas who only wanted to be identified and developed with care, and that had an immediate and very safe intuition in almost every mathematical situations that Pou Vait submit. With this speed and the safety of intuition, even things he was not familiar, it was beyond me and impressed me - the only other student I have known a comparable degree was Deligne 9 (*). By cons, he had an almost total block against writing! Incredibly, he made math **without writing** - God knows how he managed to make even little it may be, let alone the communication with others, where the "shipwreck" was complete (see above).

If I had something urgent and useful to teach Contou-Carrère, it was the art of writing, or more frus- ment itself, to make him understand that math only, it is in the **writing**. I had to try for two years, maybe three, until 76 or 77 10 (**), without being quite sure if I really entiè- surely succeeded. His first work written entirely black on white scale of his thesis is on cycles 9 (*) I@ not sure to have met with other mathematicians, except for Pierre Cartier (which had me much impression SIONNE in his youth by the remarkable capacity) and at Olivier Leroy, which will be discussed in the following note. 10 (**) (June 7) made verification, it was until February 1978.

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Schubert, supported only last December (1983) 11 (***). Between 1978 and today our relations was also more episodic, my role is merely to support practically my best in NOM breuses occasions when he

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found stuck in one way or another in his career, constantly

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suspended on delegated assistant positions more precarious.

For two or three years, I had tried to provide Contou-Carrère the foundations of a mathematical language precise and flexible, some principles systematically. With this background, and its resources and its wealth of ideas, it really was spoiled for choice on what to branching. Rather than starting over from ideas to him, he branched on the theory of local and global jacobians on which I had spoken to him as about possible thesis. Once I left to himself, he made in the space of barely a year nice work, part of which was announced in a note to SARC (95 1). Go to the end of this seam would have represented a few years of exciting work and highly motivated to learn what together all the subtleties of the technical diagrams. I still doubted anything at that time - it was obvious to me as Cartier, Deligne, Raynaud would all three be a warm welcome to the work already. Actually, that was deep, difficult and unexpected in several respects. Cartier was very pleased indeed to see some old ideas to make it a new news. By cons, indifference Raynaud, as Deligne that keeps the full manuscript in a drawer for six months, without deigning to sign life 12 (*).

It was two against one - enough to feel the wind. The jacobians too are related sine dropped die in the profits and losses. The saw has done its job. . .

It has not avoided provided the misadventures to Contou-Carrere, including a detailed report would well another little book, that I give a good heart to write. It was around that time I believe that for the only and only time since I left (in 1970) the institution that I had been alone for four years (1958-62) to represent and make credible "field"

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during the years when she had not yet roof

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to it - it@the only time I have taken upon me to recommend someone for an invitation (for one year in this case), at a time when Contou-Carrère might be without post and on the street. I knew that the one I recommended, just as unknown as were formerly Hironaka, Artin or Deligne when I

have warmly welcomed to IHES, would like them to honor the institution that welcomed him. Of course, I did quick to say. Fortunately for Contou-Carrère, its delegated assistant (admittedly unworthy the honor of an invitation to such an institution selects) has finally been renewed ¹³ (*).

I was not so surprised this episode, while already knowing the provisions of Deligne, and since ¹¹ (***) This is a long process (which I have not read), where he developed ideas carefully where I have nothing to do, including giving a resolution explicitly singularities of all cycles of the type "Schubert" - something nobody could do before him. For a Once he made a writing in form, it was criticized that it was too detailed (besides his statements were too general. . .)! Personally, if I have a criticism to make, it would go in the opposite direction: while Contou-Carrere says its methods must be applied to all types of semi-simple groups and Schubert cycles, it has done the work in the case of the general linear group - so it was not until the end of the work is to be done on the specific question description Resolutions equivariant singularities universal Schubert cycles, **and** singular places said Schubert cycles. This gap seems to me as a legacy of this "block" against the working parts and against writing, which had been for long its main handicap.

¹² (*) Contou-Carrere had nevertheless gone ahead and not a word in his note of me, who had provided the pro-starting gram. It was a lost cause - as he might add it©own, there is a "style" which does not disappoint, attached, that like it or not, some topics best avoided if you want a career in math today. (June 7) return mation taken from the person concerned, I find that I am confused here two different episodes around the work Contou-Carrere on Jacobians. See the following note (n ° 95) for details and precise references.

¹³ (*) I have no reason to complain, since five or six years later, on the occasion of the jubilee of twenty-five years of IHES last year, I was indeed the honor, to me, an invitation, and even was given the choice between the solemn reception Speech of the Minister, or a subsequent one-week stay at IHES and all fees paid yet (was I quite sure). I said to my old friend Nico Kuiper it was very nice to have thought of me like that, but I was traveling not at my age. . . 402

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Nico Kuiper warned me that everything depended on him in this case. (The idea is not even occurred to me to suggest that the thing could possibly affect other members of the Scientific Council, saw exactly the case ...) The episode struck me most strongly affected by against, of all misadventures Contou-Carrere (my "protected" as Verdier was advised to call in a letter, as a matter of course. . .), Is placed in October 1981, about his application for a professorship Perpignan. Colleagues from Perpignan (where he had delegated his assistant) have surely appreciated among them the presence of someone who was comfortable and you could see in almost every branches of mathematics. At a teacher vacancy, they have put it on single candidate the post,. - much more rare, clearly marked that it was he and no one else they wanted to post. CC had relatively few publications outside his doctoral thesis passed with Argentina Santalo, it was mainly the notes to the SARC, announcing the results (some deep), but without demonstration. No one had suggested to him that in this day and age and until one is not stowed away, it is better to have as "exhibits" articles complete with demonstrations - thing I had pretty well was drilled into him on my side, but a less utilitarian point of view ¹⁴ (**). Still the candidature for

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Contou re-Carrere was deemed inadmissible by the Advisory Committee of Universities and p. 405 sent folder. The thing that blew me then is that neither the President of the CCU (the national organization made the decision), on behalf of the Committee, nor the individual members, has had this little respect to write, or to the main interested Contou-Carrère himself, at least to the director of the Institute of Mathematics of Perpignan, to give a few words of explanation about the meaning of this vote, which in the absence any explanation could be received only as a stinging repudiation of choice colleagues Perpignan and as a disavowal of their unique candidate as capable of performing respectably the position for which it proposed. There was in the Council three of my former students, two of whom knew personally Contou-Carrere. Of course they knew that he was my student like them, especially as the file included a report from me particularly complimentary about the work of the candidate. None of them, nor none of the other Board members, no one thought of the insult this vote represented clever without further the trial and the torpedoing in good standing of an equally honorable mathematician none of them. It was this incident which, for the first time in my life of mathematician, made me feel that "breath" I mentioned more than once in my thinking. I had already felt four years, with the episode foreign ¹⁵ (*). But it was not inside the world that was mine, blowing on **one of their** - someone who unreservedly identified with this world. I was as sick during weeks; perhaps months. To free myself of anxiety then hugged me without

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I care p. 406

to become acquainted ¹⁶ (*), I am agitated me, writing letters to the right and left, and a text of thirty pages "The Brain and the Horror," a black comedy vein, I finally gave up

published 17 (**). Looking back, I realize that it was now or never to **meditate** on the meaning of this
 14 (**) The year before Contou-Carrere was a candidate for a teaching position at Rennes, where he knew Berthelot and Larry Breen. His application was considered admissible then by the CCU; but the post was awarded to another candidate. No one bothered to warn the person that if he wanted a chance to have a job, he would publish detailed proofs of the results he announced. The disallowance by the CCU in the following year came as a surprise Total both Contou-Carrère for his colleagues to Perpignan for me. With hindsight and in the light of the this reflection, I doubt also that the situation has really changed with the writing of his thesis (already declared "Unprintable" as is) and its defense, and it has a chance to find a teaching position in France.
 15 (*) See the section about "My farewell - or foreign", S.24. - 406
 16 (*) I became aware of this anguish only over a long period of meditation the year after, I discovered the role of anxiety in my life, the presence of (chronic until 1976, and occasionally after 1976) was "the secret best kept in the world "all my life. There were mechanisms of high efficiency that waved back all signs generally accepted anxiety, which remained ignored both myself and my family.
 17 (**) I was disheartened to publish by the very people for whom I was about to go to war, to whom I had the good sense
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happening. The funny thing is that what "prevented me" then to go even need a account deep meditation, it was a long meditation in which I was then engaged 18 (***), and I had opportunity to talk) - and meditation, what is more, my relationship to mathematics (if not on my past mathematician)! She was disturbed by an episode in which life interpellait me hard - and I evaded interpellation shaking me and then plunging into the "meditation". I realize in retrospect that this "meditation" then do not fully deserved that name, it lacked an essential dimension true meditation: attention to my own person at the **same time** . I "meditated" then the meaning of some more or less remote events, while ignoring repressed anxiety (perfectly controlled it True as a result of long habit of such control), a sign of my refusal to take cognizance of message brought me this "breath" disqualified.

But I@ away from my remarks. The sinking of course, had the effect that he could not fail to have. Colleagues of Perpignan were reminded to order once, that was enough. Apparently, there is no longer even delegated assistant home, at least not for Contou-Carrere. He found a replacement in extremis in Montpellier, for the current year, the holder of which will come back next year. I do not worry too much anyway for his future, it@been a while since Contou-Carrere had the wisdom to take the lead on the stroke of fate, and is connected to the computer. With the means bright that

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are his, he must dominate on top for a long time, while doing the math it

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likes in his spare time. He is a family man with two children, and math through these times and with the past that sticks after, it is definitely risky, if not violent. He has every interest in a brilliant computer scientist career, where nobody will discipline him for being my student so slightly.

Score 95 1

(June 7) This is the late 77 I submitted to Contou-Carrère a detailed work plan for a theory of local and global jacobians on, including in the local case, the suggestion "Tighten" the Jacobian and the independent group of Cartier, to find a Jacobean "complete" with more beautiful universal property, which would be "self-dual". I had no idea demonstration to propose, and am no longer took care of his work after February 78, being I realized that my presence inhibited its capacity, instead of stimulating them. It happened also to "start" in the year that followed, and his first notes "The generalized Jacobian of a relative curve, construction and universal property of factorization" (Of overall cases) appears on 16.7.1979 (SARC t.289, Series A - 203).

The following month he finds the decisive results for the local Jacobian, but not publish anything about for a year and a half, where he publishes "half" (universal property of ordinary local relative Jacobian, not screwed back with Cartier Group), in a note to SARC March 2, 1981 under the name (not very convincing at first sight) "Body of geometrical local class on" (SARC t.292, Series I - 481). As the theory of complete local Jacobian, much more interesting to me, there is one project Note the SARC, which was never published, under the title "local Jacobian, bivectors group Witt and universal symbol tame. "Of course, I was informed as early as 1979 results, that is to say a completion of the provisional program that I proposed him, for which he had to be overcome considerable technical difficulties, requiring much imagination and technical power. I do not have aware (I believe) that the first note, and astonished that he did not publish the result, ie the part Local, without his ever explained clearly - but he was visibly disappointed by the reception given to this first note. After the failure of his bid for Rennes in 1980, and since my letter of support attached to its folder

candidacy status was remarkable about the global and local for jacobians,

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show my text before attempting to make it public.

18 (***) On this subject, "The killjoy boss - or the pot to pressure," S.43.

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he must still find it prudent (to prepare its bid the following year at Perpignan) published in still less a note on local jacobians otherwise empty all her bag. It@two months later still, May 81, it sends the draft to the third grade Deligne and Raynaud (probably Cartier was to be aware for a long time), probing first land I presume. (I do not think it would have been any difficulty to present this third note by Cartan, at any time since

. August 1979 where he had the results in hand) Neither Raynaud Deligne nor does it give any sign of life - but March 1982 Deligne sent him the manuscript of an article "A remark is tame symbols", dedicated to Deligne by Kazuya Kato, who made the Contou-Carrere theory in the case of a basic body, and guess its validity on any base ring. Contou-Carrere talked to me then, saying Deligne was convinced that reported its results (without naming him, nor indeed give demonstration indications) K. Kato. At that time the thing seemed so incredible that I did not take Contou-Carrere seriously - while Now I realize it would be quite in style "go!" My usual brilliant friend Deligne.

Contou-Carrere was really outraged that someone look "allows himself to speculate" something he seemed to regard as a kind of private property. Yet himself kept his conjectures to me, without believing no longer necessary to refer to my person in any of the three notes 19 (*)! Self-vis screw me it must have seemed as self-evident, while the simple presumption the same time that it would be done by Deligne reviled, but he dares so far in saying a word to the person concerned. (I had him urged to explain to him what he was careful to do. . .)

He had to somehow make violence over the years, I guess, not to publish very good results, in which it had to invest heavily in the making. If it is done well violence is for the sake of a situation, obviously not conducive to this kind of grothendieckereries. He was astonished in recent days received a letter of the same Deligne, wondering (not mine!) that he has not published his note on jacobians "total" and calling him everything he has on the subject and even more. Zoghman Mebkhout had already told me a few days before

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that Deligne was going to use these things and p. 409

he even named Contou-Carrere in this context. It would seem that the time is ripe for that Contou-Carrère finally acknowledging a child to him, he was careful to bury nearly five years. Perhaps, who knows, she is the time came for a reconciliation of the two "enemies student"; of the two brightest among my students, one academician medalist and one assistant delegate, yet (they are reconciled or not) long two **brothers** .

16.1.4. Coffin 4 - or topos without flowers or wreaths

Note 96 (May 22) I could hardly overstate claiming that I never saw Olivier Leroy. What is certain, is that as soon as he heard me, he decided to avoid me like the plague. His reasons, I confess, escape me. Perhaps an instinct he told her that I would get him into trouble, perhaps that Contou-Carrere (who for a long time has been good friends with him) the he blew it - I will perhaps know never. Still, I had the honor and pleasure of two substantial conversations with Leroy, which I remember very well.

The first time was to be 76, 77, it was seen at his Contou-Carrere and I, without warning, History discussing math a little - I do not know if we had any ulterior motive in mind. Perhaps still it was understood that Olivier was thinking of embarking on a doctoral 3 ° cycle, and I certainly had issues filled my sleeves. For having seen once or twice in Contou-Carrère, and from what Contou-19 (*) About a certain role in league I@e played in this kind of situation with some of my students, see note "Ambiguity", n ° 63 ".

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Carrère himself gave me to understand, as I had an impression that Olivier was thinking-have fast, not just in math. This evening three was memorable. I had to quickly have a word with Olivier a program for a theory of the fundamental group of a topos and van type theorems Kampen topossique in the frame, and he was interested. He must have a small stain topossique by algebraic geometry seminar Contou-Carrère, and he seemed interested to have an opportunity to "make

hand "with the language of the topos of an example of practical theory. For many two hours or three, I had to pour him a prime contractor detailed theory that I could develop, which fleshed as and as I spoke, and that went up in me a host of concrete situations geometry and algebraic topology - situations that it was expressed in the

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toposique part, and that each

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When he first had me "remember" to someone who heard about it for the first time. More than one time in the evening, Contou-Carrere (who nevertheless read everything or almost and has strong stomach) he the wave and dropped eye, even for him it was a lot at once - and more than once I have grown wise Olivier ask if it was better not to stop for today and resume another day. I could have spare me the trouble - Olivier was visibly refreshed, bright-eyed and perfectly comfortable, I laughed Similarly, it was so incredible that not crack, but not so! He was a young guy of twenty years perhaps, which was to have just a dye patterns, some topology and topos, he not bad when even manipulated infinite discrete groups I think ... it was next to nothing, in short, and with that he came to fulfill anyway all white and "feel" effortless that I, an old veteran, told him at full speed in two or three hours on the basis of familiarity with the subject fifteen years. I had never encountered anything like it, or at most in Deligne, and perhaps at Cartier, who was also quite extraordinary in that line in his youth.

Still, that apparently it was awarded, Olivier was going to do his thesis 3 ° cycle on the subject.

It was not to doubt anyway, of what awaited him at the end. Still, during the two years

he typed the work, and even beyond, I saw him again. Its official boss was Contou-Carrère, okay,

but it would have made me happy for the opportunity to talk with a guy as trendy. In fact, I have not even been warned of the defense, and does not think never having received a copy of this thesis - but I remember taking them into my hands a copy of someone who had been right 20 (*). I can not say if the defense took

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made before or after the "casting" of the note to the SARC where Olivier summed up his work. I

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speaks of this casting, so some length but without naming anyone, in "The note - or

the new ethics (1) "(S.33). The two mathematicians who have taken care of this casting are Pierre Cartier (The very one whose staggering rapidity of intuition was talking back to me that of his young non-colleague Cartier flowed so nicely and with all the regrets in the world), and the other was Pierre Deligne, 20 (*) All this secretiveness is even more unusual that I was surely with Contou-Carrère, the only person in the whole Languedoc able to understand anything at work had done Olivier Leroy. Needless to say, I@ never had hands nor the draft note to SARC Leroy. Maybe I@ illusions, but it seems to me that if I

had been sidelined so drastically that it was impossible to me to intervene, I would have found a way when even to publish this unfortunate note through Cartan Serre or if necessary, which are not connected, but I would have done if I could vouch for their confidence seriousness of the work. (June 7) I had to learn long after Leroy had spent his thesis, and be too busy to think on my side then to wonder how it was that I had

not even been informed. It made "tilt" Only after the thesis defense Contou-Carrère himself, I@ supposed being the supervisor (s). He found means that, alone among the members of the jury, I have no right to copy final and official thesis! I finally just received a copy today itself - he thinks (he wrote) that it "not interested" to have one. . .

(X) More specifically, for a year or two DC prudently played on two "managers" at a time (no one knew, never. . .), Both of ignoring the existence of a master "parallel". I was informed of the role of director in Verdier extremis, when DC finally folded on me in the spring of 1983 when it became clear that Verdier definitely wanted still his skin!

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with its historical word that these math "does not amused" (They have yet "fun" in his young age. . .) I should add Contou-Carrère himself, who has not lifted a finger to defend his pupil - it exposed him to the risk of upsetting powerful men. He had suggested that it was Olivier Leroy better to forget the unfortunate episode of his thesis. What is clear in any case is that Leroy has indeed made a big mark on this episode - although the possibility was to report to publish not only a Note to CRAS, but even his entire work, I doubt he would use 21 (*). This time again, Chainsaw has done his job 22 (**).

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Despite this mishap, I still had fun for several months, the 1981 debut, see

Leroy regularly. It was a micro-seminar I then gave the algebraic-arithmetic theory

Teichmüller tower (which is a little question in Outline of a Program). The only listeners the true sense were Contou-Carrère and Leroy. Even for an ultra-exclusive Parisian public (and I know what I mean), there would have been three or four in a room not to be dropped. Actually, if I made this seminar, at a time when Contou-Carrere was fully occupied with the preparation point of his ideas on the Schubert cycles, it was for Leroy, thinking that maybe he would hang a about as splendid. Apparently he "felt" what I was doing, but he had decided in advance (I think) that n "cling" no. It's strange that he even bothered to come - something had to fascinate, just as I was fascinated, and it was not too clear himself of what he really wanted. When I including that it does not cling, I stopped expenses. It does not interest me to continue a monologue before two spectators, so bright they are. It was also at that time that the second place and last conversation I had with Leroy. I even think I never seen him since.

There was no real mathematical discussion between Leroy and me, outside that of seven years ago - which is why I hardly know anything about the work he did outside his unfortunate toposique work. His misadventure has not had to increase his confidence vis-à-vis people like me, even Contou-Carrère or other people beautiful people

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mathematical. I heard he was doing a seminar p. 413

the Faculty of Arts, where there is a group of mathematicians friendly and get along well with each other. There is 21 (*) A telltale sign of this "thick line": the application of Olivier Leroy an assistant position at Montpellier; presented during a holiday there two years, Leroy does not mention the title of his graduate thesis, nor the name of Contou-Carrère who had been his boss, There is also mention of any personal work whatsoever. Obviously he was not then decided he wanted this job or not - the fact that despite its impressive gifts this post was awarded to another candidate, who had a strong case and that there was no doubt about his intentions.

22 (***) Coincidentally, I had just recently echoed that Cartier had the attention of dedicate myself one of these presentations Bourbaki (this is the first time I believe that such a thing happens to me), and moreover, this talk was just devoted to topos theory - these topos, judged by the same Cartier unworthy of inclusion in a note to SARC. Sign of a changing fashion wind the last few years? Surely not, and everything stands still: the charge in question involved the use of the topos in logic! The touching dedication of my friend Cartier seems to me in the same vein as In Praise of Death pronounced last year in a big occasion (see note "In Praise of Death - or compliments," n ° 104) where the word "topos" is pronounced (among many others sent compliments) to hasten to add immediately (as single and eloquent comment) they are "now used in logic" - and nowhere else, is it necessary to say, too at least until my compliments prodigal friends can prevent it, by the power that is in their hands. . . (Presentation of Cartier Reference: Categories, logical and beams, models of set theory, Bourbon Seminar baki n ° 513, February 1978).

I feel, in the condescending attitude (and boycott...) Of some (such Deligne, Cartier, Quillen, from those who give the tone. . .), Vis-à-vis innovative deep concepts such as topo geometry, a **presumption** phenomenal. AT Even one of them have the fabric (or innocence...) to out of nothing, like I did with the introduction of topos stalls and crystalline, a new topological view of algebraic varieties (and from there, the means of renouvel-LEMENT deep algebraic geometry and arithmetic, pending topology) - no doubt that this same attitude contempt he likes to cultivate in himself and to arouse in others, defuses the power of vision and renewal for the only benefit of a conceit.

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expose combinatorial topology of ideas - a subject all that in my line, for nearly ten years. As I am of discrete nature, yes, yes!), I did not ask what he says, and I do not know if he intends it to a publication. position side, he led a life of more illegal (without Yet foreign or undocumented), making TD (tutorials) right and left, paid (Shhh ...) I know not what secret funds and the nose of the paymaster and the Court of Auditors. I think it is not very determined especially if it will or will not ultimately make a mathematical career, and it must be an uncomfortable situation at length Court of Auditors or not. I would be happy if my edifying picture a Funeral, where he now appears to fourth deputy coffin could help dispel perplexities, this both knowingly.

16.1.5. Gravedigger - or the whole Congregation

Note 97 (May 24) It's against some reluctance in me I finally decide to men- namely OPERATE some of my close friends and former colleagues in the mathematical world, I could see doing work of "gravedigger" (or "Chainsaw"), cutting short from the start attempts made by some mathematicians in small or precarious, to use some of my ideas and develop according to their own logic, or just (as in the case of Yves Ladegallerie) to follow an approach and a style that bears the mark of my influence. As I have said again and again, such reticence involve others, or just to name the 23 (*) without a

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see consulted, were not rare in crops

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and Seeds. In each case, I ended up reviewing the reluctance and that she was not entitled, its source was not a delicacy but confusion, not to say a pusillanimity. In all case (I think) which I mentioned namely acts or attitudes of others, they were by no means of "Confidential" in nature. They concerned person's working life, with attendant implications they involve in professional life (and there in life itself) other colleagues, including myself. Each of those I mean is as much responsible for his actions and attitudes, and any their range of implications (whether it pleases or not to ignore them), as I am of mine. It is not no reason to be offended if some consequences of his actions due to it in one form or Another example that of a "questioning" public, through my intermediary in this case. If by times my language is imaged and thick, my intention is not controversial, nor to offend or insult anyone, but rather to describe the facts and the way I feel, as an incentive for everyone (and first of all for each of the ones I mean) to examine its side, rather than evacuate one way or another (as I have often done it myself before thinking Crops and Seeds).

If that is so challenged chooses to be offended, this is a choice is concerned. This choice can hurt me, from people I believe in or even affection, but he did not weigh myself. The reluctance that I spoke, a sign of confusion in my vision, vanished without trace once it has been

23 (*) For example, I had such reluctance to include a footnote (footnote ° 19) in which he would mention namely all students who prepared a status doctoral thesis with me and have completed. This hesitation in me had to come from the reluctance among many of my students to be associated with my person, reluctance that I have received a level unformulated

for some years now. The only one of my former students (with or without quotes) where the will to stand out my person had been so clearly perceived by me, were Contou-Carrere (in which I had only just discovered it), and Deligne (where the thing was clear enough already since 1968, though I suspect, however, how far this will would take him). In the case of Deligne, my reluctance to appoint him as having figure "more or less" student was particularly strong, not wanting to appear to avail myself of a "student" as bright, so that he himself did not want to let it show nothing the link between him and myself and my work. My reflection made me understand also that this link had in life and the work of my young friend infinitely greater scope than I had ever suspected.

(June 1) View about these deliberate about me in the note of 27 March (three days) "Being apart" (n ° 67 © 408

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understood and thereby exceeded.

At no time during the discussion the burial, I have been feeling some vast "conspiracy" allegedly hatched against my work and against those who have had the temerity to inspire (rather than simply to borrow tools, hiding the name of the worker who had shaped them and put their hands). There is no plot, but there is a **consensus** that, in what I have called "the great world" mathematical, occurred to me until now without flaws. This consensus, except at the most in extremely rare exceptions, no not powered by a "malicious" idiots

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cient vis-a-vis my person or my work. In p. 415

exceptional cases only, it is expressed by a malicious unambiguous vis-à-vis one or other of four "co-buried" which was discussed in the preceding notes 24 (*). But surely such malice could proliferate in some of my former students, and she could not express themselves without hindrance, by encouraging the general consensus.

This consensus was evident in most if not all of my old friends and former students, not by atti-Studies of "malice", but by mechanisms (I think) entirely unconscious of uniformity déroutant and efficiency without flaws, sweeping like straws common sense and healthy mathematician instinct to make way for the **rejection attitudes** purely automatic 25 (**). Such automatic attitudes, I suspects are not only raised by myself and by those whose "smell" the mathematical reminds so slightly - but also vis-à-vis any mathematician who does not show up as invested already the **tacit guarantee** of a certain "establishment"; either he makes himself already part or it appears as the "protected" (to borrow the phrase from the pen of Verdier) one of those.

It seemed

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that in almost all mathematicians, provisions of a minimum "opening p. 416 mathematical "(necessary for this" common sense "and" healthy instinct "math can come into play) **triggers only vis-à-vis someone already invested such a deposit .**

Such mechanisms should be practically universal, not only in the mathematical world, but in all sectors of society without exception. It far exceeds any case. Yes (As it seems) exceptional situation there is in the case of me, and those eyes

of the establishment are figure of "my protected," is that in the past I have been granted the status of "a their "with the usual effect of the" minimum aperture "vis-a-vis me and" mine ". This status was me withdrew because of my departure in 1970. Or more precisely, by my own choice, clearly expressed and more an opportunity in the years since I left, and my lifestyle until today, I have indeed ceased to be a "of them." In fact, I myself am no longer felt "one of them" and I left a world that was common to us without thought of return. Even today, my "back to math" is no return "among them" in the establishment, but a return to mathematics itself; more 24 (*) I have been aware of what I regard as malicious acts unequivocally that only in cases of Deligne and Verdier.

25 (**) These attitudes of rejection, of course, never appear as such, even in extreme cases such as My friend Deligne or Verdier. They are almost invisible in the provisions conscious to me, which (As I have already had occasion to say) are almost always (maybe always) among my friends and former students, sympathy arrangements (including sometimes such of them trying somehow to defend) and respect. Such provi-sympathy and respect tions are present not only at the superficial level "opinions" conscious, but even deeper level of attraction (or repulsion) real, and real knowledge one has of others (regardless images in which efforts are made to enclose).

We are in a typical situation of **ambivalence** (collectively, I am almost tempted to say) where. visibly, no "Sees" nothing! (Compare with reflection in "The enemy Father (1), (2)" (Sections 29, 30), where for the first time in Harvest Sowing and I approach this ambivalent aspect that has marked many relationships in my life, not just in the middle Math.) Yet at the concrete manifestations (extensively reviewed in the Burial), the "resultant" these ambivalent forces has nothing more ambivalent, he seemed to me, but she has indeed, with "consistency confusing and efficiency flawless "as the" automatic rejection attitude "I am about to take a closer look. 409

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Specifically, a "return" to a continuous mathematical investment, and publication activities of my mathematical thinking.

I only just beginning to realize how much my departure was felt as a kind of "desertion" or as an "outrage" by my old friends and my students 26 (*). That must be how the easier to evacuate the direction of my departure, the question that she could arouse in them by such feelings ment of a diffuse **received wrong**, and automatic reaction a grudge, speaking through an act of **retaliation** (Which rarely had to be perceived, not even an act, the conscious level) as it is cut us, we cut it - we cease to give it to him and "his men," the benefit of the "automatic ism attention "reserved" for us "- he and his family will be entitled, as the first comers, the rigors automatic rejection!

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The situation is further complicated (for my old friends and students) that I was not only p. 417

part of the establishment, but also it is impossible for any of them to his mathematical work ticien without using every step of the concepts, ideas, tools and results I© an author. I do not know if had in the history of our science or any other science, as embarrassing example of a paradox! Views in this light, the chainsaw-effects (not limited to my friend Deligne) to determine any net vel-Leite Development for ideas that bear my impression (although such a development could that increase perplexity) now present to me as driven by an inner logic relentless as a **necessity** from a choice already made - the choice of rejection. And it is the same I see the efforts made everywhere to go under complete silence behind these concepts, ideas, tools and results entered into the common heritage which we can not do without, like it or no. This "indifference" I grew see in front of "operations" yet very big one Deligne pretending to arrogate, one by one, the authorship of a number of my main contributions to the mathematical (or crumbs, attributing them generously so inseparable pal) - this is only nulle-ment indifference, but a **tacit approval**. Deligne only do what the collective unconscious the establishment expects him **to delete** the name of one who is cut off from everyone, and solve the intolerable paradox, **by substituting a fake paternity tolerable but a real paternity unacceptable**. Seen in this light, the main celebrant Deligne appears, not as one that would have fashioned a fashion like the deep forces that determine his life and deeds, but as **the instrument** any designated (in its role "legitimate heir") of a **collective will** for consistency seamless, clinging to the impossible task to clear and my name and Mathematics personal style Contemporary.

I have little doubt that this view essentially expresses the reality of things: all least collectively. Surely my "return", which ended unexpectedly at a funeral that continued to

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so satisfactorily for all, or (if there ends) that at least disturbs so
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unseemly and unacceptable the course of a ceremony that seemed preordained - it goes back in-
commoder and dissatisfy not only this or that among the main celebrants, but embarrass
whole congregation assembled for this occasion funeral! And I have no idea, of course, the "pa-
harbor "that will invent the famous collective unconscious, to evacuate the mess created by the untimely return
the late deceased, coming suddenly (unacceptable scandal) the cozy coffin intended for him, and making
Officer mine his way to his own funeral. I trust however that the congregation found
26 (*) This way of seeing and feeling things was expressed most eloquently by my friend Zoghman
Mebkhout. By this desertion that I am responsible for his troubles with the great mathematical world, he alone having
found lacking of "protection" and support that had once found with me today those who are fond of
deal in layabout.
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good way to release that extra contradiction in mathematical building, which is no longer
it close!

It seems perceive quite well now, at the images and attitudes of each one in particular,
reflection and general shape that takes the collective agreement and the collective will to remove, bury. It©the
universally used system of "two tables" mutually contradictory on which one works
simultaneously, and which I have had occasion to speak for the first time in Crops and Seeds in the case
my own person. (See "The merit and contempt", s. 12.) I doubt there is anyone who
say outright and clear: "Grothendieck has only bogus math, no more about it and spend
down to business. "As such, it would be too explicitly contrary to the axioms of the establishment, for
moment at least. In the expected evolution of things in twenty years or thirty-the question would arise of
Anyway even more, as it will no longer even a question of pronouncing the name, forgotten by everyone from
a very long time ago. The common tactic, individual as collective, is one of silence: it is not thought to
deceased, not as any mathematician at least we do not speak of him, and does not mention (except,
when you can not do otherwise, by the providential acronym SGA or EGA, until these references
are replaced by others from which all traces of the deceased or absent).

Yet it is opportunities, exceptional no doubt, where complete silence becomes impractical. A
of these occasions, I imagine, has been my application at the CNRS, who had to embarrass more
a 27 (*). one in

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will be the preliminary release of Crops and Seeds 28 (*), pending publication p. 419
in Volume 1 of Reflections Mathematics (if my editor does not crack and refuses to put on
all the scientific establishment back together). These are opportunities created by the unacceptable gaps
deceased himself, accidentally leaving the role that was assigned to it. Another opportunity (maybe more
instructive for an understanding of the Burial, before disruption by unruly deceased) was the
jubilee of twenty-five years of IHES, which was celebrated last year "in style". As a "first
four Fields Medals of IHES "it would have been difficult to pass me completely silent on this
solemn occasion - even if we have ignored the role that was mine to give life
real to IHES in four heroic years of its existence. The Praise of Death that was concocted
my honor in the brochure issue on the occasion of this anniversary (brochure to which I have had occasion to refer
already twice), seems a model of its kind - as elegant and discreet way to solve to the satisfaction
of all, this "little contradiction" in contemporary mathematics. . .

And suddenly there I was cheered - as the horse begins to feel the stable! For nearly two
weeks I started thinking about this instructive episode in a note that once took the name
"The Praise of Death - or compliments." After some hesitation where to place the note (from a note
low late to the first page written notes for burial), it appeared that the place
more natural for the insert was (not the "chronological" place but) in the "Funeral Ceremony" which must
complete the burial. And now, without seeking it, connects the "thread" that I pursue for three
weeks through the last three processions "The Symposium", "The Pupil" and finally "The Van Funeral" which
only just joined the convoy, with the final part of the Burial, namely the Funeral Ceremony;

27 (*) (26 May) I just learned even today by a call from Zoghman Mebkhout. my colleagues on the Committee
National CNRS have made an effort for me, leaving me a "welcome center" for two years. I do not know if they did it with
enthusiasm - it is certain that none of my friends in the Committee has pushed the effort to give me a call or
quick note to tell me the good news (dated May 15).

(September) I ended up to be notified by letter of CNRS dated 16 August - this is an appointment for one year (not
for two), to a position of research officer.

28 This is the distribution of a limited edition (150 copies) is talking care of my university, for distribution among
my closest colleagues and friends.

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This ceremony marked above all, precisely by this

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masterpiece of Funeral Eulogy that I started

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consider May 12, and now is the note following naturally to it 29 (*).

I finally touch (again?) To the point! At the same time the beginning of consideration of a Eulogy Funeral takes suddenly a new dimension. It is merely the clever invention of a powerful brain

service of a fixed idea, spending at the indifference or command attention brand diners

a "great opportunity" official - but especially the perfect answer and served with skill, made this

delicate opportunity among all, collective expectation, about the attitude that should be taken

with regard to my person. If anyone of his generation deserved recognition unreserved

congregation whole, this is my friend Pierre Deligne, filling with perfection burr

although he expected the role to him.

29 (*) (November 1984) Following an unexpected episode Medicare, the note (n ° 104) is separated from "it" by a new procession - "The deceased - still not died" (n ° s 98-103).

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