

18.5.5. The threshold

Note 172

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(March 22) I thought I had for a day or two and ten pages to break everything, with p. 1102 famous "four operations" that I proposed to review, since the month of October already. There you go more than three weeks that I work on hard, during which I aligned well in the hundred pages - and I still have not finished! The first jet, from February 26th to March 1st, took me four days already. He just provided me the canvas, on which to embroider (despite everything) a "story", and not just conclusions investigation. On re-reading this first draft, the day after the 1st of March, it gave an unfortunate impression of

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grievances "that never stopped, and as it incomprehensible probably to anyone except three or four really expert experts (assuming they have the patience to read it ...). I understood that I needed at least explain roughly what it was, so at least put a context - otherwise it was not worth ⁸³⁵ (*).

That led me to a few rehearsals, compared to the first part of the Burial - but he there are cases where repetitions are not only useful, but even indispensable (in mathematics besides as much as elsewhere). In these cases, moreover, one realizes very quickly that the so-called "repetitions" are not really, because what is "repeated" is **seen actually seen again** and under lighting that changed. By situating, as "context" for the four operations, certain aspects of my work, I have the impression to have learned something about it, to better situate this work. I may not have learned anything from really again about myself and others, but I do not regret the pain I took in rewriting for several days, this first jet-grievances. This work, I had put the best that I had to give, and it deserves that with hindsight that gives me a maturity, I get acquainted again and in a day different. At the very moment when I was preparing to make the detailed statement of what this work had to experience since I left (in good hands, I do not doubt but...), it was good that I **ask** as little about her, about her place and about this unity that makes her beautiful, if only for a few pages, as a way again to mark my respect for what I have seen flouted.

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But that was not all, far from it! Abandoning the style "sheet of grievances", with numbered references p. 1103

to the more fleshy notes of the first part of the Burial, I understood that these notes that I took again, like all the other sections and notes in Harvests and Seeds, had to be intelligible and restore most of what they had to say, regardless of even those references to notes making part of **another moment** of reflection. Again, this led me to many "repetitions" that are not not, that is to say to review in a new light, what I had noted day by day almost a year ago, in the fresh emotion of discovery. I was beset by so many unexpected facts and sometimes incredible, that there could be no question then of a real "investigation", so little methodical. At that moment, I was content to try my best to cash in what was going down on me, and to "casing" somehow, without looking too much detail. Most of my energy was absorbed then to **deal** with that the pots-aux-Roses that I discovered were **crazy**, incredible (as in this tale of the Emperor of China dress. . . ⁸³⁶ (*)), and above all, to take this "breath" of violence, of cynicism and contempt that suddenly came back to me, "in these good-looking airs ..." that I recognized only too well good ; the breath of other times, that I had lived and that I did not forget. . .

The last three weeks, on the other hand, have become an opportunity to complete this stormy investigation Last year, digging a little closer some texts (SGA 5 and especially the so-called "SGA4 1

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This is gave birth to a sequel (which no longer seemed to end at times!) of footnotes (more or minus), some of which have become sub-notes, and one of these (in the intended name "Formula") taking care on four consecutive days and dividing into four ⁸³⁷ (**). . . Sometimes I felt that I was never going to finish - and then no, that eventually converge ⁸³⁸ (***) . I leave for For the moment, there are about 10 pages that are decidedly over-written, which are to be redone, and the bottom notes ⁸³⁵ (*) The only other times of the Crops and Seeds reflection I@e made such a sprain (smaller, it is true) the writing mode "spontaneous" was in "The note - or the new ethic" (n ° 33) and in the note "The Iniquity - or sense of a return" (n ° 75).

⁸³⁶ (*) See the note of the same name, n ° 77.

⁸³⁷ (**) (1 June) Which became six since. . .

⁸³⁸ (***) (1 June) A "Convergence" any interim Moreover, since the note "The Apotheosis" finally burst into thirty notes, sub-notes etc, distinct, doing well in the 150 pages alone!

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page of the last two notes ("The sharing" and "The Apotheosis") that I would add later. For the
it is enough like that! Leave to come back later on

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"stewardship" I can not wait to finish and say p. 1104

without further ado what I still see substantial to say, on the chapter of "four operations".

I distinguish in the Burial two "aspects" or "levels" intimately connected, but nevertheless distinct.

They are quite clearly separated (to me at least) by a **threshold**.

On the one hand, there is the "wind of fashion" aspect (sometimes going as far as this "mockery" of which I had
opportunity more than once to speak in Harvests and Seeds). It manifests itself mainly by what I have called

Besides 839 (*) "automatic rejection attitudes - attitudes often cutting short the simple reflexes

mathematical sense, and practicing against some and their mathematical contributions,

It is about me, and some others that are classified (sometimes despite all the efforts of

interested to stand out from me) as having "part connected" with me. In my case, it was not possible,

certainly, to "reject" (or "bury") **everything** I brought, while much had already entered the

common area everyday, even before my departure from the mathematical scene in 1970 840 (**). It is

Yet true (and I make the statement for the first time in the note "My orphans" of a year ago (note °

46)) that by far the largest part of my written or unwritten work on the cohomological theme has been

buried, by the care of my students first and foremost, the day after my departure. (Some of

themes that I introduced were exhumed four, seven, or twelve years later without mention of my person

- but here we are already touching the "second level". . .)

One can certainly regret such automatisms of rejection, sometimes going against the simple delicacy and

the respect due to others, and foreign in all cases to good sense and mathematical faculties of discernment.

We can regret it all the more, when it strikes young mathematicians with sometimes brilliant means,

when the "bite of disdain" extinguishes a joy and denatures what had been a beautiful passion, in bitterness

investments that appear as wasted (according to the consensus that make law ...). And we can regret

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ter p. 1105

also, when this rejection strikes simple and fruitful ideas that have amply proved their worth, to make

emerging from the void powerful tools that nowadays "everyone" uses without looking twice. In

the first case (that of a devastated vocation) the damage is likely to be irreversible, but not in the

second - because sooner or later, simple and essential ideas, those "on the way", end up appearing

or to reappear, and to be part of the common heritage. Anyway, we can not reasonably

want to force anyone to think a person **well**, or a work, or an idea, which (for a

because that is his own) he wants to think **evil**, or downright forgotten. This kind of question is,

certainly, and in a delicate and essential way, of personal "ethics", but it can not be done, it seems to me,

a question of collective "scientific ethics"; or if you try, it is to be feared that the remedy is

worse than the bad. . .

The second "aspect" or "level" I was referring to, however, is precisely where

violates such collective ethics. The **threshold** I mentioned, is a **consensus** that, as far as I know, has

has been universally accepted in all sciences, since these are the subject of written testimonies. he

This is the consensus that states that no one is supposed to present as his own ideas 841 (*) it has taken in

839 (*) In the note "The Gravedigger - or the whole Congregation", n ° 97.

840 (**) It is true though that even some of the ideas and techniques that were already entered in use "daily" (at

less in the limited circle of my students and close collaborators) were buried as soon as I left. We can say that he was

in particular the cohomological tool l -adic, which I developed in great detail in SGA 5 (from the results

keys of SGA 4). It was kept under the bushel by my cohomologist students, Deligne in the lead, to be exhumed under the

form and in the spirit that I know in 1977.

841 (*) When I speak of "ideas", it is understood that it is not in mathematics alone "results". Often a

single well posed **question**, which touches a crucial point that nobody before had been able to see, is more important than

"result"

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others. This consensus obliges us, therefore, to indicate the origin of the ideas that we present,

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let us use or develop, each time, at least, that these ideas are not our own or the heritage

common, known already (not three or four insiders, but) by **"all"**.

I do not remember ever having heard that consensus. From the time I was part of mathematical medium, between the years 1948 (young beginner of twenty years attending Cartan classes in the Ecole Normale Supérieure) and 1970 (when I left the mathematical scene), I had the opportunity only very rarely, and in only one friend and colleague somewhat neglecting this chapter ⁸⁴² (*), to witness or only to be informed of a patent breach of that consensus, or principle. As I emphasize elsewhere in the Part of Crops and Seeds (in "A well-kept open secret", n ° 21), the respect for this principle is by no means a self-evident thing for anyone with a minimum honesty and respect for himself. On the contrary, it requires great vigilance because inveterate reflexes. Since childhood, we have naturally grown to overestimate our own merits, and to confuse a work assimilating in us ideas from others, with the very conception of these ideas - something that is not yet absolutely not of the same order. In writing the section cited more than a year ago, I was not visibly unclear to me about the importance of this consensus. he there was a certain vagueness in my mind (which I did not clearly realize

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this stage of the
p. 1107

reflection), in relation to this widespread feeling that a strict requirement **vis-à-vis others** (eg vis-à-vis of my own students) for the respect of this principle in their relation to me, was the sign of a lack of generosity, a smallness unworthy of me. So there was at that time an **ambiguity** in me, that I have clearly detected in the reflection of the note of 1 June of the same name (n ° 63 "). This reflection completely dispelled this ambiguity, which (I realized then) had weighed heavily on my relationship to my students, from the beginning (at the beginning of the sixties) until last year again. I have understood that a rigor in the exercise of the profession of mathematician (or, more generally, of scientist), first and foremost means being very vigilant towards oneself, while respecting this consensus crucial among all, but also an equal demand towards others, and even more so, vis-à-vis those even arduous. This is still, even though the issue has not yet condensed into a clear **statement**, which would be an embryonic hypothetical answer, or even a more or less complete answer (still conjectural). It is understood that clear such an utterance from a fuzzy question is an essential and creative part of mathematical work. Present the elaborate version of a question (perhaps deep) by hiding the source of it (even though prestidigitator), as well as to silence the origin of a statement in deep form, under the pretext that This is a demonstration, is plagiarism as well as to present as his own a demonstration taken in others. The same goes for the introduction of fruitful **concepts**, most crucial yet often stated that good - because The question of "good statements" arises only when one has already known the good notions. Here again, take the excuse that has modified or even improved a notion taken in others, to hide their provenance, is a dishonesty just as much, that if one "borrows" the notion ne varietur. Most often, this is the first step: raise a question (even vague again), propose a statement or concept (even imperfect and provisional), which is the crucial step, and not the improvements (in precision, in extent, in depth) that one brings. But even though it would not be so, it can not be taken as a "reason", for the one who would do original work by improving what he received, to hide what he received (or, what can return to the same, for the "debunking". . .).

As I already pointed out elsewhere (in the sub-106 ° footnote 1 of the Circular "Muscle and tripe (yin yang bury (1))", n ° 106), the "value" of a conjectural statement does not depend on its presumed difficulty, its more or less "plausible" if this statement will prove true or false. In any case, the "value" that one is willing to give to a mathematical idea (whether it is expressed in a question, in a statement, in a notion, or in a demonstration) or in a set of ideas, is to a large extent subjective and can hardly be the subject of a consensus of scientific ethics. That why a honest scientist will indicate the source of **all** the ideas that he uses (explicitly or implicitly) and which are not part of the "well-known", without letting go of the slope which consists in silencing the origin of such an idea which it would have decided in its inside (and for the sake of perhaps a questionable cause ...) that it was anyway "obvious", "trivial", "without importance" (or other qualifiers of the same water).

⁸⁴² (*) This refers to the report that colleague in passing in the first part of R and S, in the cited section from the next sentence. With the hindsight of more than one year, this "case" also takes a weight, that I had not granted him before.
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we have the task of initiating the profession that is ours.

With each passing year, I better understand how this business is **something** that a technical know-how alone, or even the ability to work with imagination to solve problems. blemishes deemed difficult. In a way, I knew it well and always - but I underestimated the "ethical" aspect, or **collective** ⁸⁴³ (*), as something that was supposed to "go home" between people in good faith and good company. In this way, I was ready for the "ambiguity" of which I spoke, and who was also (under the guise of a false "generosity") vis-a-vis **complacency** of my students and the like, and

way more still hidden, complacency in **myself**.

I left that environment of "people of good faith and good company", which had been **my** world, which I had been happy to identify myself. Y hazarding a little more detailed look (in the weeks that have followed on April 19 last year) I found, less than fifteen years after leaving, as a **corruption** I could never have imagined it even in dreams.

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It@a mystery to me what **sense** may still have to "do math" as per member. 1108

this world - if not only as a means of **power**, or (for the modest association) that ensure a **pittance** under material conditions, well, comfortably (when you have the chance to be already "cased" somehow. . .).

18.5.6. (5) The family album

Note 173 844 (*)

at. A well surrounded deceased (March 22) To put it more bluntly, there is in the Burial level "mode", and the level "scam". Maybe I just delay, and what was looked at as scam "of my time" has nowadays become a perfectly accepted and honorable thing, as long as those who practice it are part of the beautiful world. Perhaps the "threshold" has disappeared long ago? The "second level" is a **single vast operation of fraud**, to all my work on the cohomological theme, and after it, that of Zoghman Mebkhout, the imprudent continuator, posthumous, obscure and obstinate pupil of the buried master. The great conductor of the operation was another student, by no means posthumous but on the other hand occult, that yes, playing on a tacit role of "heir" of my work, while disavowing and debunking and the work, and the worker. This is my friend **Pierre Deligne**. His zealous lieutenants were none other than the four students who, with him, had opted for the "cohomology"

JL Verdier Illusie L., P. Berthelot, JP Jouanolou. The deceased is decidedly well surrounded, both by the 843 (*) I do not mean here that the aspect of "ethics" of a situation is always the same time, a "collective" aspect, affecting the relationship of a person to a group (in this case, a group of "colleagues" or "congeners"). Yet it is good so in the case of the "consensus" that I am examining.

In accordance with the particular conditioning that shaped my view of things since childhood, I tended, until last year, to underestimate (or even ignore) what is collective, in favor of what is personal. The appearance "collective adventure" in my personal "mathematical adventure" became clear to me last year, first of all in the "legacy Galois" (n ° 7), but especially in the sections of the end of the first part of R and S, "Adventure lonely "and" The weight of the past "(n ° s 47, 50).

844 (*) The note "family album" initially formed immediately following the previous note "Threshold" written the same day (March 22). This part now forms the part a- ("A deceased well surrounded"), to which have been added the 10 and June 11 two other parties, b. ("New Heads - or Vocals") and c. ("The one among all - or acquiescence"). Note Next "Climbing (2)" (n ° 174) of 22 March again, connects directly to the party. (same day) of this note. The notes of b. from p. in parts b. and c. are from June 13th and 14th. Finally, a last part d. ("The last minute - or end a taboo ") was added on June 18th.

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codéfunt 845 (**) sharing with him the honors of burial, by those who, in his "alive", were his relatives. As extra mummies, coming to help in the double burial, put in scene by the Grand Chief, I see seven other "world-renowned" mathematicians (to 0

terms of a display ad 846 (*)), appeared occasionally during the Funeral Ceremony p. 1109

reviewed in the family album (also called "The Four Operations"). These are (in order of importance in ceremony) **B. Teissier, AA Beilinson, J. Bernstein, JS Milne, A. Ogus, KY Shih, N. Katz.**

I did there round the mathematicians who are known to me for having **actively** participated in the operation "Burial" in one way or another. There are twelve 847 (**). For the last four named, I can not to prejudge their bad faith, according to the facts that are known to me. I consider that their responsibility is no less committed than that of others. Because if they were more ignorant of what they were doing, it was there is a choice which does not relieve them of their responsibility in their actions.

As for the participants in direct connivance, I would certainly be unable to draw up a list of them even incomplete, or to make an estimate of their number, surely of an entirely different magnitude. it Suffice it to recall that among these there are all the participants in the "memorable Symposium" of Luminy de June 1981 (Conference says Flasher), and also those among the readers of the volume called "SGA April 1 2

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were unaware of the meaning of the acronym SGA - and who "let it run".

I see two texts, which reflect a **disgrace** among all the mathematical years seventy and eighties, as no doubt there has been in the history of our science.

In one of these texts, disgrace breaks out in the name he has already given himself, which is in itself an im-

posture (of genius...): the text named "SGA April 1

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"(as standard reference), and also" Cohomology

Etale - by P. Deligne, with the " collaboration "(among others and in addition to L. Illusie and JL Verdier) of A. Grothendieck ⁸⁴⁸ (***)). The second text is constituted by the Acts of the

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Symposium of Luminy of June 1981, and

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especially and especially, by the first volume, constituted by the Introduction to the Colloquium (signed B.

Teissier and JL Verdier) and by the main article of the Colloquium (signed AA Beilinson, J. Bernstein, P. Deligne).

It would be something that would surely be beneficial to all, and to the honor of the generation of mathematicians who tolerated such disgrace, if at least one of those who directly contributed to it, in one way or another, finds in itself the simplicity and courage to make a public apology - or better still, to explain publicly about what happened regarding **the**. But this is probably too much hope.

As it is too much to hope too, that JL Verdier ceases to occupy, at the Ecole Normale Supérieure, the place that had been Henri Cartan© It is surely the key position in France, for the formation of the "succession" in mathematics. When I learned a long time ago that Verdier had been promoted to post, he who had been one of my students and I had affection, I felt myself honored (and at the same time, secretly flattered). I was not touched by the slightest doubt, then, that Verdier fulfill the role that had been Cartan© vis-à-vis the young people most motivated to mathematics, who would learn their job perfectly at his touch. If I see today (and since

845 (**)) Actually, there is not one, but **four** "codéfunts" I have knowledge, which are the subject of four notes coffin (coffins 1-4) n ° s 93-96.

846 (*) This is the Jubilee wafer IHES published in 1983 for the twenty-fifth anniversary of its founding. See at this subject notes Eloges Funèbre (1) (2) (n ° s 104, 105) and particularly page 454.

847 (**)) The same "twelve" in the section (the first part of R and s) "Jesus and the Twelve Apostles", reviewing all students who worked with me up to the level of a state doctoral dissertation. It is true that among the active participants in my Burial, but this time on the corporate side of Funeral Homes Springer GmbH (instead of the Congregation of the Faithful) it Dr. KF Springer (co-director of the esteemed institution) and Dr. K. Peters and Dr. Byrne, who will be discussed in a subsequent note (n ° 175). And fifteen!

848 (***) Concerning the meaning of this "collaboration", part of the hoax mounted Deligne, see note "The reversal ment "(n ° 68 ©

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years already, but never before with such brutal evidence) that I was wrong and if I say it here clearly, it is not to charge him or anyone with shame. I think he disqualified himself to lead researches. So saying, I do not deny my share of responsibility, for having mis-taught (to him as to all my other students) this job that I loved, and that I continue to love.

b. New faces - or vocalizations (June 10) Two and a half months have passed since I wrote the beginning of this note "The family album". I did not suspect, of course, that I would have to come back again, following new developments in the Burial Inquiry. It©especially the break-up of the modest "apotheosis" in five or ten pages that I had just written, in a grandiose Apotheosis in capital letters, one hundred and fifty well-packed pages, which made me discover, in the wake, "new heads", which must have their place in the family album. There were also already familiar heads, which he appeared that they too are part of the legion of those who actively participated, at the "fraud" level, in "Burial operation". I go back to

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reviewed here "pm" and also to be sure that each of p. 1111

interested parties feel in good company (but this is surely something that has been done for a long time ...). I insert new photos coming in the order they are reported to my attention.

There is first, the home side Springer GmbH, **KF Springer** (one of the co-editors of the house), **K. Peters** and Mrs. **CM Byrne** . I give additional details in the note below "The Funeral - "im Dienste der Wissenschaft" "(n ° 175) At the time of writing the beginning of this note, on 22 March, I. had just received in recent days the letter KF Springer (dated March 15) that dispelled my last doubts about the spirit that reigns in the estimable house undertaker, true to its motto "Serving Science".

Apotheosis of side (through the burial of the unknown service), I had knowledge of the contributions of **Mr. Kashiwara, R. Hotta, JL Brylinski B. Malgrange, G. Laumon and R. Remmert** , plus a **referee anonymous** that bad faith can not be doubted; but it is true that if we start to count referred complacent of articles or crooked books, bound in any way to the burial should be there surely a new album. Also, there is resurgence of my old friend N. Katz, this time in a

context such as the presumption of good faith (relative, at least) that I kept for him, fainted. This brings to four (and five, counting the famous anonymous referred) the number of mathematicians, all of international fame, known to me to be active in one way or another to said-con spoofing "Symposium Pervers". For details duly documented about it, I refers to the Apotheosis, especially the notes "... and the bargain", "The day of glory," "The Mafia" "Carte blanche to pillage - or the High Works" (n ° s 171 (iii) (iv), 171 2 , 171 4). Finally, on the side of the operation "Patterns", appeared (better late than never), a little away from the big squad, another of those who were my students. Afterwards I saw myself almost forced to count (As sixth) among my students "cohomologistes" although "my time" he had no any idea what it like cohomology. This is Neantro Rivano Saavedra, who obviously was used (voluntarily, of course) as a "pawn" in the hands of others, rather he has acted his own account. His adventures, battling Monsieur Verdoux (disguised as "jumper

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servant ") were p. 1112

reconstructed in the pages in the sequence of notes "The Sixth nail (the coffin)" (n ° s 176 1 to 176 7) of 19 and April 20 (except the last, which has yet to write). So, this also brings to six (twelve) number of those of my students "before" who actively participated in the burial of the master. The share in Burial Saavedra by this differs in the fact that the operation "Categories tannakiennes (sic)" he has been involved, is the first large-scale operation, to retract the authorship of part

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important to my work and philosophy that I developed (in the wake and during that patterns, in this case).

Considering the newcomers in the album, and setting aside the Springer contribution Shoes-Funeral, retaining only those from the Congregation of the Faithful, this brings to nineteen ⁸⁴⁹ (*) the number of notable mathematicians who are known to me for having actively participated in the burial at level of what was called in my time a scam operation. Of these participants, there are three only know the three co-signatories with P. Deligne of "memorable volume" Lecture Notes 900, the bad faith does not seem to me gained.

This list is also far from exhausting all of my colleagues and / or alumni or friends, who at one way or another and more or less actively participated in my funeral, without so much up be associated with a characterized scam. I have noted thirty, most of which were already mentioned in During my reflection on the Burial; by counting the previous ones, it makes the firmly packed fifty - and are not there yet, as I read in spite of myself into my distant retirement,

Over the last eight or nine years, or those who are taxed to my attention during an investigation who, intentionally, remained more limited.

These numbers alone are already eloquent, alongside the confirmed unexpectedly had the impression that already imposed on me from last year, namely, that the burial of my work and my humble self is not the business of one, or a strictly limited group (as one of my students before I left, or my "cohomologistes students"), but a collective enterprise, the level of "Congregation whole ", or at least at the level of the game Mathematical establishment that was

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witness

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and stakeholder in the development and fulfillment of my work surveyor from 1955 to 1970. My starting in 1970 was the signal in that part of mathematics at least one **reaction** **rejection** immediate and drastic mathematical vis-à-vis "grothendieckiennes" felt as symbol as the embodiment of "mathematical feminine" ⁸⁵⁰ (*): the vision or constantly precedes and inspires the technical aspect, which constantly challenges are resolved instead of trenches, where constant contact with the profound unity in the apparent disparity of things, allows every moment to identify what is essential in the amorphous mass of accidental and incidental. At the same time, my departure was the signal also a spectacular save any conceptual work, or rather, a set **outlawed** any such work, suddenly struck with derision pretext "deepening".

Thus, mutilating the work of mathematical creation of one of its "catchment" critical, the slope "yin" or "Female", that is a staggering "Verflachung" a "flattening", a "drying" labor ma-
theme that culminated ⁸⁵¹ (**). The thing was done (he seemed) by a sudden and drastic turn, virtually overnight. This is something so strange point to such extraordinary item, it appears unbelievable. It took me over a year of intense reflection on the burial, eventually apprehending what happened and get to the facts. I do not know if there was a comparable shift in recent years or decades, or at any other time in a branch of science or any other human activity

849 (*) Twenty, counting the famous anonymous referred.

850 (*) About vis-à-vis rejection reactions of a certain approach to mathematical style see notes "Muscle and

tripe (yin yang buries (1)) ", funeral yin (yin yang buried (4)) ", " The providential circumstance - or Apotheose "
"The disallowance (1) - or recall" "The disavowal (2) - or metamorphosis" (n ° s 106, 124, 151, 152, 153). I try to identify
some
of the outstanding features of "mathematical feminine", along with additional features "masculine", in the notes "The
rising sea. . . " " Nine months and five minutes ", " The arrow and the wave, " " Brother and spouse - or double signature ", " Yin
Servant, and new master ", " Yin Servant - or generosity "(n ° s 122, 123, 130, 134, 135, 136).
851 (***) For a primer observation about this "flattening", see note "Unnecessary details" part (c), "Things that
like nothing - or drying "(note ° 171 (v)).
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involving (among other forces) our creative abilities.

But I return to my album. It seemed useful to include the names of those, apart from those already named
sometimes, whose participation in the burial makes me doubt. I am not convinced, moreover
none of them wants to hurt me, and there is more than one of them, surely, who experiences

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even p. 1114

in me feelings of sympathy and even affection (responding to similar feelings in myself
even). There will perhaps not one among them who will be genuinely surprised to hear
a "Burial" that took place in my person and my work, and more, to learn that he is
supposed to be involved in one way or another. The fact that he named here already have that effect
(Welcome to me) to inform him about it, and (if he is himself interested) thus give the opportunity of a
explanation of us. I am of course at the disposal of interested to give any details
about what I perceived (rightly or wrongly) as a contribution to my funeral, directly
or "co-buried" interposed. There is no question for me to question the good faith and honesty
Work from any of them 852 (*), and for more than I can even add that their entire good faith and
honesty for me are above suspicion.

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Rather than mindlessly draw up a list in order p. 1115

Alphabetical (something that a computer would do better than me), I prefer to give the names of the faithful, making
chorus to my Obsèques in approximate chronological order; not by moments of their
appearance at the Funeral Ceremony (which are not known to me, mostly), but of those I took
clearly aware of their participation. I will put aside the other hand, all of my students 853 (*).
Except the only Ms. Hoang Xuan Sinh, working in Vietnam and definitely a bit far for
lend a hand to my Funeral, no one or only one of my students who, in one way or
another, there is involved. I already explained about this in the note "Silence" (n ° 84) and early
Note "Coffin 1 - or grateful 3-Modules" (n ° 93), and this is not the place to return. It is
852 (*) (16 June) Following further information just reached me, this presumption of good faith vanishes in
If A. Borel. According to a correspondence between him and Z. Mebkhout last year, on the occasion of a seminar on the theory
3-modules led by Borel in Zurich, it was known to me already that Mebkhout had informed that he was the author of
equivalence central categories in the theory (called "Riemann-Hilbert"), indicating the precise references and
sending all of its work, where Borel could easily convince the facts. That did not stop Borel
treated with condescension (or even discourtesy) rigor. In a symposium that has just taken place in Oberwolfach on
this theme (Theory of Algebraic Systems of partial differential equations, Oberwolfach 9-15 June 1985), where Borel made
the first three introductory presentations (under the title "Theory of Algebraic 3-Modules"), setting the stage for the "theorem
of God, " **the name of Mebkhout has not been mentioned** in any of these statements, nor in any presentations
next (other than a single "reference-inch" Incidentally, in the description of Brylinski). For the record, I just have
by Mebkhout this Symposium, where Borel played conductors (instead of Deligne, which was not the party), has
was a real **reissue of Perverted Symposium** which took place four years ago. There were "mafia" almost at
full force: Verdier Brylinski, Laumon and Malgrange same (this time) Kashiwara (which already had a lead role
plan in the seminar in Zurich, notwithstanding the circumstantial information Mebkhout had communicated to the Borel
about the character). Needless to say (no more than seminar Zurich) he was fit to ask of Mebkhout
make a presentation, and (apart from occasional interventions of the same Mebkhout falling into a freezing cold) on
name of the ancestor has not been pronounced (even when apart from its presence in the unfortunate "Grothendieck group").
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bidualité theory continues to wear it the "Verdier duality", including presentations by Borel. mebkhout
had yet insistently reminded him last year already that bidualité had been copied to the presentation I SGA 5 - but
Borel has apparently developed an allergy against a certain style and against some absent allergy forbidden to hold
account of such references. . . He is also involved in the same scam in his book "Intersection
Homology" (Birkhauser Verlag, 1984), published **after** that Mebkhout it has reported the fraud to Verdier.
I kept vis-à-vis Borel a presumption of good faith to the extent possible, having known in years
fifty, when we were part of both the Bourbaki group and worked together there. He is the first among

Members of what I truly considers "my original environment" in the mathematical world, that I should be see today, without the possibility of doubt, direct, and in "fraud", the Burial.

853 (*) When I speak here of "my students" here I mean those who worked with me at a doctoral thesis and who (in except Deligne) have a doctoral thesis with me. There are fourteen (two "after I left"), passed in review in the note "Jesus and the Twelve Apostles" (n ° 19).

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in the case of each of my students a thorough explanation of what happened seems most desirable.

The "chorus at my Funeral" are placed in a wide variety of tuning forks. I have identified four main, which makes me a polyphonic Burial first class and great style! There is the **boycott** "discreet effective" against any hint of mathematical development in grothendieckienne smell. There is the **discourtesy** and lack of delicacy, as I had not met in the mathematical world before my

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departure ; in one or two extreme cases it takes the form of a **derision** barely concealed. There is the p. 1116

deliberately to ignore or minimize the influence of my ideas and viewpoints in his work personal, or as part of contemporary mathematics, in cases where this influence is yet obvious and crucial, or assign to a third party results or ideas that are caused me no possibility of doubt. Finally, there is **the attitude** (so-called " **ostrich** "), with one located inconveniently faced a scam that blindingly obvious, hiding his head in the sand and to one who has not seen or felt. Needless to say, in the choir of the faithful, there is more than one who vocalizes several tuning forks to time.

All this said, here is the promised list 854 (*) from expanding our family album: B. Eckmann, A. Dold, NA Campo, B. Mazur, V. Poenaru, DBA Epstein, P. Cartier, D. Quillen, N. Kuiper, DR MacPherson, H. Hironaka, F. Hirzebruch, J. Tits, SS Chern, M. Artin, RP Langlands, GC Rota, C. Goulaouic, W. Fulton, A. Borel, J. Tate, JP Serre.

c. The one among all - or acquiescence

(June 11) I felt a little silly last night, typing

this list of names, while each of the names lined foolishly evoked here, alone, while a rich cloud associations, which reflected nothing here. But there can be no question here to dwell on each of these names and what it evokes - there should be another volume, then I wait to finish

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this one ! I

p. 1117

apologize to the interest of the "stick" and, somewhat cavalierly, in a "table" presence (in My Burial) not very inspiring. It is true that most of them have already been mentioned in one way or another here or there in Crops and Seeds, even if it was not necessarily as a participant in My Funeral. There are four that are part of the group Bourbaki my friends, and to which I was bound so narrow, through work and (for two of them) by ties of friendship, there are already more than thirty years. This is new others, in this concise list, which I felt bound by feelings of warm friendship, and who are not yet extinct when I write these lines. But more than once, over the years passed, I found myself confronted with such of these old friends, so when those who were my students, I was seized by this strange feeling, as to which still bore me this burst of sympathy that I found in me intact, was no longer - or at least the contact to one was lost, perhaps irretrievably;

another was substituted for the one I had known, full of intense and quivering life, and seemed to have

854 (*) I have not included in this list the names of the eight students@on cohomologistes "will be found in note (n ° 19) already cited, together with the names of students cohomologistes already reviewed above.

It would be fair to give also in my "Family Album" the names of those among my colleagues or old friends who known to me to be "non-enterrants" by sympathy and esteem without the possibility of ambiguity. All First, in relation to my work "In the Fields of Pursuit" continued in 1983 (work on which I intend to come back), I received warm encouragement J. Benabou, NJ Baues, A. Joyal, especially on the part of Ronnie Brown and Tim Porter, who (In more than one way) brought me an effective aid for the duration of my work.

It is true that these colleagues are part of a very different environment from the one I used to identify myself, which is the environment in which also has naturally placed my masterful Burial. As mathematicians who belong or are close to the middle, which I have recently received (during the one or two years) in the testimonies Similarly, it is a pleasure for me to name here B. Lawvere, J. Murte, D. Mumford, IM Gelfand and (last but not least!) JP Greenhouse. This last named has the unique distinction of being on both "lists" at once - those of "enterrants" and that of true friends!

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erased all traces. It was like a **drying**, desiccation that occurred, and a hard shell and tight which would have appeared where there had been a sensible and living flesh. . . . Before closing this family album that I just barely half open, I want to focus even as little bit on one of those I have to insert in gale. It is he who comes in last end this album. More than for any other that I eventually include, there was in me resistors serious (unconscious as fair) to part with some made images and longstanding about our relationship, and make me a humble evidence. This is Jean-Pierre Serre. More than once during Crops and Seeds, I had the opportunity to speak about Serre namely mostly ⁸⁵⁵ (*). The little I have said here and there already will be enough, I think, felt that played in my past mathematician a role that amounts to no one else. It's a thing I do I was never arrested elsewhere, before writing

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Crops and Seeds, and I discovered the pages. p. 1118

For twenty years, from the early fifties until my departure from the mathematical scene, he played for me the role of "privileged partner" ⁸⁵⁶ (*), and most of my great ideas-strength and my Large investments have been directly stimulated by ideas of Serre (sometimes "seemingly innocuous"). At times, especially (I think) in the second half of the fifties and perhaps at the beginning of the sixties, there was a sort of "symbiosis" intense mathematical between him and me, temperaments were further mathematics ⁸⁵⁷ (**) - symbiosis proved each time very fruitful. The relationship between Serre and I was not such "symmetrical", such was not at Serre worn, as I am, to rely on one or more "interlocutors" to get acquainted what may be of interest or which he believes need. This does not prevent (or so I presume) I had keep in his past mathematician also a unique role, and I can imagine that my departure unexpectedly, in 1970, was in his mathematical life breaking point (a balance perhaps I represented the pole "yin"), a sudden turn, by a sort of "empty" suddenly appeared. I do not know. . . . Still, this close relationship Serre in myself and my work was certainly perceived in the mathematical world, even if she remained in the field of non says. Surely, apart Deligne, Greenhouse was seen, rightly, as the most "close" mathematician of my work. The relationship Deligne my work and my person was very different - it was a student relationship and "heir". Deligne has fed my thinking and my work written and unwritten, so that none of my big ideas and no force my great investments were not aroused or stimulated by it. It was "closer" to me Greenhouse, in the sense that it was not in him, during the years of my contact (1965 to 1969), rejection reactions vis-à-vis certain aspects of my work and my approach to mathematics, as there were in Serre; this is what has allowed it, in the space

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three or four years ago (seen its exceptional resources, and p. 1119

exceptionally favorable circumstances as well), intimately assimilated and in its entirety the broad vision unifying who was born and had grown in me in previous years. But his relationship with me ⁸⁵⁵ (*) I abstained two or three times to appoint Serre in Fatuité and Renewal; So at a time when it seemed not useful, more often, to name those persons on whom I spoke so slightly critical. The passages of Crops and Seeds which I speak in the most detailed manner about Serre and the relationship between he and I, being in the notes "Nine months and five minutes," "Brothers and husband - or double signature" and "The unnecessary details" (notes n ° s 123, 134, 171 (v)).

⁸⁵⁶ (*) Between 1965 and 1969, while the relationship between Serre and I always stayed close, but rather Deligne who played the role point of contact. The reason is probably in very strong affinities of temperament, especially in an opening Deligne (vis-a-vis what I felt like most of what I had to offer) that was often lacking in Serre.

I come down on the very different nature of a relationship and the other, which were both closer in my past mathematician. See also note cited in note b. p. following.

⁸⁵⁷ (**) On this complementarity, and the affinity between Deligne and I already see note cited "Brothers and husband - or the double signature" (n ° 134).

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was deeply ambiguous - and played consistently on this tacit relationship of pupil and heir, who represented for him the means of **power**, while denying the options and attempting to bury and teacher, and his vision. . . .

There was no ambiguity in this order in the relationship between Serre and me - at no time it entered in this relationship, of either party, the slightest hint of taking a "power" over the other, or of use this relationship for purposes of power. I dare say, even, that such games can not exist not in the "middle Bourbaki" who had welcomed me, late forties, and I do not think I was witness, much less a co-actor (even against me) in such games, until yet

I left in 1970 ⁸⁵⁸ (*). Another likely way of saying the same thing about the relationship between Serre and I (or the relationships that I have observed in the middle Bourbaki): at no time I did detect the lesser component of antagonism ⁸⁵⁹ (**), on either side. There was the opportunity frictional,

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sure, which was discussed and on which perhaps I shall return, but this is quite another thing. The relationship between Serre and I drew strength, it seems, our only common passion for common mistress, mathematics, not without it mixes component "parasite" of egotistic nature where the other would appear as a medium, as an instrument, or as a target. Therefore without doubt, taking up lately with Serre a match interrupted for ten or twelve years, I found in the between-the-lines of the two or three letters I have received from him, the signs of friendship and delicacy intact, as if it had just left only the day before. Moreover, even as the opportunity to write had not presented for more than a decade, echoes that reached me of Serre, from time, were all going in the same direction of an unchanged friendship - and not in the burial tones, as was the case for many of my old friends. It is also why, until recent weeks yet, the idea of me would not be coming that would Serre played a role in my Funerals. Everything that came from him, and all I knew him, seemed well go in opposite directions. It is sure, moreover, that his mere presence on the scene has set certain mathematical limits to the Burial (limit more modest, it must be admitted...). Leafing through the book of JS Milne "Etale Cohomology" ⁸⁶⁰ (*), published in 1980, so **after** the amazing "SGA operation 4

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- SGA 5 "I was

⁸⁵⁸ (*) I should nevertheless make a reservation, taking account of a game that was played entirely unknown to me, among some my students about my person and my work. The game began at least as early as 1966 (when the ends are seminar SGA 5), with the first episode clearly visible Article Deligne 1968 degeneration suites spectral (see the note about "The eviction", n ° 63). I have started to take notice of these games, which are well power games, than last year, nearly twenty years later. It is true that the active players were not members of middle initial who had welcomed me and which I had built myself (environment in which I still do not discern such games, even with hindsight that makes me more mature). They formed "over". It is also true that the qualitative degradation I see in this succession, from the mid-mother, is certainly closely related to a similar degradation that has made in each Member (or nearly so) this initial environment of exceptional quality. On this subject two Section "Bourbaki, or my big chance - and its reverse," and "De Profundis" (n ° s 22, 23).

⁸⁵⁹ (**) I should nevertheless make an exception here of the episode Surviving and Living, the beginnings of the seventy years. This episode had

revealed in full light as my own ethical and ideological options, on many points that seemed important (and still seem so today), were at odds with those of almost all of my friends the mathematical establishment, including Serre. That what put an end to my sudden feelings of identification with this "Establishment", I had tended to be confused with a "mathematical community" ideal (and idyllic). (See this about the "The" Mathematical Community ": fiction and reality", n ° 10.) This unexpected revelation, and the "change camp" which resulted in the space of a few months, then led me to adopt antagonistic attitudes with respect some of my old friends that I now tend to classify as "reactionary", etc. I from, income of these peremptory and superficial rankings. Still, by a reversal that is not surprising, Greenhouse was part of many of those that, for a time, I perceived as "enemies", otherwise as "awful". I have been pleased to note that this episode has not left traces of her resentment or hostility - neither do I, is it necessary to add!

⁸⁶⁰ (*) Published in Princeton University Press, Princeton, New Jersey. This is the same JS Milne, who two years later participated in the scam of "memorable volume" Lecture Notes 900 (discussed in note "... and exhumation", n ° 168 (iii)).

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struck by Milne follow "trusted", almost verbatim, the terms in which Serre had expressed in a Bourbaki seminar (February 1974 n ° 446) about the paternity of the cohomology spreads, namely that the theory was "developed by Grothendieck

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with the help of M. Artin " ⁸⁶¹ (*). It is p. 1121

visible in more than one way Milne has read only occasionally in APG APG 4 and 5 ⁸⁶² (**), and it follows both Serre (speaking casually on APG APG 4 and 5, in the same presentation Bourbaki) and Deligne (débâtant shamelessly these seminars, the volume-coupde-saw his pen baptized

"SGA4 1

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") To present, in his introduction, the original texts SGA and SGA 4 5 ⁸⁶³ (***) as difficult to access. This is precisely the situation that his book (after that of Deligne three years, a bit thin anyway the armholes) is supposed to remedy; or, in short, avoid the user work useless and tedious to read the original texts. The opinion of the highest elevations (first in Serre Here, followed by Deligne with a deceased person who remains silent and tile in its padded casket. . .) Milne view that as everyone follows eyes closed (when it is eagerly given the context funeral. . .) Excludes conclusively that these texts have something other than "unnecessary detail" (or a "matrix of non-sense." . .), But the foundations of a new "general topology" topos Version (Buried unanimous agreement along with the worker...) - and that we can not more, in the long run to the economy of this new topology allowing (among others) the emergence of the theory that the book deals Milne, we could not do that of the ordinary general topology, Milne, Deligne, Greenhouse had the advantage (Like myself) to learn about the school benches, and they therefore admit obediently (like matter of course) that the game was worth the candle. . .

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I think it was last year that I threw first a quick look at this presentation p. 1122 Bourbaki Serre, on which I spoke recently in the note "Unnecessary details" (n ° 171 (v)), Part (a) "packets of thousand pages...." The passage where Serre ironic about 1583 pages of SGA had 4 then so little my attention, I had even forgotten entirely the thing, when I took the same exposed hands, there is a month or two, during the writing of the Four Operations. I have to say that this attitude of distancing Serre compared to my famous "packet thousand pages" was known to me long, since long before the appearance of the series of seminars SGA 4, and therefore did nothing for me surprise. The first time (I think) where such a reaction "visceral rejection" has been triggered in Serre, vis-à-vis a mathematical approach to style that is mine, was on the occasion of the theory consistent duality, I had developed in the second half of the fifties. They were right there "packets of thousand pages" at least potential, especially if we realize that there was a whole new cohomological algebra to the key version derived categories; but "package" potential or current, which was Flipping Milne©book, I felt it is written in the provision of good faith, and without deliberate burial. Even as his perception of things he apparently confined to max out the Serre and eminences Deligne, he has nevertheless deserves (and originality...) To speak politely about the mother-4 seminar SGA, SGA 5. 861 (*) Two years before, at the International Congress of Mathematics in Helsinki in 1978, in the speech of N. Katz (always even Katz) in honor of the new laureate Pierre Deligne Fields, the theory of étale is presented as "Developed by M. Artin and A. Grothendieck in the direction expected by Grothendieck" - like what alphabetically sometimes good things. . . The fact that Milne chose to follow Serre instead Katz, in his version of things, seems to me as a sign among many of his good faith.

862 (**) I was struck in particular that Milne (nor Mebkhout was yet a careful reader of my work...) Does became aware of the existence in SGA 5 a formula explicit Lefschetz for cohomological correspondence generalized ral on an algebraic curve, brilliantly retracted formula by conjurers care of two friends-scammers Deligne and Illusie - the artist©work, is the case to say! On this subject the two sub-notes "The magicians - or Formula soaring "and" Congratulations - or the new style "(n ° s 169 s 169 9).

863 (***) As for the published version of SGA 5, which (thanks to the "care" of the editor-Illusie sic) represents only ruin disfigured the original seminar, Milne has apologized to find the "hard to reach" The Good Samaritan did all Illusie what he could to make (at the pleasure of the Good Samaritan Deligne) an indigestible collection of "technical digressions." . . 849

clear is that Serre had no more desire to hear that Weil was suffering to see in black and white group cohomology, hear or say the words "topological vector space". This time though ⁸⁶⁴ (*), when I returned on the text of Serre 1974, on the background of reflection from one year to a Funeral (which, in 1974, four years "was well underway"...), this passage ended up making tilt. It worked in me, slowly, over days and weeks. I visited account that attitude Serre, to which I had got used to me and, before I left, "not fired no consequence, "acted as a sort of **green light** to the burial has taken place. The first thing in the sense that struck me with the force of evidence is that the very terms of Serre (but "with malice and impudence more "), were taken eagerly by Deligne (or better say with a secret delight) just three years later, as "background noise" for his memorable Maneuvers.

I speak for the first time in this sense, in the note referred to above, on 4 May, and this reflection is approfondit in part (c) (May 27) of the same rating, "Things that look like nothing - or drying out ". This is also the first start of a reflection on the relationship between Serre and I

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the lu-
p. 1123

Mière particular supplied by the Burial ⁸⁶⁵ (*). In writing these pages, there should be in me already

diffuse perception of the crucial role played by Serre in the Burial. In the two weeks that have since, integration work and assimilation of a range of facts and impressions had to continue, and inertial forces opposing direct and nuanced perception of things were, I think, resorbed, without fighting and effortlessly. The moment the wall seems to carry this work forward, trying to this as best I can, to formulate is perceived.

One might think that this propensity old date Serre, to distance compared to some aspects and parts of my work, acted as a kind of unfortunate accident, which would, unfortunately, favored an equally unfortunate Burial. This would be yet a superficial view, which not touch the bottom of things. To come straight to the heart of the issue, it became clear to me, given the unique relationship of Serre in myself and my work, and also saw its exceptional ascendancy over mathematicians of his generation and those yet that followed, that **the burial could not take place, if there had been in him a secret acquiescence to my funeral** .

In addition to a "deceased" decidedly missing, there was this Burial **two main actors** , including acts and omissions were chained and completed, without any friction or smearing it would seem (But there is no question, however, for me to speak here of collusion, as the two protagonists worked on different forks): these are Pierre Deligne and Jean-Pierre Serre.

First, there was considerable discussion from the very beginning of this long reflection on the Burial; he represents "the foreground of the painting" the burial, as the Great Leader Funerals, at the same time heir occult and the main "beneficiary" of the operations he has the initiative (and this even before even the "death" symbolic of the deceased. . .). Serre, he referred here for the first time as leading figure of the Funeral ceremony, represents the "third picture plane", formed of " Congregation of the Faithful ".

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Since last year already, or rather, from even before I discovered the burial under his p. 1124

crudest and most aberrant forms (and under that name), I knew that those who buried me such a hurry, in a world where I was not known to me of enemies were before all my other **friends of yesteryear** , some of which had not ceased to count (albeit lip...) to

864 (*) In fact, this is only the third time I have had this text in hand, it has "ended up tilt".

865 (*) In a previous note b. p. (Note (*) 1117) I also found two other notes that I spoke to

about the relationship between Serre and I, but in quite a different light - the light "before the burial."

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many of my friends. Now it is also clear to me that among those of his friends who were also (and especially) my students ⁸⁶⁶ (*), who was really the **mainstay** of the ceremony as representative of the Congregation and as guarantor of the acquiescence of all the faithful, was that too, of all people, who the level of our common passion, was the closest to me.

The most striking sign of Serre acquiescence is certainly not for me to some quip, sent with the casualness that I know him well - this joke that nearly escape my attention (Although it was not lost for everybody...). The sign of a truly astounding evidence once I stop myself, for me **in the ignorance in which it pleased him to remain** at about this Burial which is just held under his nose, this is the case to say ⁸⁶⁷ (**) - a burial artwork

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to which he had been linked from the outset, and closer than any other person in the world. And it is ^{p. 1125} for me a total mystery if reading Crops and Seeds (assuming that reads this "package" more thousand pages, still ...) will finally encourage the use his nose (as fifteen years already that gamy hard ...) and the rest. But I know that for him, much more than any other participant my Funerals, welcome my message and use its healthy faculties is also agreeing to put itself because, deeply.

It seems to me that the role of Serre, head of the Congregation of the Faithful came to attend and chorus my Funerals, is both typical and exceptional. If special is its extreme character - in As the most close to me, closer than any other member of the Congregation; and also by its sta- Exceptional ture ⁸⁶⁸ (*). This eliminates deep motivations components "pests" usual antagonism "by offset" ⁸⁶⁹ (**). As I already mentioned earlier, I can not find in

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the relation ^{p. 1126}

⁸⁶⁶ (*) Throughout the reflection in Crops and Seeds, it became so increasingly clear how the mere fact to have been a student of someone (me in this case) indicates a relationship and gives it a special quality, making close relationship to the father or the mother.

⁸⁶⁷ (**) We can say that in its statement cited Bourbaki 1974, where he exhibited the demonstration by Deligne the last part

conjectures of Weil, Serre had his nose right in the Burial - not yet have the innocence to take note. I have grown to feel discomfort in him being confronted with this situation, aberrant in appearance than ten years after my presentation (to Bourbaki seminar also) I outlines the demonstration of a formula of l-adic cohomology L-functions, the "formula of fixed points" crucial (that I had accepted) still was not demonstrated in the literature. Greenhouse then chose to **evacuate** this discomfort by a mood movement, ironically on the famous "1583 pages" SGA 4 (meaning: and that did not provide **even** the formula was needed). This was the way a facility, consisting of avoid an unpleasant reality (x). He knew very well yet (but it pleased him perhaps to forget...) In the seminar SGA 5, I had demonstrated far and wide a formula of fixed points ranging far beyond that for correspondence Frobenius - and he also knew that the writing of my talks dragged on for eight years already to hand * of so-called "Editors" volunteers. If he had been pleased to forget the theme of SGA 5 ("L-functions and l-adic cohomology" - the title says when even what he has to say) and its contents, he knew enough yet, for more than twenty years he had seen me do math, to know it was not my habit to do things by half, on the contrary (and I made them even so "not half", he was often annoyed or exasperated. . .). This could help refresh her memories, what happened in the seminar SGA 5, where he had set foot often enough, at least, to know in large lines what I was doing and what I had. Obviously he did not want nor to see his memory refresh, or ask questions. And this is one case among many others, where my friend preferred to close their eyes and their noses rather than take note of that fact could take without getting deeply involved himself. (X) (June 22) I came to realize, since these lines were written, that such "unpleasant reality" Yet now eagerly welcomed, almost as a boon! On this subject the parts. summer. "L@lbum family". 868 (*) There is a third circumstance which gives the role of Serre in the Burial this exceptional, or "extreme". he is part of the group of "benevolent elders" who welcomed me on my first contact with the world of mathematicians. (About this group I am speaking for the first time in my life, in "Welcome Abroad" (Section n ° 9) and in Introduction to Crops and Seeds (I 5, "a welcome debt").) Perhaps this is the main reason, in addition to links Friendship and sympathy between us, which made it took me over a year to go to the evidence and make findings the crucial role played by mathematical Serre my funeral. 869 (**) I mentioned already a couple of times here and there, in that "without cause antagonism" (apparent), in particular in the note 851

Serre to my person or my work trace of antagonism, and it is clear to me that there has traces in the deep forces at work in his acquiescence. As far as I know, putting Apart from the famous quip, this acquiescence was speaking purely passive manner only, by **omission sions** no more. But the "green light" given to a tacit Burial of vast dimensions, together with operations Such a huge point of sometimes they seem to define and common sense and decency, strikes me now as the "during" essential and crucial, the "negative" in a way, the intensely active and Deligne interested in the same Burial 870 (*).

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It seems to have deeply perceived the force that was used in Serre. It is at a level p. 1127 deeper than a personal antagonism or of looking for a "profit" in the usual sense April 3 (below) "The messenger (2)" (n ° 182). There is no doubt in my mind that such antagonism "archetype" is work in the vast majority of participants at my funeral - maybe even at all, with the exception of Serre. This strength appears to me as distinct from that expressed by the suppression process (or "funeral") "of women disowned who lives in himself. "But these two forces are nevertheless interrelated, and the Burial they are bound up and appear in a kind of amalgam, where it is often difficult to separate. I believe however they have identified **the two great forces** that have been implemented in the Burial. But I would be hard, now, to tell if there is a that is paramount over the other, and where. I would think that this is the first of two I have found, namely, the strength of repression of women pouring into his own being. If the case of Serre occurred to me sometimes "typical" (together than exceptional), it©probably because it is this last among the two forces (the one I tend to see as paramount) who appears in all its strength, to the exclusion of all traces of the other (referred to herein as "parasites" - in the sense that obscure a clear understanding what I thought perceive as **essential**). I assume (for a little work of integration and assimilation of facts and gross perceptions still continue) that the coming months will bring me a more nuanced understanding of the share due to one and the other forces involved, both in the burial, as in other conflict situations in which I am involved in one way or another.

870 (*) There is here an **inversion** remarkable in the distribution of roles between Serre and Deligne in the burial: the Serre appears almost exclusively passive, the Deligne as intensely active (although this role of "leader game "is constantly obscured, for the purposes of the case and in accordance with the particular style of my friend Peter). In

Actually, it is nevertheless the person Serre is dominant "male" strongly pronounced, and the dominant Deligne "Yin" (or "female") such as marked; and this (for one and for the other) both in terms of egotistical mechanisms the "I" and its packaging (so that the " **boss** ") than that of the discovery of impulse, what is original and escapes (as intimate nature) to the packaging (the level of " **child** "). Between the extremes of opposite temperaments Serre and Deligne, the two "pillars" of the burial, the deceased, he represents a kind of medium term, strong dominant "Masculine" side of the "boss", and dominant "female" just as strongly pronounced side "workers" (or "child"). (This distribution of "basic tone" appeared in the note "Brothers and husband - or the double signature" n ° 134.) The forces and mechanisms of "reversal" between the yin and yang roles were also **the** main theme of reflection, giving rise to the long meditation "The key to the yin and yang" and remaining present in filigree throughout it. It appears implicitly from the first note of the Key, "Muscle and tripe (yin yang bury (1))" (n ° 106) and pass more or less to the forefront of attention in eleven among subsequent notes (notes n ° s 124, 127, 132, 133, 138, 140, 145, 148, 151, 153, 154). Here I just fell unexpectedly to a situation of "reversal" somewhat similar, driven by the internal logic of profound forces employed in the Hen.

I was struck by the way, recently, a further aspect, apparently paradoxical, to "overthrow" yin roles and yang in this Burial rich apparent paradoxes! It is this time of the respective roles of the "deceased" a premature hand, and all participants to his burial, on the other. At the collective unconscious intentions, this Burial of a deceased (supposed to be contained in the complete passivity befitting his status) is that, before anything else, to "Mathematical feminine" - a style and an approach to mathematical connotations strongly "feminine"; so burying the congregation is supposed to embody the masculine values "hard and fast", engaged in disdain suitable soft female decay. (See for example, on the subject, notes "The funeral of yin (yin yang bury (4))", and "The circumstance Providential - or the Apotheosis@n ° s 124, 151.) However, the internal logic of the situation requires each participating "pure and hard "in question, to play a game typically" yin "or" feminine ": A game" to velvet paw ", halftone, in silence, omissions insinuations placed there casually, or constantly thing as is suggested while pretending to say otherwise - style "thumb", in short, where my friend Pierre has mastered them all, and each of buriers had so little to do his, by force of things- (see, about this style, the note "Go!", and especially the notes "Paw velvet - or smiles" and "Reversal (4) - or conjugal circus", n ° s 77, 137, 138.) This is the "deceased" by cons, the incarnation of bloated feminine softness that out of his cozy coffin when you least expect it, suddenly takes a role "macho" which was familiar to him, playing cards on the table, thrusting his inquisitive nose and a sassy verb, flashlight in hand, in the most exquisitely ambiguous shadows, calling each by name and roughly a spade a spade and a rascal rogue - a real uncouth to be honest, and downright troublemaker around in circles in the hushed purring of a beautiful

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the term. The recent exchange of letters with him was revealing in this respect. I feel that these fifteen years have passed since my departure has come over my friend a **processing** ⁸⁷¹ (*). This is precisely in the sense of this

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"visceral rejection reaction" vis-à-vis certain dominant aspects in my approach ^{p. 1128} mathematics. These are aspects that were present also, but to a lesser degree, in the approach of Serre himself in the most fruitful years of his past mathematician - of years of opening and intense creativity before does establish a process of **repression** of these then aspects of his creative personality, the "child" in him. These are the aspects and features "yin" or "feminine" creativity. The transformation I felt in my friend with startling force, is that of a state harmonious cooperation creative forces yin and yang, with a "dominant" yang (or "male") pronounced in a state of imbalance "manly zinc strand" where grades "yin" or "female" are extirpated no thank you.

Indeed, as I have already suggested there are two weeks (sometimes cited in the note), this is the culmination of an evolution which I detect the first signs from the fifties, and went be accentuated during the sixties. From that time already, there was a gradual breaking balance, manifested by a **narrowing** in the vision, and the range of creative faculties allowed to enter in. vis-à-vis rejection reactions of some major aspects in my approach to mathematics, and gradually vis-à-vis all that was really life, the depth and strength of my work - that rejection was only the outward projection, the tangible manifestation in its relation to my person, a rejection of any scope, vis-a-vis an essential side of his own being and his own faculties creative.

It is possible (as I suggested earlier) as long as I was around, the relationship with me has acted as a brake on this evolution in Serre, she represented in his life, in the fifties and especially in the sixties, a sort of counterweight, and thereby a factor of relative equilibrium. If this is so, my sudden departure had to leave the field open to repressive force feminine qualities - a kind of force that has become familiar to me, as one of the strengths egotistic dominant who also acted in my own life; with this remarkable difference, however, that in my If this repressive force was stationed at the only egotistical mechanisms and my relationships

others,

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without interfering with my love affair with mathematics lady, or (more generally) with my approach p. 1129 spontaneous in the adventure of discovery, whether mathematical or other 872 (*).

Going back to the burial, I can do better now than quote the lines end here

reflection of 10 November, in the note "The funeral of yin (yin yang bury (4))" (n ° 124, page 564):

"... And the funeral suddenly appear to me in a new light, unexpected, where my per-

sond itself became accessory, it becomes **a symbol** of what is to be "delivered to

contempt. "These are not the funeral of a person, nor those of a work, or even those

Funeral ceremony. . .

871 (*) The term "**transformation**" is immediately associated with the "**metamorphosis**" in my friend Peter, I clearly perceived,

for the first time during his visit home last October. (I speak about this in the note "The disavowal (2) - or

Metamorphosis", n ° 153.) The term "metamorphosis" is stronger, and corresponds to the fact that there was, at my friend

Peter, a

real reversal of an original installment "dominant" yin pronounced in borrowing attitudes "macho" to strand

zinc. This apart, the transformation that I have felt in one and the other friend is going in the same direction, and is driven by

the same force

repression of feelings traits as "feminine".

872 (*) I am speaking about the role of this repressive force in my own life, in the note "The Superpère (yang buried

yin (2))", n ° 108. I began to detect the force in 1976, which marked a crucial turning point in my adventure

spiritual. It is about the turning point in the two notes "reunion (the awakening of yin (1))" and "Acceptance (waking

yin (2))", n ° s 109, 110. I make the finding of dominance traits "feminine" in my mathematical work (which said

traits appear to have refugees, out of suspicion!) in the note "The sea comes up...", n ° 122.

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impermissibly dissent, but the funeral of "math women" - and more deeply

ment again, perhaps, in each of the many assistants came to applaud the Funeral Eulogy, **the**

funeral of the woman who lives disowned itself. "

This last intuition appeared that day in a sudden flash at the same time to write the last two

lines from the as an unexpected revelation, in addition to that which was the subject of the preceding lines.

This intuition has remained like a watermark in my reflection in the weeks that followed, for

be finally resumed and deepened in the three consecutive notes 23 to December 26: "The fact

Providence - or Apothéose "" The disavowal (1) - or recall "and" The disallowance (2) - or metamorphosis".

Neither the day this intuition first made its appearance, nor in the first two of the three notes

cited, where I probe further, I had in mind a case of specific species, if not, ever so slightly, the

My friend Peter (discussed in more detailed manner in the third note cited). I knew, for

Furthermore, that this case was not typical for the whole congregation Faithful, forming

the famous "third level" for my burial. Also, failing to exemplify a case of specific species

my apprehension of a certain reality, suddenly interview remained tainted

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yet some uncertainty - the

p. 1130

offerees things, "sues" at some level, but not fully and clearly "seen". I remember

vaguely have been a little embarrassed by this blur, there was a hint to find someone "representative"

among those of my friends that I knew to be involved in the burial, to "hang" in some

so this knowledge spreads, see the incarnate into a tangible reality.

The thought of Serre not crossed my mind at any time then - he was one of the few among my

old friends, for which he was determined (the conscious level, at least) that he, at least, was not

party to my burial! But if my mind groping did not find the time (or earlier already...)

one that, in my Funeral, was to embody in his person "the whole Congregation" is probably

that somewhere in me, it had to be clear that there was **one person in the world** fit to play

this role - and that was the person, precisely, a heaviness in me made me excluded from the outset, by a

tacit and conclusive taboo. . .

Now that this weight has dissipated, following a slow, dark underground work, it seems to me

now in full light it is also that of all people to whom this intuition-to-the-looking-d@ne-

incarnation applies to such a perfect focus, one might think that it was none other than this

even that would have given rise in me that would have given him, from the moment it appeared, this force

peremptory and unanswerable things "sues" 873 (*).

d. The Entrerrement - or the natural slope

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(June 17) The reality whenever exceeds any presentiment

p. 1131

BUILDING (so acute it may be) and even "knowledge" as one can get - and it is only rubbing me at turn in the road and often unexpectedly, as I permeates gradually, its taste and its Odour. Even as this contact might seem to **confirm** simply, without more, which was foreseen or "su", yet it often disconcerting, ruffling bluntly some **incredulity**, almost ineradicable, vis-a-vis this which is indeed known, said, written, repeated and re-written - and yet, 873 (*) I am still inclined to think that "one might think" is indeed the reality of things. This would attest, once again, is how our faculties of knowledge go beyond the pale and pathetic reflection which we allow access the closely delimited field of the conscious look.

(June 14) The thought, or sudden intuition that ends the discussion before yesterday, she also appeared in "flash" when write no apparent preparation or review inclination. She introduced herself with a kind of "strength of evidence". It is only afterwards that I remembered that in the note immediately preceding that which is extracted the passage quoted November 10, I had occasion to mention just at some length the person Serre and the relationship between he and I (and this for the first time, moreover, in Crops and Seeds).

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a certain level (one of immense gravity), continues to remain a dead letter. More than once I detected this weight then 874 (*) and my impatience is irritated - a stubborn gravity that would tenaciously keep me in the rut of ideas and familiar images, or those with more or consent less general - and this, even though I "know" as much (or someone or something **else** in I know well. . .) That these ideas and pictures so installed are a lure, an obvious lure often they do not hold water. . . The thought even animated by an intense desire to know the final word (of the thing to the Once "sue" and challenged) - the thought is powerless alone to delete this weight there, deeply rooted in the structure of the self. This is the compelling force of contact with reality, only who has power sometimes shoving the gravity of the start or move a tad, if not really clear.

I called Serre yesterday. It was a simple question for information about Tate notes "Rigid analytic spaces", which was discussed recently 875 (**). I thought vaguely remember it there was a short introduction to the text, indicating the sources of this work - it seemed to me that this introduction had "skipped" the edition made by care Inventiones Mathematicae in 1971. In fact, Greenhouse confirmed to me that in the Tate notes, there was no such introduction. It was a bit of notes day by day, that Tate had sent Serre on his stiff-analytical cogitations, such as letters almost, and (of course) without any fixed idea of publishing. I remembered taking care of the broadcast by faires care of IHES (with the subtitle "Private Notes published with (out) His permission"

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- after the name p. 1132

the author), but I had forgotten that Serre was intermediate. Anyway, aside from Tate and me was Serre who had been the most "in the know" in the birth-rigid analytic spaces in 1962. It is he who explained to me, maybe a year or two before, the theory of elliptic curves called "Tate" on the body K of fractions of a complete discrete valuation ring. I was a little stunned by what I remember as a flood of explicit formulas (and, it seems, "classic"), who passed me a little over your head, not "hang". But he remained a striking geometric image aroused Surely a comment Serre in this direction: in short, the elliptic curve Tate (or, at least, its "points") was obtained by "passing ratio" in the multiplicative group K^* by a sub discrete isomorphic group Z . It was therefore analogous to the complex case, where is first divided by a first C Z -factor to find C^* , and then again by a factor Z , this time to find an elliptic curve.

In this case, the passages to the quotient had a specific meaning in the complex analytical field, and theorems the Riemann-Serre (GAGA type) ensured that the final quotient (which was a complex curve compact) has a canonical structure curve **algebraic**. In the case of Tate, alas, working in the context of analytic spaces so slightly familiar, the body full value K , as was quotient compact analytic space **totally disconnected**, and there was no chance of a draw elliptic curve. And yet (that what Serre had to say then) everything happening yet, like ... Still, Tate managed to make in terms of K^* and its discrete subgroup, genuine elliptic curve, with blows of explicit formulas.

I think I remember that neither Greenhouse, nor Tate believed that there would be indeed an "explanation" in terms of a new concept of "analytical range" over K , for the computational construction Tate 876 .

874 (*) See also, about this "gravity" and that "disbelief at the testimony of its healthy schools", the note "The duty accomplished - or the moment of truth" (n ° ... 163), p 782-784, including footnote b p (***) 782 p..

875 (***) See Note "La Mafia" (n ° 171), part (c), "Fading memories - or the New History".

876 (*) (September 1985) As it appeared in a match Serre last July, there has been distortion here in my memory (as there we had at Serre) - Letters Tate (of 04.08.59 and 16.10.61) and me (from 8/18/59 and 1.10 and 19/10/1961), addressed to Serre possible to reconstruct the sequence of events. This is Tate (not greenhouse or me) who

first had the intuition and the belief that there must be a "new notion of analytic manifold" to explain simply
ment formalism "elliptic curves Tate", to August 1959. For me, it was not "the penny dropped immediately" (as I
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As for me, it had immediately tilt (*), and there was no question for me to "see" the Tate curve
other than as a result of a passage to the quotient, for a concept of "variety" suitable remained to
clear - the kind of work, in fact, I have a crush! It is possible that this is also Serre,
while it is skeptical, which I reported that there were people, and at least Krasner, who "made the
analytic continuation "of the full body gains ultrametrics so totally disconnected. This
could therefore seem to bring water to the mill of my hope (a little wacky) there would be, nevertheless,
a "good idea" of analytic manifold, smarter than we knew and close (by properties
Type "connection") of

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real or complex analytic varieties or, algebraic. But again,
p. 1133

I was the only really in the trio, believing it - at least that was the impression I had had then.
It continued to trot around in my head for months, one year perhaps I can not say. The
situation reminded me of an old perplexity - how impossible it was in the conceptual context so
available (shots ringed spaces, such schemes and formal schemes) to make sense of the **fiber gen-
neric** a formal scheme of the discrete valuation ring envisaged A. It quickly became clear that it was
essentially the same perplexity - and the kind of "varieties" I was looking to make sense geo-
metric to build Tate, was to be the very one that would give meaning to that famous
"Generic fiber" even nonexistent. I finally had a third thread (besides the rumor about
Krasner), appeared in 1968 - it was the intuition of "generalized topological spaces" (which then had not
given a name yet as **the site** or **topos** , since I had not started conceptual work on parts)
which was to define the famous "Weil cohomology l-adic" Incoming (implicitly) in the
Weil conjectures. This suggested to me that, as for cohomology Weil, the new "species
structure "I was looking for was not to be sought on the side of listening" ringed spaces "ordinary,
but may well be in the "generalized spaces", provided with a suitable ring beam.

I can not say more when these scattered intuitions have come to be quite strong and convincing for me
push to open a parenthesis in my common tasks (especially the EGA and SGA) to begin
work on embryo pieces. What I know is that this work was done as often in
loneliness - I was the only one to "see" that there was something, and only as a result, was able to
then take the first job that would lead to the day. I remember that I began to think about a few
hours here, a few hours there, even a whole day, just as I would have skipped school (then
that the work "running" yet not lacking!). I ended one day take the bit in his teeth, to
get to the bottom, and stuck with me for good - I had to spend at least a few days in a row, if not
a week or two. The hard part, it was to reach beyond inveterate habits of thought that without
constantly seemed to want to retire in the rut of the known - that of analytic spaces "ordinary" (called
Now, I think, "plates" - or "Welk" in German). I have had to take me three or four times - from
emerge

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the rut, when I saw that I was back, like a horse in his stable! But really,
p. 1134

here, this is **not** the old who would do the trick. . .

After this job, I had a clean breast: modulo additional technical work, that I was not
believe in remember), my first reaction to the suggestion Tate was skeptical before starting to think
On the question. I had to be convinced soon after, as soon as I realized that the existing concepts (including that of
formal scheme) was not possible to account for the phenomena associated with the elliptic curve Tate. Within two years
that followed, I think I was the only one to think about a principle of definition for the new concept, while Tate nor
Serre had the slightest idea where the address. It lasted well until October 1961 when I gave Tate the prime contractor
a theory. It has triggered immediately to develop the necessary foundations for taking on local songs (work
which would hardly have made sense before having a clear idea how it would then be possible to assemble them to build
Global Objects). For more detailed comments and quotes las relevant letters, I refer to "Comments
Historic "provided in Volume 3 Reflections.

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motivated to do so, I had developed a concept of "space, stiff-analytical" (this is the name that I said
gave to express the word "rigid" properties such connectivity, relatives of algebraic varieties

and at odds with those of analytic manifolds called "plates"), in any case sufficient to meet two desiderata which were then in my mind: an interpretation in terms of these spaces, construction Tate, and credits of a formal scheme fiber.

I did not think so to look any further, I pressed especially was returning to the tasks that I had temporarily abandoned. If I had a little toy, I quickly realized that spaces as simple as closed rings $r \leq r \leq R$ (which also merited structure "rigidly analytic") escaped my building. It was Tate, I was made aware of my cogitations of course, who made the adjustments necessary in order to include them. Apart from the conceptual work itself, that I had the most part, there was also a work of a more technical nature to do, to have a good command over the "building blocks" used, playing the role of affine schemes. It work which is justly with elegance and care that characterize it in the Tate notes 1962 877 (*).

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It took me a while elsewhere, before going to the evidence that the bricks I had p. 1135 used were a little short in the armholes. They were enough to the two initial problems that had me motivated - so why look any further! It was hard to budge. Tate has convinced me of its quiet and careful manner at a time, after all, there were not just two examples there, and even if I did not seem to even have met circular rings in my life, it was not a reason to exclude. And there was no way, apparently, to the "catch up" with my building stones me (if not by using an infinite number, which was more or less fall into the rut "flange").

877 (*) To make sense of things, I think I can say that my work as that of Tate accounted steps, all as necessary one as the other, for the birth of the theory of rigid-analytic spaces. My hand was in vision Initial (who had failed both Tate, at Serre) and in a mostly conceptual work, which was not free provided certain technical aspects, the need to address head on. Tate's share of the work was mostly technical, without that there was also there a part of conceptual work. My job was to keynote "yin", "feminine" (Which is why, in addition to my absence from the scene, it is object of general esteem), the Tate to keynote "Yang", complies with good taste and good holding guns.

If I had not stepped in, pushing my work enough so that there is the slightest doubt about **the existence** of a good concept "rigid-analytic" and a clear vision of a project manager of a theory, it is likely that this notion would not have seen the day today. Indeed, while we could not fail "sooner or later" discover and develop this notion, which is not an "invention", certainly, yet his need is not felt in the twenty-three years that have passed since, enough compelling way to "force" hand "leap". I was the first apparently to provide (1966) a further field of application of the rigid-analytic theory, apart from the two initial motivations, with development of crystalline cohomology.

I have no knowledge besides other geometric uses the three I had planned - by counting it, of course, the generalization of the Tate's theory of Abelian general schemes. It seems that people who have the more "worked in the subject" saw this material especially for developing a vacuum in theory (as it existed, and that put away the consensus among the "serious research themes") without inserting it in a larger geometric vision. This is a striking case of **atomization**, the fragmentation of mathematical thinking, linked to the contempt in which fell any kind of work foundations, like any work that is not reduced to a technical tour de force, for solve a "problem in the competition." A particularly eloquent sign is the absence of any attempt to develop a notion of rigid analytic space more generally, that would be one developed by Tate as the schema concept is that algebraic variety on a body - so as to interconnect the rigid-analytical geometries on gains body complete "variable" (including, variable characteristic, and including both real and complex cases that cases "Ultra-metric"). This absence is a sign among many of the amazing mathematical stagnation of these last fifteen years, at any work foundations (obviously crucial in this case).

Returning to Tate and me, it is just as likely, certainly, if my first "breakthrough" had not "done tilt" at Tate and had triggered for a "second round", the rigid-analytic spaces would not exist anymore I would have spoken well here and there around me, but the juicy issues (including issues that seem more "urgent" yet) have never failed, it is doubtful that anyone would have hung - and especially not today, certainly, while decidedly the idea of introducing something as preposterous would have looked too much to someone he is not more charitable not name here. . .

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I had done my share of work in my corner, as was normal, then I was the only one to believe - but it prevents, of course, that once reached the end (provisional), I did not fail to talk to both main (and

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virtually only) concerned, namely Serre and Tate. At Tate apparently the penny dropped, and p. 1136

I think Serre had to be convinced also, when I told him what I had come. I do not have clear memory about this, but if by extraordinary it had been otherwise, I would certainly reminded me. So when I called Serre yesterday, it was going to me saying he knew just as well as I

practically, what was my part in the birth of the new concept of variety. I did not foresee it there would be an opportunity to allude to, but it was he who pointed out to me, when I told him notes Tate, that they had been published only in *variatur Inventiones*, and besides Remmert and two authors came out a book on famous stiff-analytical varieties. This is the book I had the opportunity to talk recently in the note "The Mafia", part (c 1) "Fading memories - or New History", where I overwhelms Remmert for a "poor memory" (whereas the same notes Tate could well freshen him), serving a bad faith that seemed obvious. I touched on word in passing in Serre - I already had the opportunity in my last letter to him to allude to some Burial 878 (*), and there was a picture, well, pretty obvious.

The first pretty crazy thing is that Serre (God knows he was ringside in yet time) - well, either, he did not remember, but most of all then, I had been for some thing in the famous stiff-analytical varieties! I was literally speechless! It was really crazy - when I referred to him in a modest part I believed to be taken from the two examples sparked me is **just the contrary** he seemed to remember, Greenhouse him almost that I would wanted to know nothing of these new varieties, saying (according to him) than formal schemes, we already had all that he

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needed! I struggled to believe my ears, on the spot 879 (*) - and yet, a few days p. 1137

just before, I had to write more confidently in the world a few pages, which spoke of a crucial role, a role of "pillar" that Serre would play in a Burial. Well, here for once, I was right in the Funeral, in front of my nose to the other end, and in the person of exactly Serre the same, very comfortable as is his habit, and obviously the best faith in the world! (And I evil imagine, anyway, Greenhouse bad faith, especially when it comes to math. . .). I did not have the mind to discuss, for sure, and Serre even less, but there has been a conversation desultory, for five minutes or ten. Ten minutes well employed if it was, for me rub, the tangible reality, color, taste, smell and all of a burial that had finally become a bit distant force to confine myself to look only paper!

The first thing I had to think to say is that the **name** itself, "rigid-analytic spaces" is me 878 (*) It is in response to this letter (in the last letter of Serre I received) that Serre quoting the expression of Siegel on "Verflachung" ("kurtosis") of contemporary mathematics, which I commented and I am pursuing in note "Unnecessary details" (n ° 171 (v)) (c) portion, "Things that look like nothing - or drying out." As I say in this note, Serre had dismissed that impression Siegel as "**unfair**" - yet I had the impression it the turlipinait rather, that Siegel thinks like that. And it is this same term again (probably without purpose) he uses to dismiss I also refer to a burial.

Needless to say, the idea did not come to him to ask me **what** so made me say that there Burial (I do had not said a word in my letter, preferring to wait until he asks me). The reason, obviously, was already heard. . . 879 (*) Looking back afterwards, I understood what was the distortion that has occurred in the memory (just failed on the edges) of my friend. As I had taken the formal schemes as the main and almost sole guide to clear a defining a rigid analytic space (so as to be associated with a formal scheme a rigid-analytic generic fiber) he retained (twenty-three years later) that I would have supported adamant that there was no need for a new concept of variety, because "my" formal schemes would be enough to everything. (Like what memory failures often make it right ...) Yet already K * (my second thread) originates **not** from a formal scheme. Anyway, here again, the cause already heard!

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who had given (suggesting, if I did not say clear: at a time when I was still the only one to dream, these things so I called. . .). Serre was a little taken aback - obviously, he did recall not, but it was also obvious that I was not having fun to fantasize. But never mind, a name this is just a name after all and **so natural** anyway. . . This "so natural" suggested clearly it was even so natural that it meant nothing, that anyone with the nose in front the thing could not help but call it just that name, "stiff-analytical". It was in fact a compliment my friend made me unintentionally, about that name - but to the tune of "if only it . . . ". Besides, I had published anything about it, right? So there was nothing to say...

I was more stunned. Published or unpublished, for me it did not change the reality. A woman bringing a nine-month kid and who

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into the world and he is frolicking and in good shape, someone p. 1138
tell him that this is not a kid in it, because nothing is published and it is not screwed to show the certificate birth - it©sure she will laugh in the face of chap who keeps him such a speech. Actually, I did not laugh at

Serre nose, which is not my style and anyway, I was still too blown. I did not think not more to discuss; Tate himself in his notes made no mystery of the part I had taken in the Startup theory (something Serre had apparently forgotten as well as Remmert 880 (*)) - and that 1972, when I wrote the outline Theme which I alluded 881 (**), Serre had not done mine yet to wince about it (his memory must have worked since that time). It would have been anyway penalty lost, obviously - as long as nothing was published, all I was going to say was going to count the Butter. . .

But the "not published" had tilt, I followed it - just as a major part of my work consisted of things not published, by word of mouth. I felt stunned Serre yet - this was an idea that seemed to seem him a little absurd, like a contradiction in terms "Work - not published ...", it seemed to him not

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go together. I said the word "reason", he jumped p. 1139 it immediately: there he would disabuse me of the idea of burial I was doing me happy end tell me that there are two three years, precisely, there was a whole book that had appeared on the reasons - really, I could not complain about the chapter "reasons"!

"So, you held hands, that famous book?" I asked him (it fell well, it was a moment that I thought of to ask this interesting question).

Held in the hands - but I wanted to laugh, perhaps, retorted Serre me, for sure he knew it, book ; he even spoke like one who would read in long, wide and across, and that is that he must have read 880 (*) I felt good again, that " **in any case** , the cause was heard." If Tate said he followed "so full faithful "a supervisor that I had given him, well that no problem - there was only one supervisor after while a wave pattern so that the first comer kid can trace in the sand, a wave grothendieckienne sauce is course - it was still nice to Tate, boyfriend really like not to bother to mention it. . .

881 (**) This is the text, dated 1972, showing a sketch rather dry (and not very inspiring) my mathematical contributions on that date, written on the occasion of my candidacy for a position at the College de France (post was recognition awarded to J. Tits). This

text, rose more detailed historical commentary, published in volume 3 of Reflections. This is discussed especially in the Introduction, 3 (Compass and Baggage). In Sketcher Theme, 5th), I write: " **Stiff-analytical areas** . Inspired by the example of the" elliptic curve Tate "and the needs of the" geo-formal metry "on a ring of complete discrete valuation, I had reached a partial formulation of the concept rigid-analytic manifold on a complete value body, which has played its part in the first systematic study this concept by J. Tate. Furthermore, the "crystal" that I introduced on algebraic varieties over a field of characteristic > 0 can be interpreted in terms of vector sometimes fibers integrable connection on some types of rigid-analytical areas on characteristic zero; This foreshadows the existence of relations deep between crystalline cohomology coach. $p > 0$, and cohomology of local systems on varieties rigidly analytical in characteristic zero. "

This also is the Grothendieck all over!

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indeed. I could dispense with the question, if there were found nothing special - it was visible not, and yet (that how we made, I can not help it!) I asked him anyway!

And as he did not seem to understand the meaning of the question, I told him that I, taking between hands last year, I struggled to believe my eyes.

I had to say the word "scam", but I felt that it was a pure understatement. As I had really felt, and still feel as I write these lines, it was **indecent** - but I abstained to read it. Basically, I felt that no matter what term I would use; nothing had happened since fifteen years that "it faisandait hard" and Serre chose not feel anything (this is indeed what I had writing, a few days earlier), and whatever I say, it does not "happen" not provided.

Serre, suddenly, it was launched, it was almost as if he had expected it. Scam? You want dream, my poor, but it is Deligne in person who wrote this book and a good job too, so - okay everyone knows that it was you who introduced the reasons, but this is not a reason to repeat Every time we hear the word "grounds", right? Besides you have never published a line, and that your yoga depended not demonstrated conjecture (I thought there hear someone talk me Serre mouth. . .), While just the interest of the book is that it uses no conjecture, actually it uses **nothing** of what you had done in time. . .

The tone was sharp and unanswerable, one that knows what he talking and who has nothing more to learn - with a hint of annoyance, a man

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bit rushed, attacked by a lourdeau who insists on not

p. 1140

understand the most obvious things. It was not the atmosphere to ask so little of anything

- everything was already settled and awarded visibly. The axioms of Serre, of ethics of the profession and what is important and what is incidental, had obviously changed - and there was nothing to do there. It was necessary that I take as is, with its new axioms.

So I hung on "speculative" in despair! I could have told him that the conjectures

Weil was too conjectural - and yet there was no question for him or for anyone to treat them

Below the leg - but it is true that these conjectures there, Weil had taken care to publish them! But as

I am just at the "Sixth nail" (my coffin) ^{882 (*)} I branched rather the "Galois group

motivic "it was nothing" speculative "him, I developed a theory of great precision on

categories of the Galois-Poincaré type, which was one of the basic concepts used in this famous book without it has appeared necessary to make the slightest reference to my person.

Serre jumped on the hint, again, again he was going to disabuse me of my ideas of Burial -

all this theory, it was available in black and white in a book, and one of my students still Saavedra ^{883 (**)}

- is that it is not I who had even made him do this thesis? Again, obviously, it was a book

he knew well, he had to refer to it more than once ^{884 (***)}. "So, in that book, nothing

nor did hit you" - I asked him again (and once again, it was clear, however, that I already knew what the answer).

No, obviously it had not hit, my name is not pronounced in this book, nor to the theory

^{882 (*)} This is the note (n ° s 176 1 to 176 7) which I am trying to finalize, and when I unscrewed the scam,

precisely around the concept of motivic Galois group and categories Galois Poincaré-Grothendieck (named

"Tannakiennes" for the occasion) - scam mounted by a Deligne and (initially) by the "pawn" Saavedra

interposed. . .

^{883 (**)} This is the famous book "tannakiennes Categories" (sic) of the same Neantro Rivano Saavedra, published in Lecture Notes 265 (1972), Springer Verlag.

^{884 (***)} I understand also that when Serre occasion to cite this book when my name is not pronounced (in other words), and without there is (meanwhile) nothing abnormal, it takes care yet (for I know not what scruples) to refer simultaneously to my no one. It must be the very last to still take this kind of punishment. . .

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making the object, or for ancillary concepts (such as pattern, crystal, and many others) which are introduced into the

ab ovo and developed as examples. There he did not seem yet Serre, to have failures ^{p. 1141}

memory - he still remembers (for now at least...) to which are due these notions, which appear

there, under the pen of another of my students, without my name is not pronounced. If there is one

"Default" here, my friend, this is not in any case in "memory". . .

We epilogue for a few minutes even on the name "tannakiennes categories", which I left

hear that I considered a hoax, while Serre, he, with supporting evidence, he found

it suited perfectly. Again, I knew it already, basically, before raising it again

Hare ; as I also know **why** this name fits so well with the man who was my friend, while I,

which has carried and given birth to this thing, is to say about it.

As it usually goes between us is Serre who cut short - and indeed it is true that the conversion

tion had plenty lasted. There had been "communication" at any time, and that is why it surely

left me this feeling of dissatisfaction, disharmony. And yet, as two or three short

letters I received from him lately and with a more assertive strength again, this short conversation

taught me a lot. Things "sues", surely, but *récusées* half; *sues* and not flood! And surely it

frustration (which was not dispelled even today) is the sign of my resistance to accommodate

and accept the message.

An unwelcome message indeed. Just a few months ago, I had no doubt that Serre (as I recalled

highly of him, incarnation of an incisive elegance and free of any complacency integrity), when

it would take knowledge (better late than never...), by reading the text providential "Crops and

Seeds, "the depravity of a burial (of which he was a far cry indeed from suspecting the poor...)

well that his blood he would turn and that he would throw himself into the fray, this time ^{885 (*)}. This image

Epinal has dissipated over

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in recent weeks, an innocuous exchange of letters helping. And yesterday he ^{p. 1142}

have ever seen, without any possibility of doubt, it has been ages since Serre is installed

in full, in the Funeral, and he finds out its account. And this, is it necessary to say (and

that I put any kind of irony), with the best faith in the world!

This is also a moment that I realized that the "good faith" is not something as simplistic

and clear-cut, it seemed to me most of my life. A certain type of "good faith", more

common, is simply to deceive oneself, like a curtain of good quality for

cover sometimes dubious goods. Our psyche is made of superimposed layers, and as

the look is refined, he sees the "good faith" in such layer may serve as a cover and an excuse for deception of the one below.

In terms of good faith Serre, I continue to do it this credit, it will never write a book making use of essential way to ideas of others, to say clearly - and this, even if these ideas have never been published and would be known to none other than the one who has to it (assuming it is still alive) and himself. That is, I understand Serre will never write a book like those that had been discussed between us yesterday. I dare say, even, that the mere fact that someone 885 (*) In writing "this time", I thought the other two times I put myself in charge, trying to get a message to the famous "mathematical community" - and even these two occasion, to mobilize. The first time was in 1970, during my Start mathematical scene during the connivance of the scientific establishment with military equipment. The Second, the more modest the only French colleagues, it was about a certain item iniquitous striking foreign in France. (See in this connection the "My farewell - or: foreigners", n ° 24.) Both times my efforts met a general indifference, where Serre, nor any of my other friends in the middle I had to leave (with the sole except Chevalley and Samuel), not exception. The paris are open on the effect (or non-effect) that will produce the pad "Crops and Seeds", in the same establishment - starting with Serre himself. . .

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as Serre like me 886 (*), write a text (mathematical case), addressing an audience, involves inveterate reflexes dedication, which will tend to eliminate or correct at least (I think) some "memory lapses", which do not draw as to result in simple casual conversation like that of yesterday 887 (**). All this is in line with what I wrote it three weeks ago

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yet, in the note "Things that look like nothing - or dryness"

p. 1143

(n ° 171 (v), part (c)): "I know Greenhouse, not older than me, would dare to howl with the wolves, plunder of scheming and slag where "everyone" plunders, scheming and débine "

That said, I note that this does not prevent greenhouse is indeed his account in some cases at least, that **other** plunder, and magouillent débinent, and this in an open and obvious, "in

Full public square "and" under the spotlight ". He can certainly do it" the best faith in the world "

- it does not get dirty hands, merely to give his blessing without reserve to plunder the shenanigans

débinages and others, and this all unless he pocketed no visible benefit: it does prides

not the fruits of others labors, while finding good as others (VOR dealers, aurais-

I want to write) play such a game, in full view of everyone. The "benefits" that are more subtle than cash

Publications (a little shady at the edges) and other bank accounts which others are fond. he

must believe that he is yet to result, to give rise to the amazing metamorphosis of one

I had known now participating (I can not say how long), eyes closed and clogged nostrils the

general corruption 888 (*).

e. The last minute - or the end of a taboo (June 18) I had a hesitation, yesterday, to add yet a fourth section in note "Family Album" (n ° 173), just to make a report "hot" the phone call with Serre yesterday. This call, it is true, had left me on a "feeling of dissatisfaction, disharmony "(as I wrote yesterday) - and even there are euphemisms to express discomfort if incisive, he approached anguish. This unease aroused the need to return to this episode as a abscesses mature now, and it would be great

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time to empty. And there was also the usual procrastination. It

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For weeks that duplication service the expected USTL brought to them after the famous

Issue IV Crops and Seeds who never ceases to give birth; already it©just to get to Augustus

while pulling and broaching before the annual closure of the college (July 15), especially since it©not just me -

the end of the academic year, there is an influx of theories of all kinds, which should be prioritized. Short,

I thought he must know how to end a book; that if I continued to insert the "last minute", I

have not completed next year yet, it had lasted quite like that. . .

And so, I ended up going to start - and too bad if the draw Crops and Seeds only to fall!

It waited fifteen years (if not thirty), now it can wait two or three months

more, but I take time to look at what I have to look and say what I have to say, without leaving me

886 (*) Speaking here of "Serre me," I think, in fact, any of the community members including us

one and the other in the fifties - the middle I© trying to understand so little in Parts III and IV "and Fatuité Renewal ", especially in" Bourbaki, or my big chance. - and his backhand "It is true though

I see that even in this small community, I met two members who have "gone wrong" (which was discussed in its place in Crops and Seeds).

887 (**) So, I do not doubt that if Greenhouse was author or co-author (as is R. Remmert) a book on the spaces rigidly

analytical, he would go to the "natural inclination" to ignore the one to be ignored; he would go past "failures" of memory a bit complacent to said natural slope, which he liked to indulge in a private conversation. It is also true that there are still fifteen years, with the rigor that I knew him then, he would not indulge in such a slope, it seems, even in a private conversation. . .

888 (*) This finding of participation in a corruption joined one made (for listeners of a seminar in March 1980) in the note "Carte blanche to pillage - or the High Works" (the name says what he means), n ° 171 4 , particular page 1090 second paragraph.

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upset by "deadlines". . .

It©been a hard day©work, or rather a night and part of the morning - I wanted it to text "in rab "for the strikes go with today©mail. It©done.

There, I feel like going after a job that **had to be done**. I feel light suddenly issued as a great weight that I was hanging without knowing surely, and I can not say since when. It must be the weight of a certain tenacious illusion which had to start moving to me at the end of forties, when began to hatch in me an adoption identity as a member of a certain "Community" (mathematical), a certain environment, which for me was full of warmth and life. I@ talking about the outbreak of a new identity in Fatuité and Renewal, in the sections "The welcome abroad" and "the" mathematical Community ": fiction and reality" (n ° s 9, 10), and also in "Bourbaki, or my chance - and setbacks "(Section n ° . 22) It is true that this identification was scanned without return by the events surrounding and following my departure in 1970, in the wake of my involvement in a militant activity. Looking back, I realize now that he nevertheless remained a **link** to this medium that I left in which I did not recognize myself; an invisible link, perhaps, but of great strength, part of the "weight of the past" (I begin to see last year, in the same section name, n ° 50). So I left that environment without thought of return, a certain **picture** of what had been this "family", in short, I had

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left her for another adventure, remained alive in me and kept p. 1145 this link. This image have remained more or less static, it seems to me, since I left (and long ago before, certainly) until the reflection continued in Crops and Seeds. It started qualify the image I had of a certain past, and to incorporate a fashion element of this, often disconcerting and certainly ill-comers. I ended up going to the evidence of a staggering **degradation** in the state of minds and manners in which had taken over the medium to which I had identified, and (It would seem) in the mathematical world in general. This degradation, I@ realized only dates not yesterday, and I had time, even before my departure to be me. (An interview part, at least, during the discussion continued in Fatuité and Renewal.) I had the impression, however, that there a kind of unbridled escalation in this degradation after my departure, in which some of my former students have played a catalytic role.

Anyway - all over the revelations succeeding in my investigation of the burial, I kept my mind a sort of "taboo" tacit around those among my old friends, who were Part of that environment that greeted me in my youth. I could not conceive simply qu@u-cun of them was seriously ill or "initiated" by the profound degradation of which I was the finding. When I happened to mention the convenience of the "entire congregation" vis-a-vis operations (For me at least) beyond imagination, surely there must have in me a kind of "clause" interior, putting harmless those who, for me, should remain "above suspicion". They do unsuspecting, obviously - is that they must be busy elsewhere, surely - must not blame them! Somewhat in these tones there. And for the older among my seniors, this view is, I will believe to reality, or at least some aspect of reality. But certainly not for people like Serre, Cartier, Borel, Tate, Kuiper, Tits and others that I have known, who are of the same generation as I, in full operation, fully integrated in the middle that I review here and continue even today there to exercise significant power and set the tone there, as well as some newcomers who ended up constitute a "mafia" unscrupulous, with the blessing wholeheartedly of their elders. There was thus a persistent and glaring contradiction in the image that I had of the reality as it appeared through the "revealing" top notch what the Burial. It is this contradiction

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surely,

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perceived at some level and challenged to another, which created the "malaise" of which I spoke earlier, the

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limit of anxiety - revealing anguish of a **division** . And one who, more than any other, embodied for me this environment, people that someone in me persisted to perceive as "close", and that also had was "closest" to all of them was Jean-Pierre Serre. As such, it was him, more than any other, that the resident node of the evaded contradiction.

I began timidly to address this contradiction there only six weeks in the first Part (May 4) of the note "Unnecessary details" (n ° 171 (v)). This reflection considerably deepens ment in the third part of that same note (May 27, so three weeks later), "Things that resemble nothing - or drying "I be back on the person of Serre against perennial inner resistance, there is one week (11 June) in part c. ("The one among all - or acquiescence ") of this note. This time, the crucial role of Serre in the Burial finally appears full light. This was a big step in my understanding of the Burial - but the knot the contradiction was still not addressed so far! The person Serre remained for me (as if nothing had ever happened) the epitome of "elegance" and a "probity" without fear and without reproach. The "Taboo" remains safe and sound!

It the phone call the day before yesterday that burst contradiction, putting my nose "right in" (The burial), whether you like me or not. It has been, as fair, immediate mobilization of forces considerable resistance (sometimes referred) to maintain the status quo, rather than taking the contradiction: take note, one way or another, and thereby solve it. I was free to do or not to do so.

I have taken the plunge - and I happy. The reward was immediate: a **release** , manifesting by a feeling of lightness, relief; relief of inner tension, yes, but even more, release of a weight.

The only other time in Harvest Seeds and where there was a feeling similar release is that also has marked a first turning point in reflection, in Fatuité and Re, with the section "Sport mathematical" followed by "Finish the ride!" (n ° s 40, 41) - I feel also that this new step that I just "jump" follows the one I made last year. I can not say, at the time, and why

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what. The triumphant exclamation then, "No more riding!", Was premature is

p. 1147

sure (as I noticed me in the month after). But the new step I have to do is, for the least, a step that leads me out of that arena. The future will tell me, how it is well well.

After the reflection of yesterday and that of 11 June, I feel arrived at a less blurred vision the Burial. It was mainly this "third level" was left vague. Reflection of 11 will have done "Incarnate, in a tangible way in the person of Serre, and this in turn has taken all contours that there is concrete (the case to say) during the discussion yesterday.

Finally, throughout this fourth part of Crops and Seeds is the reflection on the relationship with Serre that strikes me as the most crucial part to my own understanding of the Burial at Beyond the "further investigation" and high tables color shallow mathematical megalopolis.

It is also true that if I had not taken the time out of respect for the subject I gave myself the task of probe to wrestle me this "ordering an investigation" with all the care I can, taking

Great care also enlighten my best every corner a bit dark that arose along the way, this reflection on Serre would probably not born, and my understanding of the Burial (and my involvement in it) would have remained vague as before. Everything fits in a research!

The most substantial part of the thinking in the latter part of the Burial, appeared in

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made "last minute". In principle, the "end point" in this part had been laid there will be two months and half (April 7). It remained just then ten pages to retype the net, and some footnotes add pages (like this was the case also there a year, in late May...). Unexpected started to scramble from the days already, with the visit of Zoghman, came to read that last part (in principle over) and give me feedback. They materialized in some three hundred pages of text additional - and among them, those pages where I was on the relationship between Serre and I, in the light (Hitherto evaded) of Burial.

18.5.7. Climbing (2)

Note 174

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(March 22) ⁸⁸⁹ (*) As I have already noted elsewhere, there are actually not four operations p. 1148 (for a Funeral), but a single " **Burial operation** ". Its division into four components was convenient for exposure, but is artificial and (if taken too literally) capable of inducing

In error. Undoubtedly, the Director - Conductor - Principal Celebrant for Funerals, there no **four** little devils in four different corners of the head to blow him what he had to do, but a single! I have tried, over the long meditation on the yin and yang ⁸⁹⁰ (**), to do better know this little devil here than in the past, where I had merely stated that he occasionally was always there trying to agitate, and spent something else the next moment. I also not pretend be fully successful, to make his acquaintance, and perhaps is not so much my job, after all. What is certain is that he is always there to shake as before, and it is not said that he will stop before last breath of my friend. Still, as the famous "Burial" Operation continues in this time even as I write these lines. And I wonder if the distribution of this "Family Album" will all at least the effect of ending the biggest (and most iniquitous) of all partial operations: the which was to bury alive a young mathematician, Zoghman Mebkhout which "everyone" working in the cohomology of algebraic varieties or complex used for four or five ideas and results. . .

Abandoning the fiction of "four" operations where there has obviously had one, it would be interesting make a sketch, in chronological order, the main episodes and steps that are known to me. I will not do not here, judging doing enough in bringing together, in the previous four key notes ("Silence" "The maneuvers", "Sharing", "The Apotheosis", n ° s 168, 169, 170, 171) all episodes that are me known, and the curious reader can itself order on a timeline. Curiously, the "second level" view or "operation" (to use euphemisms), it does not seem the year of my departure from the mathematical scene in 1970, marks a discontinuity in the succession episodes, which continue to fairly steady pace, he seemed to me, from the end of the seminar SGA 5 1966 until 1977 with the double publication "SGA4 1

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"And publishing -
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Illusie SGA 5 ⁸⁹¹ (*). This p. 1149

operation appears to me as marking a **qualitative change** suddenly and striking. Before there was a "Mowing" discreet. Here I feel the eruption suddenly a burst of violence and contempt, their obsession with the work of an absent, declared "defunct".

After this kind of **romping** collective of all of my cohomologistes students (under the eye com-pleasant to the "whole Congregation"), it seems that there is a lull for four years. While

⁸⁸⁹ (*) (14 June) This note goes on with the party. ("A well surrounded deceased") of the previous note, written the same day.

⁸⁹⁰ (**) This is the reflection forming the major part of the third part of Crop Seeds and, with the notes n ° s 104-162 ".

⁸⁹¹ (*) (3 June) It is correct that impression, taking into account the large-scale operation "tannakiennes Categories" (sic) whose first episode (with the "straw man" N. Saavedra) is up in 1972 (and the epilogue in 1982, with the "real Santa" P. Deligne taking over). On this subject the sequence of notes "The Sixth nail (in the coffin)" n ° s 176 1 - 176 7 .

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all the eleven years that have elapsed between 1966 and 1977, I detect an "episode" well-typed all one or two years, I know of none between 1977 and 1981 (year of the Symposium Perv). Instead, along article "father of conjecture II" Deligne, published by Publications Mathematics in 1980, so the year which preceded the incredible Symposium can almost pass for normal, for these times. . . ⁸⁹² (**).

This is the year where Deligne also learns during a Bourbaki seminar and the author©mouth

itself, the "theorem of God" (aka Mebkhout) ⁸⁹³ (***) . This is the start of a sudden melting

ice in a long stagnation of the cohomological theme. And that is the signal as soon as next year, this second and final (?) culmination of the Burial operation on the pitch this time iniquitous, when deductions, and even simple prudence, are blithely thrown overboard.

The episode of "memorable volume" LN 900 a year later (devoting exhumation patterns without men- tion of myself, episode which had so moved me some April 19th of last year ...), while

Berthelot like the report of the same year (devoting eliminating my humble self

the "history" of the -SiC crystalline cohomology), appear to me afterwards

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like extensions natu-
p. 1150

ral, and actually quite harmless, this happened during the symposium, whose name will perhaps in history (or what remains of it), as a **warning** . And "the Funeral Eulogy" the following year, if Incredible as it may seem to those who "pose" on him so little, also appears as such a pro- longement, or (as I wrote previously ⁸⁹⁴ (*)) as an "epilogue". As for the two years that still since they have merely endorsed in the writings and in the minds, "acquired" a Symposium gloss and its extensions. . .

It is a remarkable coincidence - or rather, this is clearly **not** the effect of a "coincidence" - that from last year, and before he even met with the operation "SGA4 1

- SGA 5 "nor with the

Symposium Pervert, I have found two "rotating" in the personal relationship of my friend Pierre to me, placing in those same years 1977 and 1981. I included for the first time in a common focus and tries to fathom the meaning, in the note "Two turns" April 25, six days after I discovered the Burial (by reading the memorable LN 900). At the time, where both were turning occurred years before, I was far from suspecting (not on a conscious level, at least) of the Burial was going on, and I would have been hard to connect one or the other at any event I known, and who could enlighten them.

18.5.8. The funeral - "Im dienste der wissenschaft"

Rating 175 (March 23) Finally to tour the "Burial operation," it remains to enter review the role of a last active participant and eager, I have had occasion to speak "through" good number of times during this long reflection on said burial. It is the honorable institution GmbH Springer (Heidelberg), well known as a publisher of books and scientific journals, is ho-892 (**). Of course, no reference is made to myself at the main result that is the subject of the work, which the statement was part of the yoga patterns that Deligne was holding me. For cons, I was struck by the fact that my name, with that of Miller, in one of the paragraphs of the work, about the De Rham complex with divided powers, which had was introduced (circa 1976) independently by Miller and myself. I gave a presentation on the subject in 1976 at IHES (it was also the last public lecture I had given in my life), but it was clear that I will not publish anything. Without probably no one would even notice, nor especially would find fault, the author ignores that any co-authorship unofficial. . .

893 (***) (1 June) In fact, this episode took place last year, in June 1979, the Bourbaki seminar.

894 (*) In the note "jewels", n ° 170 (iii).

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norant also the motto "Im Dienste der wissenschaft" - in the service of science 895 (**). In the edition mathematics of this house, it is undoubtedly the series of texts "Lecture Notes in Mathematics" which is the best known of all. This is perhaps the series of scientific texts in the world who has known fortune

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the p. 1151

more prodigious: over a thousand titles published in twenty years. I also think you have made my part in this unprecedented success, bringing my deposit to this series still in its infancy, with the publication many texts students or myself, during the sixties and until the early years seventy. I have also been associated with the Springer house as one of the editors of the series "Grundlehren" (der Mathematik und ihrer Grenzgebiete) where three books (including the reissue of EGA I) are published by my Care 896 (*).

After leaving the mathematical scene in 1970, I also refrained from any activity as editor. I continued with a simple inertia effect, to be part of the publishers of the series until last year yet, when I finally pulled myself "officially" any editor responsibility for Springer. I was prompted by two concurring motives. First, when I return to a mathematical activity tick "orthodox", handing me to publish math, I would like to draw definite limits to this "return", which does not mean to me back in a "powerstructure" (one of power and influence structure) but only a **working** staff mathematics for publication. On the other hand, had had occasion, since 1976 (with the episode of the thesis of Yves Ladegaillerie), smell the scent of a certain air of In-INTERMENT, well before having the slightest suspicion of large-scale operation that I discovered the year latest. (See about the episode of this thesis, one of them read brilliant I have had the honor of inspiring the note "You can not stop Progress" (n ° 50), and especially more detailed note the "Coffin 2 or cuts sectioned", n ° 94.) It made me realize that" the kind of mathematics that I love and I want promoting has no place in the Springer Verlag " 897 (**), and even more, perhaps, that the spirit that I felt

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did not encourage me to continue or resume connections so slightly closer with this house. p. 1152

The year that has passed since my letter of resignation to the "editorial board" of Grundlehren in February last year, has been also confirmed and further strengthen this feeling.

But this is on the margins of the "Burial operation" itself - this "second level" of which I spoke yesterday, in which it is time to return. There is to my knowledge **the five books** that are directly related to the operation in question 898 (*). These are, in chronological order of publication, volume 7 USG I (published in my name in 1972) and APG II 7 (published under the Deligne-Katz 1973), introducing the seminar SGA 7 895 (**). (1 June) Information taken from Dr. J. Heinze, it appears that this is not really a "slogan", but rather a publicity slogan. The English form is "Springer for Science".

896 (*) The other two books are the theses of Jean Giraud and Monique Hakim (on the formalism of the field and 1-

noncommutative cohomology, and diagrams related on ringed general topos).

897 (**) This quote (translated) is extracted from the short letter (addressed to Dr. Peters) February 18 last year, where I informed my decision to withdraw from the "editorial board" of Grundlehren. Dr. Peters had already left the Springer Verlag (It is now working in the Birkhauser Verlag), and correspondence is continued with Dr. J. Heinze, responsible for Grundlehren in Springer. I asked for a copy of my letter be sent to each of the co-editors Grundlehren (numbering eighteen), and had repeated this prayer to Dr. Heinze twice (April 84 and January 85) without he deems useful to tell me whether or not she had been respected (it appeared that **not**). I took the trouble to send myself a copy of my letter to each of the eighteen publishers, with some explanation about this shipment. I know it well seven of them personally, and I counted five of my friends. One (Artin) has bothered to answer me, and no apparently did not find anything wrong (not least vis-à-vis **itself**) that the Springer house was not itself bothered to send him (and in the month of February 1984) the letter.

898 (*) (1 June) Since these lines were written, it appeared that it be added to the list following a sixth book, the same name is a hoax: "tannakiennes Categories" by Neantro Saavedra Rivano. Remarkably, this book also appeared in the same series "Lecture Notes in Mathematics" Springer. But in the case of that operation, responsibility for the Springer house does not seem committed to me, as it is for the other five volumes. For some Details of the operation "tannakiennes Categories", see later notes "The Sixth nail (in the coffin)," n ° s 176 1 - 176 7 .
867

on monodromy groups, 1967-1969; the volume named "SGA4 1
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"(Deligne) and editing of-Illusie

SGA 5 (published under my name) in 1977; Finally, the "memorable volume" dedicating the grounds of exhumation, published under the common signature-Deligne Milne Ogus-Shih in 1982. Remarkably, the **five** volumes published by the care of the **same** house, and in the **same** series Lecture Notes 899 (**). The four first volumes have been published while this is Dr. K. Peters, who was in charge of Lecture Notes 900 (***), the last Ms. M. Byrne in charge of this series.

These five publications were made under conditions that seem to me a gross irregularity.

As I have already noted elsewhere, the two volumes SGA and SGA 5 7 I **published under my name** in 1972 1977 (LN 288 and 589) have been published without the Springer house deems necessary to contact me, asking my permission or to only notify me of the publishing project. Publication of two volumes of the name APG 7 II and "SGA 4 1
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"So with under the acronym AMS which I think it is not available to all comers, but notoriously linked to my work and to my
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person, have been published
p. 1153

without asking my consent to the use of the acronym for the proposed publications, while I is not listed not (as might have been right to expect) as the author or director (or directors) volume, or seminar he has a written release. Finally, volume 900 presents LN without appoint me, notions, ideas and constructions which are known, among knowledgeable mathematicians, they were introduced by me. In this case, it was therefore clear (without having to be among the few insiders a seminar SGA SGA 5 or 7) that this volume was what is commonly called a **plagiarism**. I do not not expect, of course, that Mrs Byrne, responsible for LN (unless I'm mistaken) at the time of the publication of this volume has the competence to recognize the scam on its own, given the manuscript. But he belongs, I guess, tasks of a serious publishing house, to ensure the reliability of its publications, surrounding himself with competent advisers.

These same counselors were able also, if they are honestly the job for which they are (I imagine) paid to report to the proper authorities that the sign SGA is not a symbol to all comers, it has a **meaning**, it be observed by looking at the only person who is qualified to decide on the use of the acronym in know myself. Finally, as an aggravating circumstance for the publication of volume occurring as the sham "SGA 4 1
2

"Just browse either the introduction to the volume or the" Thread of Ariadne " following the, or the introduction to the first chapter, to find the casual disregard with which there are trai- tees seminars SGA SGA 4 and 5; it is known more among the people so little informed, that these recent seminars were held in the mid-sixties, while the volume itself as
"APG 4 1
2

"Consists of apocryphal texts of the 70 I therefore consider that for a person reasonably ment informed and in possession of all his means, trickery could only be apparent. It was a Because all the more imperative not to publish such a volume under such name, without asking my

agreement in due form.

So I think the responsibility of Springer fully engaged in the publication of each of these five volumes, as a constituent of significant events in the monumentable scam operation was made about my work on the cohomological theme. Through these publications, Springer has made auxiliary and **conveyor** of this unusual transaction. I can not say, of course, whether in knowingly. But I can say that repeated discourteousies which I have experienced the from this house in her relationship to me, since the year

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1976 (I have not had the opportunity, I think, to have

p. 1154

deal with it between 1970 and 1976) go well also in the sense of this operation and are in a

899 (**) These are the volumes n ° s 288, 340, 569, 589, 900.

900 (***) As I specify it in the penultimate note b. p., Dr. Peters has since left the Springer Verlag for Birkhäuser Verlag.

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18.5. THE FOUR OPERATIONS (a corpse)

spirit, which is inseparable.

In the sub-note "Eviction" (n ° 169 1) of the note "maneuvers", I referred to my letter to Mrs Byrnes regarding the publication of SGA 5, and its response, which blew me I must say. (This is not true the first time nor the last that I "blew" in this brilliant operation "in the service of science." . .)

I learn from his letter (dated February 15, 85) in accordance "with the usual course of action when a book contains contributions from several authors "(sic), it was not necessary to address more specialized LEMENT mine, who was only **director** of the Seminary ... The five "authors" of SGA 5 are Bucur Houzel, Illusie Jouanolou, Greenhouse, excluding my modest person, who appears only as "Director" - without purely honorary doubt, had I said too much 901 (*) - for this brilliant seminar.

Even before receiving this informative letter and finding the long time (having received nothing for a month)

I took my best pen (in German) to write to Dr. KF Springer in person, which is part of

managers responsible for Springer. It was a beautiful letter of two pages Machine, explaining

I was very sorry to a long series of inconveniences in my relationship at home Springer and beyond

these, a number of gross irregularities in me, which I was content for now

to submit two, that seemed particularly glaring: the publication of two volumes

Lecture Notes (n ° s 288, 589) appeared under my name and not find it necessary to consult me. In these two

texts, ideas, methods and results that I had developed in oral seminars were shortened or

sometimes mangled as to be unrecognizable. The coincidence of that fact, with the circumstances

unusual that surrounded the publication of these two volumes, could not be for me the effect of a pure

hazard. And I expect a public apology and unconditionally from house Springer, in a

form that would be set by mutual agreement, once an agreement in principle would be acquired. I hoped

he would like me to the heart to terminate an unpleasant and unacceptable situation and find a

solution which is to rise to the occasion

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("eine dem Fall zu finden geziemende Solution", which is p. 1155

even more distinguished), "hoachtungsvoll" (as it should) signed in my best hand.

For cards on the table, I think I played cards on the table! The he can not say, Mr.

KF Springer, it has not been personally informed of the situation, and first-hand yet, by none other than the main person himself!

Chance would have it: I finally have an answer (even after a month) not later

that yesterday. It©so short that I can not resist the temptation to reproduce here (translated) verbatim. I needed

a while, however, to grasp that this was indeed an answer to my beautiful letter last month. here is

So the answer.

Heidelberg 15/03/1985

Dear Professor Grothendieck

I must thank you for your letter of February 9. Mrs. Dr. Byrne©letter of 15 February

will undoubtedly have answered your questions.

Receive etc.

KF Springer

There at least I set! The people "knowledgeable" (he was already question) had to explain that

it was not worth it for Mr. tiredness a little excited who wrote to him there - he was decidedly

not part of the beautiful world. And it©true, too. . .

While waiting for this edifying steering response of the Corpse Springer Pumps company

901 (*) In this famous "Breadcrumb" (through SGA 4 etc.) in the volume named "SGA 4 1

2", nothing could suggest

the reader that I have had the honor to make presentations in SGA SGA 4 and 5 (for cons, I have been that of "collaborating" with

"SGA4 1

2 The double meaning ") See in this regard my observations in the note...." - the art of the scam "(n ° 169 7), p 899..

869

Verlag GmbH (it was nice yet honor me with a signed response from the director himself), I had the time to sound me on my own intentions. The role played by the estimable company really seems very big, and I thought about the possibility of show trials, where I would ask for damages astronomical, as a "good man" outraged victim of unspeakable favors. But I told myself as a trial like that, it must eat a crazy energy. Even if I have prevailed and I touch dizzying damages (let©be optimistic!), after X years certainly - what I be advanced? I© not in need and have no need for more than what I have - and fraud not more nor less a scam, because a trial has been won or lost. I© not going to improve the world, neither myself nor Mr. KF Springer ways and some employees now

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he leads, and certainly not the way they design their trade, mobilizing lawyers and

p. 1156

making them mobilize their 902 (*). And I do not will improve a certain spirit in a beautiful world I left, the spirit that makes possible the kind of operation which Dr. Springer and his estimable house are made (thirteen years) servants. It remains for me (I hope) a few years to live - Time flies, and I see lots of exciting things to do in the time I have left. It must not well be exciting to bring the exhibits to convince the judges that I have something to do with SGA. It is not for them, nor for Mr KF Springer, I got tired in the to write. . .

As for those (besides myself) for which I wrote the SGA, their relationship to that (for me anyway) is still part of me, is not indifferent to me. It is part of their relationship to my person. Strangely, I well know the relationship (or at least, so little) for my cohomologists five students: even those through which it now became possible to Dr. KF Springer send me walk like a messy that would have nothing to say about what we do or do not with texts bearing the acronym AMS, the chap in question is or is not on the cover.

The mathematician reader who followed me so far, and would one day have haunted the SGA (true, I in- hold out), maybe he will be thought of touching a word to me about what he thought to himself. Sure it myself would be pleased to receive a word from someone who found him, the book in which I was only me put whole for ten years of my life, and that **nobody** in the world has been keen to continue a When the Labor Party - that this book is indeed the mark of the man who designed and carried him time it took before it takes shape under his hands and becomes a **home for all** 903 (**).

And a home for all is not a urinal in a slum, where everyone would feel free to relieving at will and scribbling obscenities on its dilapidated walls and sticky. . .

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And if the one who reads me is one of those who were my students, or those who were my friends, and it feels

p. 1157

prompted to write to me or talk to me about it then at least in the absence of any other, he knows that his silence also speaks for itself, and it will be heard.

902 (*) I thought indeed as it may well be that the situation is reversed, and whether the estimable company who brings me a trial for injury to his reputation. These people "in serving science," they must be picky about this chapter (the now it©their reputation is at stake. . .).

903 (**) The key idea to build "houses", which are good "for all," played a significant role in my work mathematics, and this since the early fifties already. This was the concrete expression in my work than I called the "Service drive", which is part (without my even detected before the reflection "The key to the yin and yang") the underlying forces giving them vital force to my mathematical work. The archetype of the "house" appears for the first Once in my thinking, but I do have approached and with great force, in the note of November 26, "the Servant Yin, and the new masters "(n ° 135).

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18.5. THE FOUR OPERATIONS (a corpse)

18.5.9. The sixth nail (in the coffin)

18.5.9.1. at. The pre-exhumation

Rating 176 1

904 (*) (April 19) I finally had the opportunity to read (April 10) of the PR section Langlands cited in note "Pre-exhumation" (n ° 168 1). To believe the "Annotated Bibliography" on Deligne reasons communicated to me in August this article Langlands is, with that of Deligne appeared in the same volume (item that is the subject of the note cited), the first in which the patterns are used, since I left in 1970 905 (**). I am excusable for not having been aware until last year yet Article Langlands (no more than that of Deligne), as the author was not deemed necessary (no more my former student) sent me a reprint. One wonders also why he would have taken the trouble, when it is clear, by exploring its article, my humble self has nothing

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to do with the subject p. 1158

"Automorphic representations, Shimura varieties, and motives" referred in his article. My name (To use a formula that my typewriter knows by heart, from one year to the day!) appears nowhere in this article, nor in the bibliography. I grew yet recognize some ideas I emerged to 1964 (or dreamed that I had emerged -... definitely I repeat myself), and I even put black on white that remember a dream (or dream may be a memory of a dream...), the same ten-nine April 1984 906 (*). I think myself back in that day, a year back. It is true that I have had time to be bored, in the year that has elapsed meanwhile. If there was displeasure, it was hardly a surprise (given the limited, it will be said...), and certainly not a shock. There is also a difference size, between this article precursor memorable volume LN 900 that was to follow three years later, and the latter: I have not had the honor to meet in person Langlands, and it©not from my mouth he learned (as was the case Deligne to 1965 or 66) Yoga of the Galois group (or "Basic group") said "Motivic". But, during the second half of the sixties, I spoken enough about me to anyone who would listen (and Langlands after all not just landed just ...) to be a presumption that Langlands knows where does this philosophy "Geometric" new on Galois groups and fundamental of all kinds, seen as pro-algebraic groups suitable affine. I assume he knows that this philosophy is not born in 1972 from the brain of a Neantro Rivano Saavedra, who disappeared from circulation since without trace 907 (**). - I think it would not be a luxury Langlands explains about it, if he judge quite useful on. True seen these days, it might be too optimistic on my part hope he will take the trouble. . .

904 (*) (16 June) The group notes the following (n ° s 176 1 to 176 7), under the name "The Sixth nail (in the coffin)" should be considered

a natural result of the notes group "Silence" (n ° s 168 (i) to (iv)), dedicated to the "Patterns" operation, especially the last among them, "The pre-exhumation" (n ° 168 (iv)), dated 8 April. The following notes with the exception of Last (n ° 176 7) are of 19 and 20 April. If I have preferred to reject them here at the end of the "Four operations", instead of joining the in the "Patterns" operation, it is because the thinking that had gone on in the previous weeks on the three other operations, and especially that (called "Symposium Pervers" or "unknown service") that is the subject of the group of notes "The Apotheosis", threw an unexpected light on the "new fact" (also unexpected) which had just appeared. I remember that at I write the notes that follow, I had already, in principle, laid the "end point" under the Burial (whose ultimate rating, "Girlfriend" (n ° 188) is April 7), and I thought entrust typing the complete manuscript of the Burial III from one day to another.

This means that these notes were written in terms of "last-minute additions." . .

905 (**) With the exception of exposed Kleiman and Saavedra in 1972, in line with some modest "lines" on the category description patterns (compare the note b. p. (**) page 794, in the note "The dot the i" n ° 164).

906 (*) See the note about "Memories of a dream - or the birth of reasons", n ° 51.

907 (**) From what Deligne suggested to me during his visit home in the month of October, Saavedra would virtually changed jobs (it would now "in the economy"), and would do any more math for his thesis defense in 1972.

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18.5.9.2. b. The good surprise

Rating 176 2

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As the surprises never come alone, the day after I took connais-

p. 1159

ciency of the article cited Langlands, I also had the opportunity to travel the volume Neantro Saavedra Rivano (which refers extensively Langlands) with name "tannakiennes Categories" (Lecture Notes in Mathematics 265, 1972).

Of the nine students (men) that I had before I left, Saavedra was the only one with any when I no longer had echo, and therefore not echo that would have me that he would be so

little bit taken the "color" or "smell" of a Burial. I concluded hastily, with this naive confidence which I am customary, that (even that used perhaps because, having left the waters mathematics from what I have heard ...) was a pupil among all who remained entirely foreign the spirit of the "operation" Burial. Yet, as in the case of Jouanolou, I had had so little echo, it could have just put a flea in the ear. I knew of course that, from the time He worked with me, was supposed to become his thesis had finally appeared in Lecture Notes in 1972 cited volume, I do not remember ever bothered to look before last week 908 (*). Fully absorbed by other tasks, the thought had not occurred to me that it was a little strange that Saavedra has given me more sign of life, not least as to inform me of his thesis defense, and for me ask to be part of the jury as the best person to know what it was. It is by reading this book it becomes clear why he preferred not to disturb me in my other occupations, and spend his thesis "on the fly" before a jury which I know fully the composition 909 (**). The Burial at that time was already underway, since none of the members of the jury has seen fit to inform me only of the defense, much less ask my participation in jury (as was also the case for the thesis Jouanolou, who had to go to the same time) 910 (***) .

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This volume presents a critical component of this "arithmetic geometry" whose vision was born and de- p. 1160 veloppée in me all through the sixties (without having received any name), whose yoga grounds was (and still 911 (**)) soul. Essentially we can say that the book is a presentation of Saavedra by careful and detailed form my ideas about a sort of "Galois theory Poincaré" of some categories (I would have never dreamed call "tannakiennes"...), ideas that I have long and patiently explained to Saavedra, at a time when it was still doubtful whether it would be the current awareness effort and assimilation needed to be included in part "expository" of his thesis. I had him entrusted handwritten notes circumstantial, with statements to the nines, demonstration and sketches everything, and I wait he please send me the 912 (**). Of course, the subject of the thesis itself 908 (*) (16 June) Saavedra did not have to see fit to send me this book, which I do not own a copy, but it is possible by against my having held in his hands in the seventy years. I remembered no more, he had a careful and perfectly usable as is, but I can not locate the exact source of this impression. It was this in particular by writing the note "The clean slate" (n ° 67, especially pp. 252-253), where I comment this "mystery" of Deligne "copying" almost the thesis that Saavedra had made with me. 909 (**) The mystery of the composition of the jury elucidates completely unexpectedly in the seventh and final notes of "sixth Nail" (n ° 176 7), I will say here a word. . . 910 (***) For shooting rectification, see note cited in the previous footnote b. p. 911 (*) In the meantime, the "soul" was enriched yoga "anabélien" discussed so little in "The Outline of a Program. "(See, on this text, Introduction 3" Compass and luggage ". It will be also included in Volume 3 of reflections 4 912 (**) It was my habit to distribute my handwritten notes right and left between my students as needed - and one of 872

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said was not to expose the ideas of another, whose motives completely escaped him. It agis- knows to explain an intrinsic characterization "helpful" categories "tensor" I would call here "Galois Poincaré" 913 (***) , that is to say a category admitting a description "on Galois-Poincaré Grothendieck "in terms of linear representations of a" sheaf (pro) algebraic refines "the ring Basic $k = \text{End}(1)$ of the proposed class. When it is a body, I had indicated such a condition by the said property "rigidity" (in the terminology that I introduced), and seem to remember that I had written a

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full demonstration (from my initial thoughts on the motivic Galois group in p. 1161 1964-1965) 914 (*). I had him state the principle by abstaining to communicate my written notes to subject, as it was for him, not for me, to learn his future profession, doing the work itself. If my memories are correct, the only question that remained unresolved for me was to identify the nature area validity of such Galois theory to Poincaré, regarding the hypothesis to the base ring k , being particularly concerned with the case where it would be a ring as Z (because of the applications to theory of motives).

Of all the students that I had before I left, Saavedra, the latest happened 915 (**), was also the which was the least prepared, and (at least initially) the least motivated to "put a shot." It is why I was hoping he would hardly beyond the very limited technical problem I had proposed, who asked that more modest knowledge (some language patterns, linear algebra, flat descent, language sheaves, and nothing more). The most delicate issues which are the subject of Chapters

IV to VI of his book (filtrations functor fibers, polarization structures on a category Galois-Poincaré R and list of such categories which are "polarizable" applications category patterns and many variations) asked a little knowledge "all-out" 916 (**), and therefore an effort put in considerable current, which I did not believe that Saavedra would be able to provide; I hoped everything at most he would join perhaps work a summary (which it would be more or less dictated by me) points important theory that would not have been included in a health exhibition work. I have been disabused Only last week, and

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realize that Saavedra provided a really impressive job and p. 1162 record time 917 (*). This work is materialized by a book presenting a detailed and careful presentation, flawless mime and perfectly usable as is, with so virtually exhaustive (and me a-first things they had to learn was to read my writing. It was always understood that I wanted them I return to my notes, as they have done to make use of - but it is rare, I think, that this wish was respected. It here a sign, among many others, that I was not worried by my students, but I was rather seen as the "Softie", demanding work for sure, but otherwise accommodating as not. . . 913 (***) Not to call them "categories Grothendieck!" Yet among the many species categories (and other new concepts) that I have had the honor to introduce and appoint (and, therefore, do not carry my name), if is one for which this designation would be required by common decency would I be tempted to write, that that! (Aside from the topos, but whose name seems perfect as it is ...) As for the name "tannakiennes categories" surreptitiously slipped a brilliant former student (and obligingly passed by a unanimous Congregation), this is nothing less than a hoax - as I explained in detail how lower. (See note below "Anyone who wait...", N ° 176 3 .)

914 (*) I did not want to take the time to check something in my notes on the motivic Galois group (or rather, what left me, I had not given Saavedra). I will come back anyway in Volume 3 of Reflections, probably in Chapter "The reasons my love."

915 (***) If my memory is correct, Saavedra asked to work with me in 1968 or 69, a year or two before I left unexpected mathematical scene.

916 (***) It especially had a thorough knowledge of the structure of reductive algebraic groups theory, their classification on the field of real plus a familiarity with a range of concepts such as pattern, crystal, F-crystal modules laminates, local systems (for someone who had at most a vague stain on the fundamental group of a singular topological space), more Hodge theory and properties of "polarization" delicate, which had never been explained in literature but remained "between the lines" in common reference texts.

917 (*) For further reflection on this "record", and its explanation (obvious) see note "Monsieur Verdoux - or cicisbeo" (n ° 176 5).

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he seemed) the geometric-algebraic formalism that I had developed in the sixties. From this point So of view, I think he has done useful work and all Honorable points and the "surprise" I was talking sometimes was indeed "a good surprise."

This work consisted, precisely, to turn the "canonical" form and publishable as is (according to the criteria that were still mine at the time) a set of ideas, statements and demonstrations, that had been provided by me. Do such work exhibition is part of the mathematician profession, certainly, whether his own ideas and results, or those of others. Unlike many of my colleagues, I do not think that such work should be counted as negligible to assess quality a thesis or other publication, and at the same limit, to award to the one who does the title of "doctor" in mathematics - that is to say, to consider it as a mathematician For full against it myself. seems essential to be respected some basic professional ethics, and that where a job is to exposing and developing the ideas of others, the thing is clearly indicated, so as to leave to this regard the slightest ambiguity.

For yet case, nothing in the entire volume, but three lines of "thanks" and waves pure form lost at the end of a brilliant introduction 918 (**), could make the reader suspect that my modest person has something to do in any of the themes that are developed there, starting by the fact that the very purpose of the book. I increased my income to the day of my first meeting with the memorable volume-exhumation of reasons (there are now exactly one year to the day)! My name hardly appears nowhere in the volume, except for two or three occasions when

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references

p. 1163

forms are required and none is available that is my pen.

This is also where not the only effect of a **hindrance** , not seeming to recognize clearly the author does "that" present ideas and results from another - which (especially in this case) is not bad when the work is done intelligently. But I came to realize, by the number of "small

details "that do not lie, there is no question here of just a little" hay "to brown slightly its image before disappearing backstage. This really is **the burial for burial** .

To give just **one** example - God knows I@e spent days and weeks to explain at length breadth to Saavedra, who landed just and was not aware of anything, crystal notions F-crystal (Replacing bus. $P > 0$ the "coefficients" missing-adic, to define functions L ...)

laminar module (and its relationships with local systems), and finally a minimum of yoga units (in taking as a temporary heuristic based standard conjecture); all that to make him understand, by a wide range of examples where I was getting with these categories Galois Poincaré, and the case (You never know...) Where he would find the courage and perseverance to include at least beyond "Minimum program" expected, a chapter of typical examples. As he well knew, without me had to explain it to him at length, these are crucial geometric concepts and do not go back to Adam and Eve; it is none other than me, who explained to him the réexpliquais and without tiring, which had introduced during the five or ten previous years, to be used as tools in a vision (even if it him going over the head as she passed over the heads of all my students except a 919 (*)). But my name does not appear more where it introduces and develops a tad these concepts (in Chapter VI on 918 (**)) This introduction consisted essentially in copying text message four main statements, I had indicated in Saavedra as the "pillars" of yoga Galois Poincaré to develop (excluding issues related to the filtrations functor fibers, which are difficult to lend a summary in one concise statement); but increasing any of these statements, one that was supposed to be the "minimum program" of his thesis, a monumental and obvious error, which made it trivially wrong! This is discussed at the next note ("He who wait...", N ° 176 3), especially in the already noted cited "Monsieur Verdoux - or servant rider (n ° 176 5) and one that follows the" The dirty work "(n ° 176 6).

919 (*) Who is unable to bury him, as soon as the master had his back turned. . .

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the examples), that in the section of text devoted to the development of the theory which he pretends to appear as the author. Yet I do not see Saavedra imagining that the reader, if he is misinformed and even if he is willing to believe the father of these categories (which he calls generously "tannakiennes") go to think it@the same as Saavedra who invented for the sake of the cause the F-crystal, patterns and other gadgets of the range "tannakienne" (sic). If these concepts are treated as ungraded we come to the time to improvise, or pick up

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the nearest orphanage, I have p. 1164
acknowledged there a **style** that I know only too well, for a year that I do not finish to tour the Burial. . .

Mebkhout brought me the volume in question, while happy to show me if one of my students, at least he had been "honest" 920 (*). He was dazzled, obviously, by the three lines thanks to the end of the introduction - it is true that in 1972 it no longer ran so streets thank a deceased, and since then it is rather the tone of banter or joking that became to put in more than one of my former students, where it is complete silence. Still, I have this right both of the "deep gratitude" for "introducing [the author] about it," and my "advice and encouragement. . . necessary to carry out this work. . ." 921 (**). This is called afford words, while a simple honesty in the presentation of his work would have seemed to me a way more convincing to express "gratitude" at a time when the burial was decidedly swing.

18.5.9.3. c. The one who waits

Rating 176 3

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In fact, it was enough that I hold this book in your hands to realize that before p. 1165 memorable "APG 4 operation 1

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- SGA 5 ", there is not a single episode throughout the Burial, which is comparable in scope to that volume LN 265, the innocuous name "tannakiennes Categories". The episodes previous 922 (*) are all confined to a "mowing" more or less discreet, hiding some of the affiliation important ideas. Here, it is a crucial part of my vision of "arithmetic geometry" found "Hijacked", no less; and this, through one that could seem the most "trivial" among all my students !

920 (*) (June 16) There has also been absolutely sorry it missed, and did his best to coax me - it reminds me of the case Kawai (see note b. p. (*) 1078 page), where the Beilinson that Mebkhout was "honest" Bernstein (see 1072) - as Diogenes with his lantern, but this time in search of an honest mathematician in the "gang" of those who dunk in the decidedly dodgy theme cohomology of all kinds. . .

921 (**) These "thanks" are a joke, given the circumstances: you might think that I have "introduced" the author "subject" functions of a complex variable, or any other conventional about the same water. In fact, the "subject" in question **existed**

not when I spoke of it to Saavedra bad thesis, if not only a vision that had developed me in harmony with that of the patterns, and in my handwritten notes which gave it shape. I am speaking about the birth and development of this vision in the note "Memory of a dream - or the birth of reasons", and contempt casual with which one of those who were my students (and under the complacent eye of all) made a clean sweep of these roots there, in

Note that the following "The Burial - or New Father" (Notes n ° s 51, 52).

(June 16) thanks Saavedra These are the more "a joke", that the author has never cared about me only to send a copy of his book and these bogus thanks. Having finished a tour of the operation "Categories tannakiennes (sic)", I understand even better now how my ex-student had no reason to be proud his "work" -SiC, and he was in no hurry to see me read it. And as things seemed parts then and until two years ago even, it seemed that there was little chance that the worker would take cognizance never. . .

922 (*) The "episodes" in question are sketched quickly in the note "Burial..." (N ° 168 (ii)), part of the following Notes devoted to "Patterns" operation.

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It is true that behind this, I recognize, for a style that never fails, the one who pulls the strings - and contained elsewhere prominently among those to which my former students profuse thanks ⁹²³ (**). The only **name** given to the volume of the pen of Saavedra and the crucial notion that I introduced, is an act subtle **dispossession** . It will be surpassed in his lapidary efficiency, five years later by the only Under a name yet, given to another volume, but the pen this time Deligne in person ⁹²⁴ (***) .

If the name "SGA 4 ₁

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"Given to a volume-knuckle-saw is a genius of imposture, the name" category tannakienne "is a **hoax** , just as great. Even in the case of a class of Galois Poincaré "Trivial" or "neutral", equivalent to that of linear finite-dimensional representations of a schematic refines groups G over a field k , yoga I developed is typically "grothendieckien" inspired it is the analogue yoga that I had developed in the case of the fundamental group of a topological space, a scheme or (more usually) a topos. The idea of defining the fundamental group as the group automorphisms of a functor fiber coatings on the category of a "space" or "topos", and the idea (Just as preposterous as new, so unusual) to work systematically with the category stalls coatings not **necessarily**

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Related , I had time attracted many sarcastic. I do me

p. 1166

am never worried, knowing that none of these pranksters who thought they knew Galois theory or the Poincaré because they had learned on school benches, had really understood - and none of them until today still can not make even **the first steps** elementary theory Galois coverings of a scheme (say) so slightly General ⁹²⁵ (*) without repeating the text message work I done about it, and formulation I gave the Galois theory Poincaré coatings in terms Equivalence class ⁹²⁶ (**).

And likewise, the idea of rebuilding an affine group scheme (on a body, to fix ideas) from the "abstract" category of its linear representations of finite size, provided with its multiplicative structure Natural and its "fiber functor" natural "forgetting G operations" as the **group scheme of automorphisms of this functor** - that idea is due neither to Tannaka (which has never requested so), nor my modest former student Saavedra, nor my most brilliant student Deligne (to my regret - but he was not still around), but it is an idea typically "grothendieckienne". And as for the fact that and is a perfect correspondence between patterns in affine groups over k and k -tensor categories provided with a rigid fiber functor k . And as yet for the idea that, if by chance (as it tends to be the case for categories of patterns on a non characteristic zero) was a tensor category rigid that (unfortunately, or additionally happiness...) has **not** the advantage of having a fiber functor, the "algebraic group" should then be replaced by a "**sheaf** algebraic". This idea has long been explained in and off when the young Deligne had not heard him say in math the word "spray", and had never dreamed of something similar. The so when Giraud took it upon himself to develop in the sixties an arsenal of cohomological algebra

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non-commutative in size ≤ 2 , with blows

p. 1167

⁹²³ (**) side "mathematical" itself, these people are (in order of appearance) myself (excluding alphabetical order it was nice), Berthelot and Deligne.

⁹²⁴ (***) As will appear below (in Note "Monsieur Verdoux - or cavalier", already cited), there for

least strong presumptions that instead of reading here "but the pen this time Deligne in person" it is lawful to read "and

also penned by Deligne in person. "

925 (*) "As is little general" may be interpreted here, precisely as "a non-normal pattern." Before me, the group a fundamental algebraic variety was introduced (by Lang and Serre) that in the case of normal varieties, in the describing as a suitable quotient of the Galois group profinite "absolute" of the body functions, $\text{Gal}(K/K)$.

926 (**) Today, this way of formulating the relationship between fundamental group and tiles, even in the particular case "School" (so to speak) of ordinary topological spaces (locally simply connected by arcs) starts hanging everywhere, without referring to the ancestor is it necessary to say. . .

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18.5. THE FOUR OPERATIONS (a corpse)

fields, wreaths and links 927 (*), the chuckles have not failed. This is the stuff that our days long ago the Deligne and others call a "matrix of non-sense." These sneers do not embarrassed 928 (**), I knew where I was going - and it was with "Revive" (as I write elsewhere) but without de.surprise really, I saw this "gangue" enter with perfect finesse of the delicate relations and deep I knew no other "language" would be able to seize them.

That said, when the same sneering one day realize a "cream pie" that had escaped them, whether the categories that some are quick to baptize "tannakiennes" (until something better ...) or some "correspondence" or "relationship" or "construction" (a little neo-grothendieckienne on edges) that sends one or euphemistically christened "Riemann-Hilbert" (until something better égale-is lying. . .) 929 (***) - then everyone rushes and that is who will play the génials inventors. This "spirit time" mathematical, in the seventy years, eighty of the century... What is certain, in any case, is that this is not a Saavedra could have had the idea of calling these categories (I had him at length ment explained) the truly awesome name "tannakiennes categories." Left to himself, he would not already dared change the terminology he held me without at least ask my permission - and it was indeed the least of it! it was the example and encouragement come from above, for

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it per- p. 1168

put to treat me thus negligible. Moreover, the unfortunate was well enough to work for get to know what was essential if he wanted to achieve if only a part of the program ambitious writing that I had submitted 930 (*), it goes without even delving into literature and read the Tannaka and what not, which he had probably never heard of, at the time when he was still working with I 931 (**).

The name is "brilliant" by the subtle combination of two qualities that might seem contradictory.

One is that to a superficial observer, this name does not seem completely crazy. "Everybody" vaguely remember that there ure "duality Tannaka" in which the multiplicative structure plays a role - and it seems to look a bit like what happens to those famous that a \otimes -categories Saavedra (? Which is that one) called "tannakiennes"; then go to "tannakiennes", why not!

But for those who wait, things ripen themselves. Thirteen years have passed since, and Instead of the book from an unknown nobody has ever seen there for three years a reference much more prestigious in the glossy volume LN 900, from the pen of none other than Deligne, and a man named Milne making tandem. These well-known authors develop ab ovo all categories of formalism they

927 (*) This suggestive terminology was introduced by Giraud, instead of a provisional terminology (slightly to the back as-I-you-shoot) I used from 1955 (like "categories fibered local in nature" and other unwelcome names for concepts whose fundamental nature demanded pithy and striking names).

(June 16) on the first page of the introduction to his book, Saavedra spoke of "formalism not homological algebra commutative **introduced** by Giraud. "This is one of many places where I could feel someone smarter than the author This book, which he "held hands" ... the one who likes to speak of "derived categories" that to add in stride "**Introduced** by Verdier (as he knows, in both cases, what to think...).

928 (**) But if Giraud - who distanced himself without return of the theme he pursued me, initiating the just. See to it Note about "The heirs..." (especially p. 386-387), and the note that follows "... and Chainsaw" (Notes n ° s 91, 92).

929 (***) See, on this last "until something better" whole package "Symposium Pervert", including the notes "The prestidigit-feeler" and "Leatherheads Markets - or puppet theater" (n ° s 75, and 171 2 (e), the latter part of the long note "The Mafia" n ° 171 2).

930 (*) He completed the program in record time of just two years, from the time of my departure, where this program was practically not begun yet (beyond an early made aware schematic basic techniques). same supported by a Deligne (who had no interest in that student before leaving), this performance takes just prodigy - that "miracle" is examined a little closer in the note "Monsieur Verdoux - or cavalier" (n ° 176 5).

931 (**) I recall that Saavedra has worked with me just for a year or two before I left (around 1968, 1969), after which I have almost entirely lost. His luggage that time was neither more nor less extensive than that of any other Student 3 ° cycle from the third world (or our provincial faculties).

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call, too, tannakiennes. Obviously, this is a fundamental concept, used for years by people like Langlands, Deligne, Greenhouse and others, and with a bright future. No certainly not believe that this is a Saavedra, called two or three times in passing in this article, which is the author of this crucial concept, and formalism of great finesse which it gives rise. The same tone of the article two brilliant authors, taking up the subject with all the mastery we know the main author, leaves also stand to

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about doubt ⁹³² (*). Besides they belong in the presented theory

p. 1169

Saavedra in the book of an error such Coarse (which requires even from a definition quite different, which finally seems good ⁹³³ (**)) that is based on whether this unfortunate Saavedra (Which someone - and we guess that -... Had to once trying to explain what it was) really had understood what he meant. And it©not Milne, all shiny it is, and who had the honor to co-sign with the prestigious Deligne an article visibly developing a basic idea, which would have the idea that could pass for father or only co-father of it; nor Beilinson nor Bernstein come claim they have invented (or if only co-invented...) the famous "relationship which should have its place in these notes. . . "They had the honor to co-sign with the same prestigious Deligne after it has had the great kindness to put them on track for a demonstration Kazhdan-Lusztig. . . And who, Finally, think **seriously** that this famous Tannaka who lent his name (without surely one consults) to designate this fundamental concept, there is **really** for something? It is not he who come to claim, assuming that it is still alive, the day he will be clear to everyone that is **true father** of this concept, and the whole theory of perfect delicacy that goes with it. For who could be about it doubt, just browse it work Tannaka, or if there is too much for her Patience, one on the "duality Tannaka" to realize that it has basically nothing to do. . . Again, once posed some milestones, simply let time. Obviously, this theory, which more will be revealed as the technical means of a new **philosophy** to connect geometry and arithmetic, is called in the coming years to come more and more to the front of the stage mathematical. In five or ten years, no one has thought to refer to it at a certain book by an unknown author, as one who had him probably held hands took the trouble to write the statement that was required, with the assistance of a brilliant collaborator, to form the core of not less brilliant volume which is finally developed to a

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solid ground the notion of pattern. (Volume where it seemed more charitable,

p. 1170

also not to mention the "matrix of non-sense" usual conjecture on this theme obviously exceeded it, a vague and precursor draft, long forgotten. . .) It will be become second nature to cite "Tannakian categories" by P. Deligne and JS Milne cite as FCC or GAGA (Serre) or LMS (the well-known anonymous seminar of IHES says "Bois Marie"). And in doing so, there will be in anyone©mind any ambiguity as to the authorship of these ideas innovative - which is certainly not the fact Milne co-author, let alone Tannaka or even a certain author strictly unknown (called a Saavedra), called two or three times in passing their paper for writing (in the introduction of a volume from his pen) an "excellent summary" (with some reserves close) on the subject.

But we will not be expected from the father of the theory, he does violence to his well-known modesty, the point of calling "Deligne categories" (or "Deligne correspondence" in a completely different field...) which, obviously, and by the unanimous consensus of the people "good" that decide on these matters should ⁹³² (*) About the article in question, see in particular the notes "The Burial - or New Father" (n ° 52, especially p. 214) and "The clean slate" (n ° 67, especially p. 252-253).

⁹³³ (**) See, on this feat of Deligne (Milne attended acting listed), the beginning of the note repeatedly cited "Monsieur Verdoux - or cavalier" (1176 page).

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Yet indeed be called as well. . .

18.5.9.4. d. The waltz of fathers

Rating 176 ⁴

(April 20) The reflection of yesterday made me see with new eyes one thing last year when I landed just in the Funeral, left me stunned: "... this thing looks absurd.: Deligne "remaking" the thesis of Saavedra * Ten years after "This is discussed from April 19 of the year last I discovered the "memorable volume" LN 900, in which (among other good things) is Texting reproduced virtually thesis Saavedra ⁹³⁴ (*). I return a week later still, in the

notes "The clean slate." At this time, I had come to "firmly believe" that the meaning behind this nonsense, it was the desire to gloss Deligne (becoming the scribe Saavedra) of "Give the illusory feeling of liberation from something he certainly felt as a painful necessity: having to constantly refer to the same one that is supplant and deny, or not least than another which refers to him. " But last week, taking the first penalty flick the work of this "as another" I noticed to my surprise it

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absolutely no thought "to refer to me" (if not by the three lines p. 1171 cited in "deep gratitude" -bidon, clearly intended to deceive). So my "intimate belief" of a year ago became lame - there must be a fair in element, certainly, but it yet remained a mystery: it is still not the three lines in question, no reader will think going to find at the end of the introduction, which will be motivated to play a Deligne copyists of the more obscure student of a master long-dead! Besides in this end of the introduction I figure almost in one breath with him and Berthelot, who have the right (just like me, it looks like 935 (*)) to thanks for their "help and advice they have generously made during this work." . . This "mystery" was completely cleared when thinking of yesterday, and without that I had to look, and without even I only have to talk to me. In resonance there, after I stopped writing, various associations have surfaced - they must already be present in writing, without that I have consciousness, and guide my pen without my knowledge. I was struck by a similarity not only style, but of **patented** ownership, through the three "operations" in the Burial (among the four in which Deligne itself is the main (if not only) "beneficiary"). This is the process we might call "Provisional surrogate father", smuggled on the board for the mathematical racketeering retract a real fatherhood, while the person of my friend stone remains temporarily in the shade. A When fully eliminated the natural father of the scene to the satisfaction of all, the surrogate father is himself even whisked away as if it had never existed, and the **real father** , modest and smiling, appears on the scene, without even having to say it to him; as for the one who quietly has learned the son and that has expected, things happen for themselves without any resistance: the unanimous agreement of the whole Congregation, already, has invested the proper role of law.

This process has begun to be seen by me only a few days ago, by tracing mésaventures My friend Zoghman through the various episodes of the IV operation called "the unknown service". The "surrogate father" in this case (... for some "correspondence") was **Kashiwara** - I can not whether he fell from the sky like that, provi

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dentiellement and by sheer chance, or if the future real p. 1172 father made him understand gently that this result then an unknown, that lying there without a father worthy of the 934 (*) See the notes cited in the penultimate note b. p.

935 (*) With the difference that even when I "brought about" (sic), and that it "also owes me a large part of its mathematician training "(it really too much honor).

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name, was my faith not to be despised 936 (*). Still, the friend Pierre has played to perfection on a alleged paternity ambiguity, fabricated by the peremptory consensus of "skills" and this from even before the scope of the new thing again tonight generally recognized. The father Kashiwara substitution appears from March 1980 937 (**), if not already at the Symposium Houches six months before; it is retracted without a trace (and not too take offense, would seem it) when the memorable Conference of June 1981, fifteen months later. Here, the retraction is done with perfect skill, by the introduction of two other, call them this time "presumptive co-fathers" (and pure form) Beilinson and Bernstein, who enter the scene as a merely decorative -! "thumb", while nobody of course no one would imagine that it is one or the other would have made the child (although both have well advantage. . .).

The analogy with "the Patterns operation" is truly breathtaking! While the authorship of what Poincaré present as the "non-sense" to all comers on the grounds was too notorious even (and especially early 70s) to give taken maneuvers, there were **two crucial aspects** of yoga reasons who had never even been a single published online, were it in allusive form. One of these vovets, the "yoga of weights" had been appropriated by the Mega-father in 1970 without the shadow of a ride - this which had been retracted was anyway as "speculative" and no better than a hint of pure form. The other side was against a fully developed, nothing conjectural for once, as soon the second half of the sixties. A vague student dropped a bit was supposed to make a presentation at least startup mechanism of Yoga - technically somewhat daunting task, but (until about the timing of the "death" of the natural father and undesirable, at least) seemed rather overcome the unfortunate.

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It was this student, so Saavedra, who was the surrogate father just found credible enough, thanks
p. 1173

the interim bail of one who remains in the wings to take the consent of a Congregation just waiting to forget the one to be forgotten; but at the same time (and that is the interest) that "father" -There clearly do not "weight". In time, the idea would never occur to anyone, and probably Saavedra less than anyone ⁹³⁸ (*), to advance the supposition that he could be the father of a new philosophy - assumption simply grotesque to little we did was stop there though only for a moment. . . Right here, evacuation of surrogate father, who did his time is done only ten years later, with the publication memorable LN 900 in 1982. It must be said that between 1972 (before implementation of the "surrogate father" in the operation I called "patterns") and 1980 (appearance of surrogate father equally angel in the operation IV called "the unknown service"), water had passed under the bridge, and there was no place to go yet the bush! Remarkably, here too, introduced a "co-presumptive father and pure form" for make the transition "smoothly" (without anyone having the air to emphasize) between the paternity substitution (polichinelle of authorship, in short...) and **true**. And I am sure most Milne has not seen invisible son who maneuvered the way to another, that Beilinson and Bernstein do is bother to the see. Everyone had his crumbs, and everyone (at least those who have a voice...) Is reason ⁹³⁶ (*) (June 16) It would seem that the initiative of pickpocket operations on the work of Mebkhout back well in Entre taking Kashiwara, and this since 1978, just months after Mebkhout has communicated its Chapter III of his thesis he had just finished. On this subject the note "The Mafia" part (b) ("First trouble - or big shots from beyond the Pacific"), notes b. p. (*) P. 1060.
⁹³⁷ (**) (June 16) In fact, it is already beginning to show the tip of the nose two years before - see previous footnote b. p. The episode March 1980 is the seminar Goulaouic-Schwartz, referred to the city note and in note "Carte blanche for looting - or works High "(n ° 171 4 particular pages 1088-1090).
⁹³⁸ (*) (16 June) the term "market" that had to be concluded between him, Saavedra and Deligne (temporarily) in the wings (loan to reappear when the time was ripe. . .), The "part" of Saavedra was a state doctorate in pocket and notoriety Relative gained an author of the prestigious series "Lecture Notes" - which would give the start to a career in his country, far from arid prosecution mathematics he did interviews from afar. . .
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to be fully satisfied.

All this made me also resonger tonight in the third major transaction for the direct benefit of "future Father all-out "operation" Cohomology spreads. "I had been convinced earlier that motivation tion of this initial operation ⁹³⁹ (**) was about the ownership of a certain **formula fixed points** , the fact that we could have some "formula of L-functions" to unwanted fatherhood as a co-trivial rollaire of said formula. The trouble is that the trace formula in

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question was tainted with the **same** p. 1174

unwanted fatherhood. Fortunately, there was also an alternative father, a good friend to him (Verdier not to name him), who had in fact two formulas, one too broad (but heuristically crucial), the other a bit skimpy but still sufficient to "cap" what we wanted. But buddy or not, it is certainly neither the friend nor the undesirable deceased, who is **the** "father" appropriate here when he comes to of the formula-key for "**the**" famous conjecture ⁹⁴⁰ (*). Given the notoriety, alas, in the formula of L-functions and its unfortunate paternity, the delicate point here was not the boyfriend (with friends we always end arrange ...) but the deceased. To make matters worse, his demonstration of "corollary" was published black and white in a Bourbaki seminar in 1964, but at some point (hopefully) or routine cases (Uh sorry, the crucial event, I meant!), This formula (or trace formula is kif kif, but that it important not tell. . . ⁹⁴¹ (**)), had not yet had time to be verified.

Here, the manipulation was to use the buddy in question to father figure of his ultra-formula (Which was not the exact truth, except that only he never bothered to prove it ...)

but by sliding the Band confusion with the formula **explicitly** demonstrated by the bulky deceased (formula that above all it is not hinted at any time) and **débinant** ultra-formula (As speculative, incomplete and, frankly, useless). This was a way to drown a fish, and remove all the reader want to go look in a seminar SGA 5 (which makes it also a have to "forget") what he would say on the matter. As the explicit formula (a little skimpy on edges, but perfectly valid) buddy, by mutual agreement there is no question, either, except an ambiguous reference and pure form, drowned at the end of a text stringy and discouraging in the extreme, no player in the world will have had the courage to read to the end. So we can say, in summary, that the "Surrogate father" (Verdier in this case) is reached, but not by tacit agreement for a "Fatherhood" on a result (that of

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deceased) that this is **to retract completely** , by connivance p. 1175

rather interference-débinage play two "children" that he is indeed the father, just to retract in the melee the third child of father unmentionable him, orphan that nobody comes, or especially not cares, to find ⁹⁴² (*). In this manipulation, Illusie plays a supporting role, somewhat similar to "Presumptive co-fathers" of now - except that its authorship, nor that of Verdier is supposed to no time focus on the sacrosanct trace formula **for Frobenius**, the only one that matters and reserved (With all the dexterity that is needed, certainly) the only Deligne, but as it relates to the unspeakable child it is retracted - what Illusie collaborating with this exemplary devotion that characterizes it.

⁹³⁹ (**) Reference is made to the group of notes "The formula" (n ° s 169 5 -169 9). The initial intention was considerably later expanded -

see in particular in this notes, "In Praise of Death (1) - or compliments" (n ° 104) and the note "Jewels" (n ° 170 (iii)).

⁹⁴⁰ (*) This is of course "the" conjecture of Weil. On this subject the note "Conjecture" (n ° 169 4).

⁹⁴¹ (**) These two formulas are actually each immediate corollary of the other. As my authorship on one (formula functions L) was known, Deligne was fixed (in the text having memorable name "APG 4 1 2 ") to present it as a corollary to

the other, by making more impossible to give the appearance of being the father of the latter, by sleight-scams tricks infinitely more difficult, as my modest demonstration (and set out the key) to said formula. See the group of formulas already city, for this probably unique feat in the history of our venerable Science (notes n ° s 169 5 -169 9).

⁹⁴² (*) See note on the subject "The magicians - or formula soaring" (n ° 169 8) - and also note b. p. (**) page 1121 to note "The family album, showing how the retraction-envolage efforts of good Samaritans and Deligne Illusie were successful.

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18.5.9.5. e. Monsieur Verdoux - or cavalier

Rating 176 5

But I would still return to the "thesis" of Saavedra. It was around the time of my departure mathematical scene, beginning in 1970 (if I remember correctly), that Saavedra had finally mine really "hang" at work, after a year or two during which he did not seem too decided.

He told me he had cleared a formulation and a demonstration of the initial statement that I had him proposed, so as to apply to the case of a base ring **k one**. It even made me a sketch demonstration, I had to listen to a somewhat distractedly. Substantially all of my energy was occupied by the mutation in my life I was then experiencing. Then without thinking to check with care that Saavedra told me, I felt that he had finally started, and he was able now fend for its own. Maybe I was in a hurry to take rief desires

for reality, at a time when my availability for a true direction of research became almost zero ⁹⁴³ (**). After that I have not had any sign of life from him, as far as I remember ⁹⁴⁴ (***) . I presumed until the last week he had to have done the minimum program I him had proposed, and just a little

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beyond perhaps by treating the case statement (from what I had Deligne p. 1176

wrote last August with his annotated bibliography on the grounds).

I have only just noticing **that it is not so**. The unfortunate found means, after three or four years on the subject of making a mistake in the **definition** of what he calls "category tannakienne" (defined by intrinsic properties, I hear ⁹⁴⁵ (*)), it was about to prove it implies the description "Galois" in terms of representations of a suitable spray. Theorem 3 he states in the introduction (the introduction where he is supposed to at least **outline** the four theorems critical theory, as I had given him) is **trivially false**. Deligne and Milne are pleasant duty to report the error monnumentale, offer as "new" definition of categories studied the description in terms of sheaf (which is obvious a priori that it is the right, even change the intrinsic description needed ...), and seriously questioning whether the definition "Saavedra" (once rid of the silly mistake) involves much "theirs" (sic) ⁹⁴⁶ (**) - which was exactly the subject that was supposed to be the thesis of Saavedra!

The situation is pure father Ubu! And this thirty-six ways at once. So, what was the subject of work offered to Saavedra, the only party seeking an original contribution, however modest it (clear the good intrinsic conditions for categories Galois Poincaré on such a general base ring that possible) was not treated in the same case (which I believe have long treated ⁹⁴⁷ (***) at the time meet Saavedra) where

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the base ring $k = \text{End}(0)$ is a **body**! The work "thesis" Saavedra p. 1177

therefore consisted, precisely, copy piously part of the theory (beyond the start of Yoga

943 (**) In comparison, at least, with availability that was mine before I left; but not with that I can find in most of my colleagues, assuming research directions.

944 (***) My memory serves me a tad here - see footnote ^o 176 7 for unexpected revelations about it.

945 (*) The error comes from the fact that there was confusion in the minds of Saavedra, what I meant by **base ring** a tensor category; is not any ring against which said category is "flat", and the tensor product either "bilinear", but the canonical ring End (1) (where 1 unit is the object of the category). As I have explained to Saavedra BABA theory, there should be so much "not in the know" that it had to pass him completely over the head and sink into oblivion. Deligne, who seems to have more or less my estate to Saavedra (with visibly his idea behind the head ...), was careful not to make him change course. This allowed (ten years later) to discreetly apart Castle Saavedrien cards, and appear as the Savior and Angel (again) like Father true that everyone was waiting for. . .

946 (**) Loc. cit. page 160 (I am not making!).

947 (***) It was in 1964 or 65, so seven or eight years before the famous "thesis" -SiC Saavedra, and seventeen or eighteen years before a tandem-Deligne Milne accoure to the rescue **not do** , either, this modest work-out - the only work "Original" which I had expected from the most modest of my students. . .

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grothendieckien), above a basic body, which was already fully completed by me, and to present, instead of work that was a prerequisite for everything that was to follow, a definition and a cannulated "Demonstration" a false theorem, demonstration reducing (as Deligne is committed to report - loc. cit. p. 160) to a single vicious circle!

That©not all. The thesis does not hold - and the thesis jury sees nothing! We must believe no member has had to take very well what it was. But this has no incentive to make me sign that there is at least one among them who is able to give serious a valid deposit of work they were doing seriously undermines judge ⁹⁴⁸ (*). If the defense has yet taken place, and without me partner, it has hardly been possible thanks to the deposit of Deligne, which (as the thanks of Saavedra the leave to hear) had to follow so little work, once I had virtually disappeared from the stage ⁹⁴⁹ (**).

It also seems to me inconceivable, therefore, that Deligne will not be preview of this error, it I know alertness and acuity down to the smallest detail - and there is no question here of "small detail"! Of course, I had told him in all its finesse yoga which I had succeeded, and it is simply not possible that among the first things that I explained to him, there has been this against-example he and Milne pretend to get out there as the latest addition, which was known to me from the very beginning my reflection on yoga (I©eventually call "grothendieckien" instead of referring to Galois-Poincaré who do not ask much. . .). If he is allowed to remain in the "thesis" (sic) his "protected" (resic) a gross error, such that they can discredit simply the "surrogate father" (All provisional) as soon as it would seem appropriate to him, it is certainly not without good reason. The reflection Yesterday makes them also very fairly obvious.

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What can be said I affabule, and that "help and advice" which makes Saavedra state do not involve ^{p. 1178} Deligne necessarily that took the trouble to read with so little care the four statements from the introduction which summarize the bulk of the theory ⁹⁵⁰ (*). These statements were of course familiar to him long before the knowledge of the person concerned would have been so simple lightness, endorse a work without taking at least worth checking out, just for a quarter of an hour, correcting the main statements announced in the introduction. But in fact there is no doubt in my mind that Deligne has indeed had to take this barely-there. This work, in fact, **was not any work** submitted by a student lost a tad and bad thesis. Deligne was best placed after me (and before Serre again) to feel the full scope formalism that was presented here as forming a crucial part of the unwritten legacy (or at least not published) of the deceased master. If he has more to it, of course, to take in respect of this component its jaunty air usual ⁹⁵¹ (**), basically he knew better than anyone what it was. If he, the brilliant Deligne, elitist excessive, took the trouble here to follow someone working who obviously was poorly endowed, it is certainly not for the beautiful person©eyes and in order to help him get which according current consensus (and even more, according to the requirement criteria pushed to their extreme degree, he is proud to profess) is a **bogus argument** .

Once released this word, we are confronted immediately with a strange contradiction. First, if an error

948 (*) The composition of this lamentable jury will also end up being unveiled (the reader who has resisted so far) in note 176 final 7 ©"Sixth nail" in my coffin. . .

949 (**) This sudden interest of Deligne for an obscure student evil thesis has also made its appearance, one wonders why, after the death of the natural father (and undesirable...) of the theory that the said student (visibly overwhelmed by the task. . .) Was supposed to expose.

950 (*) Apart from the results of the filtration fiber functors, more technical and discomfort to compress into a single statement

striking.

951 (**) See, on these tunes, and ownership they serve technical note "Ownership and contempt" (n ° 59 ©
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monumental, in someone who is supposed to have invested full-time in the subject for years, he is hard not to interpret it as a sign of inability land - it would seem that the same problem which lay, even in its purely technical aspects (which was not rocket science yet) had any just not yet seized at the defense, and in the publication of the book in question. On the other hand, the same student, after a year or two past me without doing much, suddenly acquires less two years, a mathematical culture can rightly seem impressive structure theory algebraic groups, both in the general body of the

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field of real, stranded patterns theory

p. 1179

zinc, Hodge theory, patterns. . . Not only that - but then I do not remember having read a text mathematical written by him, if only a few pages, and knowing full well how (especially for students of modest means) it is not obvious at all to learn to write the math - I was struck, browsing the book published under his name, his "dress" of exceptional quality. Thought I had come to that, technically at least, the text, which apparently is a reference text the same standard, as are EGA and SGA texts have been written by my hand, or that of Deligne or among the four or five other students that I had, all remarkably gifted, who are experienced in the task of presenting as accurate, complete, and elegant set of ideas and facts and nested complex. I know very well that even less than mathematical, such editorial virtuosity is something that is improvised (except in beings with exceptional gifts, as well Deligne and a few others), and it is acquired (when ends indeed by acquiring) that after long years of practice. I set myself ten years to acquire, while yet the contact I had with the substance it was expressed, was very strong. This contact has been no common measure, certainly, with that of Saavedra for his thesis, still not understood after writing on this theme which proves to be yet (at least until 1982...), **the** "good reference" for a delicate and formalism crucial. Certainly, there are two things there that simply "stick" not with each other. . . The thought that had touched me since last night, and now back with the force of evidence, Once I bother to tell me the location black on white, is this: it is unthinkable that Whether Saavedra, that I knew well and whom I know very well the possibilities and above the limits - it is unthinkable, on reflection, whether indeed he the author of this brilliant book, putting in his appearance exclusively technical but it is true in a way (on that front) and complete to the nines, bases a "philosophy" that exceeds the full, maybe the first three chapters, two of which consist especially in generalities functorial everyone already knew, and the third shows the fully cannulated version of Saavedra of the central concept of the book - so that these chapters were supposed to be the "minimum program" that he has never accomplished - perhaps those are they fully hand Saavedra. All cannula that is the central chapter III, simply nevertheless

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give an idea of what

p. 1180

what we wanted to come - namely, the vision "grothendieckienne" (not to call it), or "gerbienne" © certain categories, vision gives meaning to subsequent chapters IV to VI. Once admitted description by sheaves (wisely taken as a **definition** of the so-called category "tannakiennes" in the Text doubling pirate Deligne and Milne), it is these three chapters are the heart of formalism that it was appropriate. I presume that these chapters were written in toto by Deligne or maybe partly by it, in part by Berthelot; and this in a much more detailed than the notes I had spent Saavedra, so he had practically to copy them verbatim, if indeed we even asked him to take the trouble to take this step one. It should feel "win" because it made her "gift" of a thesis and the title to the key, then it was good to feel that what he had done himself (and by being illusion that it stood), it was probably a little thin for a thesis

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of state doctorate. Deligne and wins (still disguised as a Samaritan...): Here the reference was needed otherwise for immediate least for "later" (for those who wait...), and where the unwanted name only appeared more, for all practical purposes at least.

To the joy at its height, I add that the named Saavedra seems to have disappeared from circulation

without leaving any trace. Last year, in anticipation of sending (I saw imminent) copies learned and paperback and all of Crops and Seeds, I laminated in the International Directory of mathematicians, which is big yet - everybody is (and the book does just that), with the sole exception of yet the person, which is not listed or under Saavedra, nor under Rivano (or even under Neantro, I looked to salve consciousness). So, the story looks like a dark detective story. One shudders to imagine the Deligne smiling and affable, as a second Monsieur Verdoux (aka Landru), once achieved his torturous fine with that "good reference" at will (four years before that of his friend Verdier! ^{952 (*)}) - one shudders, I say, make light disappear "exhibit" of his diabolical machinations, namely unhappy generous Neantro Saavedra Rivano in person, making the long calcining in a tidy stack of Ormails ^{953 (**)}, specifically designed for such purposes.

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I reassured myself that I had not heard that Kashiwara or Verdier have disappeared from this ^{page. 1181} world - to be honest, I got it in the end not later wire before yesterday again, asking him (Without much conviction and without success, to me it seems) he could not give me news of a other "disappeared", which everyone talks about and nobody apparently has never seen - I mean, the thesis of Jouanolou. I still do not know in this thesis more about that, but it seems at least that Verdier is still alive, while "exhibit" it - and I am confident it is the same for Neantro Saavedra Rivano.

18.5.9.6. f. The dirty work

Rating 176 ⁶

With all that, I have not even finished making the turn still ubu aspects of the history of the thesis Saavedra - definitely I collect, theses and thésitifs like no other! There I came to the presumption (not to say, firmly believe) that if Deligne (assisted by a colleague and eager volunteer) did mine severely copy thesis Saavedra decade after the defense of it, he did probably done where "back" what he liked her "pay" for a time (the time for Saavedra spend his thesis and disappear), and that it was therefore here a just reward - except that that he had "lent" for a time, he had "borrowed" the deceased never named. But as it is not make use of the dead what they borrow (it would certainly more than that!), everything is for the best, on that side too.

The best part about it is that even after a second former student has passed by (the brightest of all that I had, to boot), the humble problem I had given to Saavedra, who was My starting point there are more than twenty years and the first thing I think I resolved from that moment in If the ring defining the proposed \otimes -category is a body - this problem is still humble

^{952 (*)} On this, see note named (just as) "The good references" n ° 82.

^{953 (**)} "The Ormails" is the name of the residential part of the IHES (Institute of Advanced Scientific Studies), where the friend stone - alias

Monsieur Verdoux-Landru alias (and disguised as a cavalier) took the point sequence named a deceased ousted instead and sent into oblivion by the kind of blow-mine-de-anything which my friend has the secret. The residential part is in ten family houses, and a larger building consists of comfortable studios, which will soon Surely, too, to have each his small single chimney all uses. . .

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not "solved" at present, even in this case! Deligne was content to raise the gross error of Saavedra (surely marked for over ten years, but he bided his time...). He did not care, all copying 128 pages

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the previous reference text, to repair the error. Why would he give p. 1182

that sentence - while the aim was clearly achieved! It would have required that there be present in him, in this operation, **something** that the only cravings of ownership, but an interest aroused, a **respect** for the mathematical substance he treated, and a vision that goes beyond the prospect of "winning" immediate.

If I took the trouble to 64-65 years to reach a yoga "grothendieckien" for \otimes -categories be represented in terms of "algebraic sheaves", instead of just going to those who can describe by a group scheme, it is because in the example that I "motivated" the more, the patterns on a body, he was well known (by a simple argument Serre) that when this body is for. $p > 0$, there no fiber functor "rational \mathbb{Q} " (or even \mathbb{R}). This **forced my hand**, then, to express theory in terms of something as "not serious" than the formalism of sheaves and links, and even time of course, to find the intrinsic criteria of simple algebraic in nature, ensuring that this vision "Galois" or "grothendieckienne" walked almost "always", and in any case, at very little cost. The characterization that I had released (and, if I am not mistaken, proven), by the existence of a fiber functor an extension of the field k of the basic body k , is still not established in the literature, twenty years later!

Even today, in terms of what is written by the care of Saavedra of Deligne and others, even admitting anything you like on a formalism of "motivic cohomology classes" over a finite field (Say), it is still not established (not in the literature, at least) that the category of semi-simple patterns (Say) on such a body is "grothendieckienne" (or "tannakienne" as these gentlemen say). This 418 + 128 = 546 pages of text, from the pen of Saavedra (assisted by Deligne and Berthelot) and then Deligne and Milne, and all for not even get to clear what was my starting point there twenty years, convincing me that the "motivic Galois groups", **it existed**.

Yes, Deligne why would he give this penalty, although he had long forgotten the vision, the credit he sought was acquired anyway, and the body on which he worked for his theory of motives (which has nothing to do especially with that of a deceased ...) are all body characteristic zero - so that his famous so-called category "tannakiennes" are all "neutral" (or "Trivial"). At this rate there, it was certainly not worth making a salad on the sheaves

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and others,

p. 1183

which therefore is no more than window dressing. It was not worth it, if only **to appropriate Letter something we forgot the soul and spirit.**

And I see that the epilogue of this époustouflante and lamentable story is that just like the Baba's vision of the reasons buried for fifteen years, it is still crumbling, barely finished making round brilliant Burial and his prowess, is going to hit this small job then none of his students after his "death" has not been keen to do. Because it's a long time that they are too busy to play masters, to still have time, if only for the space of a few days to be as **servant** 954 (*).

954 (*) I was a little hasty here, pretending to put all my students in the same bag with the brightest of them. In advance, I apologize to all those among them who do not feel flattered to be in brilliant company! I'm happy Anyway to remember Giraud, tapping his work (which fell on him unexpectedly) to read the thesis Contou-Carrere, in terms of "service" for sure, vis-à-vis Contou-Carrère and to me at least, and perhaps also vis-à-vis the mathematical community; see about the last paragraph of the note "Jesus and the Twelve Apostles" (n ° 19, page 151). 886

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18.5.9.7. g. Five Theses for a massacre - or filial piety

Rating 176 7

(June 19) It is now exactly two months since I started, breezed to write notes above (19 and 20 April), with the name all found "The Sixth nail (in the coffin)" (n ° s 176 1 to 176 6, besides it, part of the batch). Zoghman Mebkhout had brought me Saavedra book the week before - and it was enough of a look to make me what it already has returned.

I must admit that this discovery was an emotion, hardly less than that of "memorable volume" exhumation of reasons (Lecture Notes n ° 900), a year before to the day. Rather, the emotion of the year last reappeared, somehow, unexpectedly revived by the discovery of an "operation" intimately linked to this exhumation; an operation (it was immediately obvious) that had prepared, and a scale any comparable. I was struck then again, if not suffocated by that sense of quiet impudence - **the same** impudence (it also was clear from the outset by many signs that do not lie) is taking to something closely related to me, something that no other person in the world that I had long range and nourished. . . This was so strong, the same limit of anguish, I've been there myself surprised.

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The spontaneous reaction, and the natural outlet, would have been to do as last year - saying my emotion p. 1184 while it was fresh, and thus get to the heart of this new component to my Premature Burial by those were my relatives. I restrained myself yet 955 (*) because I needed a minimum of availability to visit Mebkhout besides he had things to say to me that I felt good, even if they did not touch me as neuralgic way, they were just as "hot" for him, all cases, and equally significant for Burial. Moreover, it seemed important to note these things I had learned by him and who were still familiar to me, as they were fresh in my mind again - as the ins and outs around this famous book-burial were not likely to escape me, even putting me only later. Therefore, the day after the departure of my Friend, I started (from 15 to 18 April), the story of his misadventures, the group notes (n ° s 171 1 to 171 4) forming now the end of the Apotheose.

This means that before coming to the famous "Sixth nail", I had time to re-enter it. As a matter of fact, retracing the instant the first pages, I find traces in my sarcastic description (and a tad remote) of the new pot-aux-Roses, emotion that had first attacked me, to the point of making me spend white night, at a time when I had yet much needed sleep. For once I felt, yes, the

"Weight of the past!"

It was June 10, three days after having put the famous "end point" in the burial - which suddenly cycled more beautiful! Of course, I had no idea myself how it was restarted - that there even three hundred pages (pretty much) that remained to write! When I finished with the sixth Notes ("the dirty work") forming the "Sixth nail", I thought well have done the trick, and "Four operations" also at the same time - apart from a dozen pages (for III and IV operations) to retype the net and add the footnotes provided page. In a few days I thought I could entrust the strikes the entire manuscript of Burial III.

Yet from the days that followed (maybe even the next day or two days after I had grown finish with the last "nail") there was an unexpected bombshell, where it remains for me to return. Again, my spontaneous movement would have been going to start right away. If I waited two more months 955 (*) Still, I wrote four or five pages in the emotion of the moment, but it remains little trace in the written text nine days later, on 19 April.

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before doing so, it is not that the desire was missing in me, certainly.

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But there were things more pressed

p. 1185

prepare for the strike. Rereading the four operations since the beginning, it was clear that there was great needs to develop further here and there - and the rest is history!

Still today (unless new unforeseen yet - touch wood) finally is the day pomp where I put the real end to the Burial, practically speaking I hear: that I write all last pages, supposed to be part of my thinking about the burial, in all crops and Seeds at least. After that, it just remains to write this "Letter" which must take place foreword for Crops and Seeds - then I think taking a few days off, well deserved and I@ more well need. . .

A few days after writing the previous six notes, I learned of the composition of the jury thesis Saavedra - the jury I was covering well deserved sarcasm in the penultimate note "Mr. Verdoux - Or cavalier "The thesis was defended February 25, 1972 at the Faculty of Science of Orsay, a front panel formed by **J. Demazure** (reporter), **Castelle** and **A. Grothendieck** . For a "bombshell" was a bombshell! The coronation of Ubu! I had also the hardly believe the official source of information, while I had not kept a shadow of a memory to have attended such a thesis defense. Certainly, the history of Monsieur Verdoux-Landru is corsait again ! I phoned at random to Demazure, if he remembered me with being part of a thesis committee called for Saavedra. Demazure could not remember much of anything, either, but still enough to ensure that the defense had actually taken place (he would most certainly too able to say when and how), and that there had been one and the other, in addition to Castelle (which I did not remember not even the name. . .). It does not much knew, if only he had been rapporteur thesis. It@me who I taught him that the thesis, officially, would have been a 25-page text (which had to assist him his work as rapporteur, I suppose). So it was he who was surprised. He promised that he would deal send me a copy of the thesis. It would have me very interested to know what she looked like, but I still waiting - apparently (from what Demazure finally told me a few weeks after) this thesis would be found; perhaps he has not worked hard. Still, no more than me apparently it has trace in his papers. But that is a detail. . .

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So, I end the air! With hot sips that I had paid on this jury, apparently

p. 1186

inept, "making learnedly mine to judge" a work he "did not have to enter very well what it was!" One can imagine that I had a mad desire to repackage these taunts to save the furniture in short, keep holding - and then not, it would have been cheating. There are already enough cheat like that in all this Burial, without my even put mine. Again, these taunts were entirely justified. Now that I know the composition of the jury, I can even specify that it@me, above all else, that have fully deserved the sarcasm. After all, they had to remember especially Demazure and Castelle is this thesis, Saavedra had prepared me, or at least he had started me on a subject I had given him. It was I who was supposed to be in on it, and them they trusted me. If anything finds these famous 25 pages Demazure which is believed to have been the rapporteur, they perhaps stood - and even if the same monumental blunder was there, in a simple summary of theory, which was not Demazure in the game and who trusted me, had no chance to notice.

As for me, who had virtually stalled math for two years, except for my classes, this defense I expédiais there breezed surely, between a course in Orsay and a meeting Surviving and Living or some public discussion (if it is) on atomic waste stored nearby (Saclay), it

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Saavedra followed the work of the past two years, no more than anyone else - and I had no doubt that the work of Saavedra was standing. I can not say more exactly where I had got this conviction. Unlike all the other students that I had had until then, I had no direct presumption by previous work with me, the seriousness of Saavedra. Would I took my university assignments in these time there, so much so lightly, I would have trusted him on his countenance, so to speak? If the text of the book (Released the same year), the 25-page thesis is perhaps a summary, was ready at that time and I used to get an idea, it is true that "at a glance" it presented so well that the idea is perhaps not even occur to me to check some of the work that was supposed to be the contribution Personal Saavedra. It is also possible and even probable (but I have no memory about it) I am trusted me with the opinion of Deligne, that after my departure had followed the work ⁹⁵⁶ (*).
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In one as in the other case, I must admit that my responsibility is engaged in the same ^{p. 1187}
As for having awarded the title of Doctor of Science in light of a thesis that, twenty-three years later appears as a **thesis cage**, in the words of the note quoted above. But it is not that I was myself and to my knowledge an instrument in this deception, and it bears responsibility for giving my deposit (lightly), which removes provided his trickery character. It appears only especially great. After all, the true motivation (for the one who pulled the son) was certainly not allowing a wave PhD student in distress to have a title with it, before changing profession and disappear behind the scenes - but someone not lost to appropriate, and gently casually, fatherhood over a vision born in me and eventually reach before he even heard pronounce (mathematics) words such as "spray" or "pattern". It is thanks to my sudden activity and intense for the survival of the species and other fine causes more urgent (including the same former student and friend told me to have to outrun, because of its sole and absolute dedication to the only mathematical ⁹⁵⁷ (**)) at a time when my energy was fully absorbed elsewhere, my great friend and pupil has achieved what truly unique conjuring trick, to make me the instrument of my own dispossession! In the provisions where I was then completely disconnected from my old math interest and making a blind trust those among my students, Deligne in mind that since the end of the seminar had already SGA 5 started playing a little game in their own way, any name (for example) might have concocted for his famous categories that I did not remember that far, I would say yes and amen! As I said yes and amen to Verdier announcing that there would be no book about homological algebra new style, or Deligne announcing that half of the seminar SGA 7 we had done together would suddenly change paternity. . . But the fact that one who paid the price of a scam operation there agrees benêtement, and without suspecting anything, does not change the nature of the scam, if not it doubles as Abuse of confidence. And the fact that the Serre and other omens are there, too, their account and give them unqualified blessing ⁹⁵⁸ (**), gives the thing a dimension
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unusual - that of corruption of an entire ^{page. 1188}
environment and a time - without the Honorable make any great she is, or remove him one iota of its indecency.

As theatrical surprises jerks never come alone, just a few days after having the revelation of the composition of the thesis committee of my former student Saavedra, I also got the information idoinies for Jouanolou thesis, a thesis a bit special too, which I have had occasion to speak as ⁹⁵⁶ (*) I do not even remember that Deligne was busy work Saavedra. This is one thing I learned April, looking at the introduction to the book of Saavedra.

⁹⁵⁷ (*) See the note about "brothers and husbands - or double signature" (n ° 134), including 614-615 pages.

⁹⁵⁸ (**) See, for this blessing more explicit, the note "Family Album" part. ("The Burial - or slope natu- Relle").

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little bit here and there in my thinking ⁹⁵⁹ (*). Nor Saavedra, he had never bothered to send me a copy of his famous thesis ("everybody quotes (from the colloquium Perverts) and that no ever seen"), so I ended up writing her a letter a little dry (April 25) to ask him some number of questions about the strange vicissitudes of this thesis. He replied almost by return " May 1, evasive to questions of substance (as it was "still very sore back about the past"), but by against information could not be more precise at the coordinates Administrative: the thesis was July 3, 1969 to IHES (Paris), before a jury presided over by Fr.

Samuel, with as examiners **J. Dixmier**, **A. Grothendieck**, **JL Verdier**. My correspondent adds, with a hint of malice: "As far as I could tell, all the board members were present!" (thing me also confirmed by JL Verdier, I got a phone call about it shortly after). Again, I did not have a shadow of a memory of this thesis then of defense, who obviously had done Also on the sly (and sorry to degrade my brand!) ^{960 (**)}. If I thought the defense had made in Strasbourg (and this defense Plaçais due early seventies years knowing that Jouanolou was a post in Strasbourg in those years), it is probably because of a reference cryptic JL Verdier that argument (in a presentation Bourbaki February 1975 n ° 464), cited as "JP Jouanolou Thesis, Fac. Se. Strasbourg "(without date or title) Yet it was part like me the jury. - Would his memory as faulty as mine, or rather, capricious, placing the IHP

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(Henry Institute

p. 1189

Poincaré) where the defense had made in Strasbourg? Figure it!

This same Verdier was also kind enough to send me his own copy of the thesis. I thought

First, looking at this package of 208 loose sheets ^{961 (*)}, it was a photocopy of a draft,

I rappellais I also have myself held hands and commented out in detail, the

Jouanolou time when working with me on this thesis would not stop hanging out. But Verdier me confirmed that it was definitely there the final copy of the thesis unfortunate that apparently never was honored to be drawn more than three or four copies (mine, with my annotations, had to return the hands of Jouanolou, and I have never seen. . .) Or be pinned.

Explanations a bit more detailed as Jouanolou kindly give me afterwards (in

a letter of 3 June), plus the call to Verdier, allowed me to give me a little in the bath of

situation. Jouanolou had come, obviously, to a "saturation point" for his thesis, he

had continued without conviction since the beginning (but not that I care to go clear account

the situation ^{962 (**)}). In 1969, he had arrived at a locking point where it would have been unable to resume work so slightly, to reflect my many observations. I then had to go

obviously and "let it run." Anyway, it seemed, in retracing it again, that the text

represented a work setting seriously and usable form, although it is far from perfect - it was clearly

better than "better than nothing", and could pass as providing a text indispensable reference in

the absence of any other that would have me completely satisfied ^{963 (***)}.

^{959 (*)} There has been talk of this thesis in the sub-grade n ° 85 $\bar{1}$ (p. 349) note "Solidarity", and also in the note "The heirs. . . "(N ° 91) p.387- 88. See also the "Student and Program "(n ° 25).

^{960 (**)} The thesis defense is placed at a time, I think, where I already had just "get" math to get interested in biology (and more particularly, molecular biology).

^{961 (*)} In the Service of the Theses of the Sorbonne, there is a thesis submitted 215 pages - apparently missing six pages to copy Verdier. If it is, the copy filed Audit Service is the complete one that exists in the world - and figured over the market are we assured me. They must have a service pin for child records found that arrive in pieces spare. . .

^{962 (**)} See the section quoted above "The student and the Program", n ° 25.

^{963 (***)} Anyway, it's still the only text in the world that presents the theory of the coefficients l-adic version derived categories - and found a text on top of it, to bring joy to its height. The saw went through 890

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Of course, the idea would not come to me ("even in dreams") that Jouanolou take his revenge for his way, the lack of conviction with

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which he continued this work with me, scuttling himself ^{p. 1190}

and erasing virtually every trace of that famous "reference" I wanted so much to have! This again

a "return things" which I would be unsound to complain (as the desire not miss it!). In

my relationship with Jouanolou, which was important to me was to find in him "arms" to push the

wheels of a trolley of imposing dimensions. I counted as a foregone conclusion that he, Jouanolou,

was involved in my plans, but I think at any time to stop the insistent signs

Yet that showed me that it was not. It is true, certainly, that Jouanolou himself had

chose to come work with me (he had to find his account to work with a "boss" prestigious, without

suspect in what he promised ...), and it was he who freely chose their topic work among the

wide range of subjects on which I was willing to support him (all topics related certainly to the same "chariot" which probably, in fact, did not say anything worth it). To put it differently: as each was Jouanolou

dealing with some contradictions in himself, at his own desires and choices in his

work in this case.

My own contradiction did not place in my relationship to my work, but in such polarization

my duties, I was unable to see my students anything but welcome arms and ima- me
giner none of them can be divided in the work he was doing with me. With the additional decline
that gives me a long reflection on the burial, I realize also that was far Jouanolou
being the only one of my students to be "divided" in one way or another, in this work. But it is
an extreme case, since it is the only one among them who was not able to identify with the task he had chosen, and
whose work will be done without conviction and without joy. My responsibility in this situation is to have
not consented to take really knowledge, preferring to what should be accessory (the accomplish-
ment of my tasks) **before** what is essential (the task "chosen" by the student is truly **hers**
also, and continued with joy).

Therefore surely Jouanolou is also the only one of my former students that he arrived to collect me
a grudge (who never said his name, certainly). Cultivate such bitterness is an outlet and a derivative, which
is unhelpful certainly, if not to evade its own problems (and we rarely seek further). it
Nevertheless it is based, and I do not complain to me if today (twenty years later) I harvest
some fruits.

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To find myself faced in quick succession, there are less than two months, with unusual episodes p. 1191
Saavedra's thesis and that of Jouanolou, made striking for me this thing, just interview
in the first part and Crops Seeds; that even before my departure and in the years that followed
immediately, all was not well (as I thought as a matter of course!) in my
students and me. Thus, among the twelve theses that were passed by the students who have worked with me
level of a state doctorate, **four** of these theses are flagrantly, the "thesis of
Burial "Master! They follow over a period of five years, between 1967 and 1972, and two of these
theses Burial place before my departure. The first is that of Verdier in 1967, reduced to a thesis
summary of 28 pages, a prelude to the burial of the new homological algebra I had introduced, and
Verdier had undertaken to develop. It was discussed at some length already 964 (*), for
it is unnecessary to return again. The second is that of Jouanolou in 1969, which enshrines the funeral
formalism of the l-adic cohomology, from the point of view (obviously crucial for les six operations) of
the. . .

964 (*) See in particular, about the notes@redit Thesis and comprehensive insurance "and" Glory galore - or ambiguity "(n ° s 81
170 (ii)).

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derived and triangulated categories (why Verdier was supposed to provide basic reference). The third
is that of Deligne in 1970 (?), brilliant thesis he was deeply rooted in the ideas he also
took me 965 (**), without my name will be pronounced only! The fourth is the thesis of Saavedra,
he just discussed at length, where another alleged that the author 966 (***) sets, with the mastery
Technical we know it, ideas and

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results with a third on the Galois group Motivic (via

p. 1192

complete theory of the so-called category "tannakiennes" and four!) without referring to my modest and
deceased!

The four-burial operations (which will herald the "Four Operations" in capital letters!) Are visibly
related and in many ways 967 (*). They follow in the space of less than five years, beginning the year
even after the end of the seminar SGA 5. This seems to have been the starting point and place
rallying for fossoyantes provisions in my former students, and this good since before I left! What celles-
entered prior to my departure is a remarkable circumstance about this "second level" of
Burial formed by all of my former students "before" - fact that I did not know really
yet integrated into an overall understanding. It is this "second level" which, right now, I think
the least understood of the three. But this is not the time to revive thinking about it,
Surely, the coming months will certainly bring me many new elements coming to me
of my former students themselves. At this time, it's time to assemble them into a whole picture living
the "second level".

There is a fifth thesis still 968 (***) which for me is part of the series of theses-Burial, but
thesis "after", and even ten years after the previous series. It is that of Contou-Carrère, passed in
December 1982 and more special in a way, too. It differs from the previous four by this,
the valiant efforts fossoyants Contou-Carrère, to be nice to the people who matter and make
forgiveness for having been more or less my student, did not spare him provided that Verdier (he had grown
wise to choose as supervisor 969 (***)) will make mine unexpectedly the "flow"

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without warning -

p. 1193

what, for want of better, he fell back again on me. It was not necessary that I should figure Director thesis, as Contou-Carrere had found his theme and working methods developed by its own
965 (**) This is the work "Hodge Theory II" Deligne. I elaborates on the rooting of this work in yoga reasons, in my vision of "coefficients of theories" (including a theory of "Hodge coefficients"), in the note "The points on the i " ($n \circ 164$), especially pages 739-740, as well as the subscore $n \circ 164_1$ (p. 805-806). As and M. Raynaud C. Contou-Carrère, Deligne chose his work themes including that for his thesis without waiting I asked him one, and continued this work completely independently, without even talking to me before it was virtually completed term. That does not stop her work (on mixed Hodge structures) is rooted in my ideas more deeply than this is the case and Raynaud Contou-Carrère, who use mainly the language and techniques that I have made, while issue pursued by one and the other is entirely original.

It is true that (as the wind blowing today) ideas gone with the wind, especially if they are not published the bargain (like Serre yet just explain it to me peremptorily, there a few days). . .

966 (***) This is at least the belief here that I arrived in the penultimate note "Monsieur Verdoux - or rider for" ($n \circ 176_s$).

967 (*) It would be interesting course to probe further these links - but as I say a few lines later, it is not Now the moment.

968 (**) Of a total of fourteen theses made by the fourteen students (both "before" that "after") who have worked with me level of a state doctoral thesis. It did so, in the number, the more **of a thesis on three** which is a thesis-Burial - which is not bad!

969 (***) At one point besides I always thought (from what Contou-Carrère himself assured me) to be its director Official theses. I have learned of a supervisor "parallel" (in a pair when it@me who should do figure supervisor "spare" in case ...) that when Contou-Carrere was forced to fall back on me, and at the same time (because the situation had become too much, crappy) reveal me the role played by Verdier. It@no wonder with such shenanigans not possible according to over the years, Contou-Carrere has finally stopped practically still do math. It must be said that it is not the only one. . .

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18.5. THE FOUR OPERATIONS (a corpse)

means, and that I had not followed his work, and that it is placed in a context (that of schemes in reductive groups) that I was a little lost. This does not preclude the idea of starting his job, know some method of resolution of singularities "equivariantly" for adhesions cycles Schubert, is directly inspired by an idea I had explained to him in detail how (circa 1975 or 76), for a resolution of canonical and simultaneous singularity adhesions orbits, to the adjoint representation of a reductive group on itself 970 (*). Needless to say Contou-Carrère, who felt for a long time how the wind blows in the beautiful world he has a legitimate desire to access, not breathe a word of this relationship, where would we go if we put again to mention such imponderables an **idea** (not yet published), supposed to **create** another (or asks you a little...) - except, of course, when that which is honored to quote is one of those whose name raiser the brilliance of the work presented (which If indeed it is entirely superfluous to specify why it lavishes thanks, which soon when can only be founded. . .).

END OF "FOUR OPERATIONS (ON leaner)"

970 (*) I was intrigued, in the late sixties by the fine work of Brieskorn on singularities (surface) say "Rational" and their links to some simple root systems (those where the roots are all the same length), and I asked myself the question (ridiculous, needless to say) to find a direct description of a rational singularity in terms simple algebraic group corresponding to its roots diagram. That@how I came to a description simple geometric (and obvious, frankly) of resolution of singularities referred to blows Killing couples, with all a beautiful set of conjectures the key that I have a little forgotten since, and I have told in time to anyone who would listen. But as I have not published and following the new axioms that just explain kindly Serre is the first one who picks wins - and I saw also that there are who collect much like that, necessarily. It is sometimes convenient, change of axioms. . .

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18.6. The yards sorry

18.6.1. (1) What remains unresolved

Note 176

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(March 25) Last night I spent in bed for several hours to get back in the bath of "yoga p. 1194 reasons", instead of quiet sleep as I should. And yet sometimes, instead of rely on my notes, I still spent an hour or scribbling diagrams implications for conditions

intrinsic who are known to me on a cohomology class De Rham (a projective variety not a singular body since, no, say) to be "algebraic". I found **twelve** variants in Altogether, conjecture Hodge and Tate 971 (*). At the same time, I could convince myself that must have at about the hands you need to define "the" category (triangulated) patterns on a diagram finitely of Z , or at least a very close approximation thereof (assuming that this is not yet "" Good), but to that has provided a theory of "mysterious functor" I had postulated the late sixties 972 (**).

This is not the place to dwell on it, certainly. But now I see that it now or ever, given the state of deplorable neglect in which I see the motivic theme fifteen years after leaving in the bad hands, draw some lines-force of ideas which I succeeded once. I have no heart to wait again, time to find leisure (once completed "In the Fields of Pursuit") to write "The" systematic book he would write; This story detailed a dream, like first

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big step

p. 1195

the **dream** takes root, finally! in the soil formulations carefully matured (and published...), and it flourish following his own nature. Besides a first step already planned and announced for this book of "mathematical fiction", ie a sketch of the algebraic formalism duality said "six operations" I will join the Volume 3 of Reflections 973 (*) a short work where I intend to ask some questions crucial related patterns and algebraic cycles. I had trouble to see them rot in a grave, and me soon see the return to daylight and participate again with the seasons. . .

For more than five weeks of reflection has returned to the Burial, without leave. It is probably why the thought of "orphans" left behind in a sick world, came back

lately with some insistence. The last note which deals in detail how a

orphans, is "the melody to the grave - or sufficiency" (n ° 167) on a theme close to that of motivic thinking last night and now (which I just mentioned). That was a month ago day

971 (*) (March 27) Each of these twelve variants should lead to any basic pattern characteristic zero X , a

"Class coefficients" of a type corresponding to X (where the notion of "type coefficient" is the one discussed in note "The melody in the tomb - or sufficiency", n ° 167). If the proposed conjecture is true, this class of

coefficients should contain the patterns on X as a subcategory (triangulated) full (conjecture none other that the same assertion, in particular when X is the spectrum of a body. . .). For details, I refer to the part of Reflections Volume 3 will be devoted to the theory of motives ("The reasons my love").

This also means that these twelve variants of well-known conjecture, give rise to many different ideas (a priori at least) a notion of "pattern" on a characteristic zero. This will allow the future to eleven rivals of my friend Stone "discover" each with its own concept of motive, while pretending to ignore those of others and especially (as rigor for fifteen years. . .) A deceased (known for his predilection for unnecessary details...).

972 (**) This question of "mysterious functor" establishing the "missing link" between crystalline cohomology coach. p (via the filtered notion of F-crystal, F as "Frobenius"), and p-adic cohomology coach. zero, obviously crucial issue our understanding of the cohomology of algebraic varieties, has not been seriously addressed, nearly twenty years after I have raised in terms could not be more clear. . .

973 (*) In the current state of my publishing projects, the first four parts of Crops and Seeds (ending with the third and last part of the burial) must form Volumes 1 and 2 of Reflections. Volume 3 will be formed of fifth part of R and S (read notes on the autobiography of Jung) and a number of shorter texts, most of which were announced in the Introduction. The first volume of "In the Fields of Pursuit" is intended as Reflections fourth volume.

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18.6. The yards sorry

day, the day before I throw myself aillais (yet without suspecting what awaited me!) in a note would be called (it was already decided in advance) "The four operations." Finally, it was sixteen notes instead one, I thought I never would end - and then if I have yet come to make the turn, these "operations" extendable 974 (**)!

And there, I want above all to return to the orphans, to call them at least each by name,

it will make them perhaps the good, and to me it surely will do. The first time I spoke, it was there

A year in the note of the name exactly, "My orphans," the end of March last year, in a breath with

Note following the "Denial of inheritance - or the price of a contradiction" (Notes n ° s 46.47). In writing these notes and giving them these names, as guided by an obscure prescience, I do not doubt me how much these things I had left were indeed orphans -

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in a stronger and more poignant meaning p. 1196

that I could not imagine me even in dreams; or how far would this "contradiction" of which I was then first and timid observation. And remember immediately reminds me of another, the month before, when I

have seen him write, as if it was another, more penetrating than me, writing by my hand, " **we will fight not corruption** . "It was while writing the " World Without Love "(n ° 19). I still remember, in Seeing black on white the word " **corruption** ", I was taken to court first. Someone of "reasonable" in me scolded me, really, you do not go with the back of the spoon - it is a great word "corruption" must not spoof! You better change register!

I must have sound me for a few moments, minutes maybe. Then I knew I was not going change the "big" word there, nor add a note to explain that the word had escaped me in momentum the pen, and it should not be too much to take it seriously. These "flashes" that were returned to me here and there this world, someone inside me, more perceptive than the "I" who decides "reasonable" labels, knew what their senses before I even bother to try to make my story ⁹⁷⁵ (*). . .

I remember also the exact moment when thinking of that day there suddenly changed quality when the **other** in me took over to write. It was just after mentioning the loving warmth that had surrounded my early years in the mathematical round, thanks to the welcome received from my seniors, and into their families: Schwartz, the Dieudonné, the Godement. . . The change occurs when I followed that with "Apparently, for many young mathematicians today is to be cut... of all current affection, warmth ... that cuts the wings to work and takes away a deeper meaning than that of a livelihood gloomy and uncertain. . . "- and when at the same time, suddenly appears and takes life my eyes this **world without love** , which again interpellait me. . .

This is without having to look that came to me last year that name "my orphans," for what I had left when I left (decreed "death" by relatives whom I had entrusted...). That is sure that name

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expressed a **real** simple and tangible: I had "left" or "given" that were not ^{p. 1197} "objects" or "property", but they were **living things** . When I think it always like to things alive, vigorous and fruitful, made to grow, to flourish and to design and produce other living things, vigorous and fruitful. If I feel a "richness" I left it not the rich banker, but the gardener, or one of the mason, who with their hands these have given rise exuberant gardens and the spacious and welcoming homes. This sense of something valuable (if fragile) above binds me to the **concepts** , the **issues** , the **themes** that I know ⁹⁷⁴ (**) (May 9) Just two weeks after writing these lines new facts emerged in extremis, relaunched the investigation "Four operations", which has already increased by a good twenty notes and subscores new ⁹⁷⁵ (*) I@ in the story, first in March last year in "The note - or the new ethic" (n ° 33) and two months later, after the discovery of the burial, throughout much detailed notes, forming the X procession or "Van Funeral" (jointly with the Gravedigger), 93-97 notes.

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fruitful, and I had left in younger hands - those things that still need work and solicitude; more tools than good to the point that I had shaped, or "houses" that I had finished build and develop through ⁹⁷⁶ (*). Other than me be busy it at will to their will cooking and lounging there; if one is too small they will enlarge according to their needs, such as myself even often had larger and larger still, where yet it had seemed lately that I "saw great."

But it is **what remains outstanding** , by the shipyards that had just started on the splendid sites with the stones of beauty (and already workers are gone, having won what they liked and degraded rest. . .) - this is where my past mathematician continues to take hold of me. It is these **sites** abandoned, and I found today looted and dilapidated, I would now like to review.

18.6.2. (2) The miser and the crumbling

Rating 177 (27 March) The day yesterday was occupied by stewardship. I had to reread fifty first pages of the third and final part of the burial to entrust them to type. It took me not less than five hours, doing odd rajustages -d@xpression here and there, and adding a few footnotes. The striking "The key to the yin and yang" is about to be completed. After trouble not possible that I had with the hitting that part ⁹⁷⁷ (**), I ended up doing on

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services of a

p. 1198

Secretary of the Faculty, who did the work outside his official work. The troubles are over, thank you God - it is a conscientious and efficient work, impeccable thirty pages per week. It eventually will.

It was time !

Apart from that, the question of a shaped building the triangulated category of motives on scheme of finite type on absolute basis I continued to trot my head - I still spent most of the night thinking about it in bed instead of sleeping - beware! It seemed at first that the idea that I had that would not work for zero characteristic patterns (finite type over the field \mathbb{Q} , say), already Based Spec (Z) itself it did not seem to work, then I remembered that I had determined

In principle the structure of the category of motives over finite fields, in the sixties. Supposing said the work I had done so, I see finally appear the principle at least a description complete in the general case, pretty screwed it must be said, but not unaffordable I think. The only new ingredient in relation to my ideas of the sixties is the philosophy of Mebkhout expressed in his "theorem of God" strange memory. Otherwise, I use as the hypothetical ingredient theory of "mysterious functor". If it is not available now, it is certainly not it be "unaffordable" (to use a phrase that I have met 978 (*)), but because the people I have known to work on the cohomology of algebraic varieties lost, even in math, sense of essential things, pounds Relationship certainly absorbed a funeral that demand all their care. . . To be fair, the work done by Deligne on Weil conjectures in "Weil I" and especially "father II" will surely come at the right moment, when it comes to build les six operations on categories coefficients intended to express the reasons. Still it took a "confused" to the deceased and crumbling wishes to have the idea after fifteen years, out of the padded coffin where his dear students and heirs were 976 (*) On the drive in me that drives me to "build houses" (mathematics), see note "Yin servant, and new masters "(n ° 135). 977 (**) See, about these "trouble" (this is an understatement), the debut of the note "Prayer and conflict" (n ° 161), and those the note "Jung - or the cycle of" evil "and" good ", which opens the fifth and final part Crops and Seeds. 978 (*) This is the term by which peremptory my ex-pupil brilliant Deligne was pleased to bury the "standard conjectures" - which suddenly none of my boldest contemporaries dared to attack for nearly twenty years for a complete quote, see note "In Praise of Death (1) - or compliments (n ° 104). 896

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to assign more, he who is aware of nothing and forgotten as saying the little he knew, so that the problem of the description of the category of motives over a base scheme S is only **asked** in full, and 0

same time and coincidentally, that the very principle at least a construction p. 1199 form (which takes into account all known structural elements associated with a pattern) is finally clear explained 979 (*).

After the "memorable volume" 1982 on the grounds, it seems that the "nest egg patterns" during which ten or twelve had been the preserve and secret one, has become a common loot three or four, which communicate with each other conspirators tunes, or as Large insiders some secret sect and ultra-selects. Yet just a few days, to ask a few black and white simple questions and submit them to the attention of all, and a few weeks if it wishes to identify with some care, clearly indicating what ingredients are available, and which ones need to be developed. If within fifteen years since 1970, and in the three years since the "memorable volume," neither one first or then none of the few, wanted to take these few days of his precious time indeed, without even speak of weeks is surely for good reasons, none of them certainly does concern fathom. But this atmosphere they like to talk, and the spirit in which they are maintained, are by themselves already degradation of an adventure of discovery, became simple way to raise above the others, when it is not to despise. Such an atmosphere is likely to spread corruption and is the antithesis of creation, even as those who indulge it would be the brightest geniuses. Turning now in such provisions - those of brooding miser his money - they cut the force creative in themselves, as they like to choke in others.

18.6.3. (3) The tower construction sites - or tools and vision

Note 178

(March 30) before yesterday I was fifty-seven years, and I made a little break. I just made a little typing corrections to the end of "The key of yin and yang," I continued yesterday. It@a work relaxing and enjoyable - if, at least, where the person who made the strike puts also his, and that text where I spent whole comes back to me disfigured. There is a recreation that I paid for myself two days to read with 0

care about fifty pages to the net, to detect them here and there even a comma p. 1200 that is not in its place. . .

The work is the tone remains at the zenith. For weeks, a sadness in me tells me that there more important things waiting for me, that lead to their natural end these notes I@a to describe. I write as against the current, and yet I know that, barring accidents and acts of God, I stop me when I finally put the final point in the Burial. But to compress, to exile this sadness, which therefore is as heavy as a stone, not to give him a voice in these ratings (if only by allusion and going right now), is a pretty clear sign that for some time, my thinking has more quality "meditation". It is part of the division between the writer (in

having custody of them put entire 980 (*)!), and one who lives and feels (without stopping yet, for "ask" on what he saw and absorb its meaning). Here I feel that it is time to get to this "end point" (without 979 (*) As I announced in the reflection of yesterday, I think this description to include in the next volume of Reflections, with an overall sketch (very basic) of the "vast array of reasons" - holding that the scam has hidden motives lasted long enough. I note now that the construction principle envisaged not dependent on any conjecture species on algebraic cycles, like "Hodge" or "Tate" (or one of the twelve variants, discussed yesterday). 980 (*) Yet in the preceding paragraph I just wrote (with no inner reserves) that I "was investing my whole" in the texts that I entrusted to type. Like what the same words (or almost...), As the context may be relevant different or indicate a different shade.

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provided that little botch yet to see and say. . .), And to return myself. . .

Besides working on the notes, there is something else these days a diversion. This is the recovery, as despite myself, a mathematical thinking. I realized a few days that shaped construction a theory of motives, with the full extent that I saw him he was twenty years ago, is not that far "to the horizon, "he seemed to me. It could even be that a theory" fully adult ", with the formalism Full of six operations (plus bidualité), a matter of a few years working for someone who would invest them entirely (without degrading its creative energy by fossoyantes provisions). It also appears to me that there are two "keys" 981 (**) for the explicit description of "the" reasons of class 0

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p. 1201

scheme, say finitely on absolute basis Z (cases which should always be able to bring themselves). On the one hand, there is the theory of "mysterious functor", with a general and flexible enough to move granted appropriate triangulated categories, connecting coefficients De Rham - Mebkhout and coefficients ordinary-adic (coach. zero). On the other hand, there is the question of the explicit construction of the category patterns on a body **finished** k (a building "purely algebraic" preferably without reference to algebraic geometry k), and further, the functor "motivic cohomology" up separate schemes finitely k (and begin, projective and smooth patterns) to search. I had built the latter to equivalence, using the heuristically Weil conjectures and those of Tate 982 (*).

981 (**) Yet there is a third "key" that I did not mention here because the problem in question seems to me (rightly or wrongly) less delicate. This is the proper definition of "coefficients De Rham-Mebkhout" (first without filtration or F -structures) over, say, a smooth pattern on absolute basis Z . This definition should at the same time provide the key of "the" good definition of general crystalline coefficients for. $p > 0$, my dear former students (Berthelot in mind this time) still do not unable or unwilling to release.

When in June 83 (there will be two years) Mebkhout explained to me his "philosophy" around the theorem of God, I the impression that his description "purely algebraic" (type "Rham") for the category of discrete coefficients constructive patible (C) with a smooth pattern on the body C of complex, was dual approach (not published) followed by Deligne in Seminar (mentioned elsewhere) given by him to the IHES in 1969/70 (except error), with blows of promodules connection. I presume that the transition from a point of view to another is through the functor dualizing $Rhom (. O_x)$ relative to the beam

the proposed structural scheme, which turns $3 \times$ finitely-modules (which can be considered as " O_x -modules IND-consistent "equipped with an integrable connection) in the modules" pro-coherent "(also equipped with an integrated connection).

The advantage from the standpoint of Mebkhout is that it provides a simple and profound algebraic expression (M-consistency, ho-

lonomie, regularity) for "good coefficients" which lacked Deligne. The advantage from the standpoint of Deligne is that provides equity (instead of antiéquivalence) with coefficients of transcendent nature that it is expressed, and it is better suited to the expression of the multiplicative structure (tensor product) for the proposed coefficients category.

I presume that, in practice, there will often interest to work on both fronts at once, mutually dual to each other.

The interpretation of Deligne seems more close to a direct geometric intuition, via the module (or promodule) integrable connection. This is expressed by the fact that (if the base body is C) to a building beam

C -vector represents a unique connection to promodule, instead of a complex such promodules. That is why (in my regret, we guess. . .) I expect that his point of view (although he had no regrets buried him, as thereby burying the problem bequeathed by the coefficients disavowed master. . .) That will be best suited to develop formalism of the six variances, and as a third ingredient - key in the construction of categories of reasons.

(May 9) See also in this sub-note "... And obstruction", n ° 171 (viii) and "The five pictures" (n ° 171 (ix)).

982 (*) If I remember correctly, I confined myself then to describe the category of semi-simple patterns. An immediate variation of the Construction (following the same principle) also gives a plausible candidate for the categories of reasons not necessarily ment semisimple. When I speak here of "units", it is actually an "isomotifs" or patterned isogeny. But using the functors "l-adic realization" for the first number, we get to rebuild from there the category of reasons-not-iso (Where Hom will therefore be type modules over Z , not on Q).

When I say that my building used heuristically conjecture Tate, must not take literally. if is true that there (over a finite field, in this case) on a smooth projective scheme, cohomology classes that are "Motivic" (in a direction that remains to identify precisely) without being "Algebraic" (ie not derived from algebraic cycles), then it is necessary to restate the conjecture Tate (like that of Hodge moreover, this time above C) by replacing "Algebra classes" with "classes motivic". Assuming we get well (as I suggest below) to define the cohomological functor canonical (and presumed "universal" in a suitable sense) on the category of projective schemes and smooth over the finite k to category (so-called "semi-simple patterns k ") already built, this will provide an ipso facto definition shaped cohomology classes will be called "motivic" as elements of $\text{Hom}(T_i, H$ word (X)) (in dimension $2i$), where T is the subject of Tate, and H word is the hypothetical functor considered. That is why the construction of this

18.6. The yards sorry
I have no doubt that this
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construction is correct. The work left to do, probably significantly p. 1202 more delicate, is to "pin" this category in terms of the given finite field k , and above all, to define the functor "motivic cohomology", not least of all on the class diagrams Abelian k (this which should be enough to "pin" the searched category. . .). The second problem seems less likely technical, more direct "geometric", as the mysterious functor. Moreover, it seems to me **the** key of a standard solution of conjecture 983 (*) and also there, of all issues so irritating that arise in the cohomology theory in characteristic $p > 0$. So many reasons why this question carries a powerful attraction on me! This is the third evening when I leave it to the notes with the idea to quickly review the themes that I think are the hottest among those left behind by my students and by all, when I left the mathematical scene, there are fifteen 984 (**). This time I will finally happen!

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Project 1: Topos . I mention them here especially for memory, being expressed myself in a rather circumscribed p. 1203 tanciée about them in the note "My orphans" (n° 46). View the disdain with which some of my former students, Deligne head are longer treat this crucial unifying concept, it was doomed from view I left to a marginal existence. As I recalled in the note cited in the guidebooks and multiplicities all kinds are however not meet at all in geometry - but it is of course very well do without see, as happened for thousands of years to see symmetry groups, assemblies, or number zero.

A soft and delicate language about topos, "sticky" intimately to the topological intuition was developed with great care in the first two volumes of SGA 4 (the famous "gangué non-sense" which speaks Deligne in the introduction to the first exposed gloss volume named "APG 4 1 2

"). This is the About invest- natural language and intuitions around the concept of "beam" introduced by Leray; this second step (or the "second wind") in the development of intuition and tool "sheaf" I think of a comparable range to the first (provisional finding its expression in the well-known book Godement). As of now, it is this vision that has made possible the emergence of cohomological tools l -adic and lens, before it is buried sine die by the very people who pretended to be approach these tools.

Developments SGA 4 about topos does not claim to be complete and final, but I think they are more than sufficient for most immediate uses of geometric topologique vision. Like the general topology and the theory of ordinary beams, the "general topology topologique" seems to me to ask itself really profound question. It is a carefully crafted language to point serving a certain enlargement of the topological intuition and geometrical shapes, which we is dictated by the things themselves. The disrepute into which this vision has been maintained, and the **derision** that functor now seems like **the** crucial question of all, for building form (and not hypothetical as in the sixties) a theory of motives.

983 (*) The term "standard conjecture" is not to be taken here in the literal sense, nor "Tate conjecture" in Note b. p. former. Rather, in the statement of these conjectures, it would be appropriate to expand the class contemplated cycles (initially reduced to only algebraic cycles). In the term "final" standard conjectures "readjusted" (and even when they

would be valid as such), the cohomology classes "algebraic" will still be replaced by classes "motivic". I will return to the standard conjecture more detailed manner, in "The reasons my love" (in Volume 3 of Reflections).

984 (**) For a first "tour" very summary of these themes, see note last year "My orphans" (n ° 45).

899

hit her, belong to me of the great misfortunes of the mathematical world of the 70s and 80s.

Here it is not a "run-down site" which he would revive, but in a house fully completed and installed, those who lived there and who were called into a place of work and life, have chose to leave in débinant worker who had built it. The house is spacious and healthy and everything is in its Instead, as the day when the worker left to attend to other tasks. If she needs something, it is not

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not the work of his hands, or those of anyone else. Perhaps the act of respect for the worker himself,
p. 1204

for these things that these hands have done with love and he knows best, He will dissipate the scent of violence and contempt, and he will make friendly again what was done to accommodate.

Project 2: cohomological language . This is primarily the language of derived categories, and other share views that I had introduced to the non-commutative cohomology, one and the other in the second half of the fifties.

The first current was supposed to be the famous "thesis" Verdier, and burial by Verdier himself of his thesis 985 (*) was at the same time that the point of view of algebra derived categories homology. He had played a crucial role in the flowering of the sixties themed cohomologic in algebraic geometry, for the duality formalism particular, and developing formulas fixed points (type Lefschetz-Verdier). Practical needs had shown the context of failure triangulated categories developed by Verdier in the early sixties framework has not been renewed as it should.

Current side "noncommutative" we have a good working basis with the thesis of Giraud but it is limited to a formalism-1 fields, lending itself to a direct expression of geometric objects cohomology dimension until 2 only. The issue of developing a cohomological formalism not commutative in terms of n-fields and n-sheaves, imperiously suggested by many examples, ran into serious conceptual difficulties. View disaffection or, rather, the general contempt, in which are the foundations of the issues fell into a beautiful world, these difficulties have never addressed before I stuck with me there is a little more than two years 986 (**).

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I see now the two streams join in a new discipline, which I have proposed elsewhere 987 (*)
p. 1205

call the name **of topological algebra** , synthesis of traditional homological algebra (style cat-ries derived, certainly), the homotopy algebra formalism (still in limbo) n-categories n-groupoids and fields and idoines sheaves, and finally the vision of the topos, which now provides the framework for nature "purely algebraic" the largest known, to implement the topological intuition. Ideas departure for such synthesis were met since the sixties, including that of **differentiator** called to replace the inadequate notion of triangulated category, and also applying to contexts "not additives." Some important developments in homotopic algebra, such notions of limits and coli-Homotopic mites developed by Bousfield and Kan to the beginnings of seventy years without their knowledge of my ideas (treated bombinages grothendieckiens by my dear students), are in the

985 (*) See the note about "credit Thesis and comprehensive insurance" (n ° 81) and "Glory galore - or ambiguity" (n ° 170 (ii)).

986 (**) This is the reflection in my letter to Daniel Quillen February 1983 where I discovered how "jump right" to above the "purgatory" gaping compatibility relationships increasingly screwed, which seem to break into the description shaped n-categories (not strict or no-fields as I call them now), for increasing n. The case n = 2 is already no picnic, and no one, I believe, has yet found the courage to explain them all for n = 3. This letter is become (as I recall below) the "kickoff" for the long journey "In the Fields of Pursuit" begins in the Next month the momentum of reflection initiated.

This letter was not considered worthy of being read by the addressee or to receive a response. I ended up receiving a commentary

silence of the person more than a year later, on which I express myself in "The weight of the past" (n ° 50). (See p. 136, second paragraph.)

987 (*) See the footnote under ° 136 1 to Note "Yin Servant - or generosity" (including 638 p.).

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right wire them.

I started two years ago to draw a contractor for the work that I see to do with the letter to Daniel Quillen 988 (**). This was the kickoff for writing "In the Fields of Pursuit", a first volume ("History of Models") is almost completed, and will probably appear as volume 4 in the Reflections. I anticipate that I will take one if not two volumes, one or two years of work, to complete this preliminary survey of a substance of great wealth, and that twenty years later I always seems to be the only one to understand. It is therefore the one site that has been abandoned for a fifteen years, but came to life in my hands for about a year. The writing of the sketch a program, then Crops and Seeds, interrupted this work, I nevertheless take account and finalize, as soon as writing is finished R. and S. and the text (all of limited size) which are to form, with the last part of R and S, volume 3 Reflections.

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Site 3: Six operations bidualité. This is the perspective that I introduced in the formalism p. 1206 duality the Poincaré or Serre, discrete or continuous coefficients. The name "six operations" that I had introduced has been carefully eradicated by my cohomologues students. They simply use the ones here and there that suit them while dropping the profit and loss structure they form a whole (With bidualité formalism), and especially the irreplaceable thread that provides the view (no-MENT to release good "categories coefficients", cf. lower). For over twenty years it formalism exists and is proven, none of those "in the know" did not bother (if is in paper intended to remain secret and which I have no knowledge) to clear the "form" Algebraic common to many situations where one has such a duality "boilerplate" speaking formalism in six operations 989 (*).

We see that this is, not strictly speaking a "site abandonment" (since the work for-ization to provide here is ridiculous), but rather a fruitful perspective systematically evaded (as has been that of topos). This abandonment was surely for many in the state of lamentable stagnation I see (with some exceptions 990 (**)) on the theme of the cohomology of algebraic varieties in comparison especially strong momentum that I had given him between 1955 and 1970.

As I already announced in the Introduction (I 8, "The end of a secret"), following harvest and Se-mesh 991 (***), I intend to include a brief outline of the essential features of the formalism "six operations". Thanks to the care of my

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students, its very existence is now unknown to all, with the exception p. 1207 of those who have been directly associated with one or other of the two seminars SGA 4 (1963-1964) and APG 5 (1965-1966) 992 (*), which obviously have forgotten. Thus will I do what is in my power to restore honor (if workers is on the lookout for good tools) a tool of perfect efficiency, and a view fruitful which in the cohomological theme, we are constantly led straight to the crucial problems. 988 (**) On this letter, see in particular the "weight of the past" (n ° 50, page 136, 2nd paragraph). 989 (*) (May 9) In a first set SGA 5, I took great care to explain in great length this form, which would be like the motor nerve of all the upcoming seminar. This presentation, the most crucial of all in SGA 5, disappeared from editing-killing. There are traces of a "hint at its existence throughout the volume! See note b. P. (*) Page 942 in the note "ancestor" (n ° 171 (i)).

990 (**) The "exceptions" are mostly (before 1981) the two important works Weil I, II Deligne, and some results sporadic in crystalline cohomology, and theory of Dieudonné Barsotti-Tate groups on bases since. $p > 0$ General (which I had initiated towards 1969). It has been, as I have pointed out elsewhere, a revival in the wake of the theorem

God - Mebkhout (one always ignored the other...), including the theory of bundles Mebkhout (called wrongly "perverse" in lieu of that right. . .), Developed by Deligne et al.

991 (***) I remember that this is Volume 3 of Reflections, containing also in principle the last part of Crops and Seeds.

992 (*) These are also the two seminars, coincidentally, that the text that is as "central" and named (oh irony!) "SGA4 1

2 "recommends not read mostly... (May 29) to reach the vision of six operations, see Note" Details useless. . . "(N ° 170 (v)), part (b) ("machines to do anything...").

901

The three "sites" (or houses, or tools ...) to retire, I just review, concern plus an **algebraic language** common to express the most varied geometrical situations, such particular geometric situation as the cohomology of algebraic varieties. If the second site, one I call "topological algebra" I sometimes rub deep probably issues (such as Such issues homotopy groups of spheres), it is by accident, not by deliberate. My main motivation, again, has been and remains that develop algebraic tools of generality

and a sufficient flexibility for the development of this **arithmetic geometry** still in his prime childhood, I spent fifteen long and good years of my life to carry, give birth and nurture, from embryos that were the Weil conjectures. It is this geometry that is the substance actual geometry, which over the years was really the heart of my love affair with the mathematics, and remains today. This is the substance that will be discussed now in three themes "among the hottest," I still have to go through.

Site 4: "Problem coefficients". This issue was already in germ in the same formulation Weil conjectures 993 (**). It was the center of my interest in cohomology, throughout the sixties. It was clearly stated, with all the general and the necessary precision for the main types of coefficients then glimpsed 994 (***) . I speak about this issue, obviously crucial

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for

p. 1208

an understanding of the cohomology of algebraic varieties, from the first return to my work and the act respect what notes the "My orphans" (n ° 46), and I return to this subject in the note "The melody tomb - or sufficiency" (n ° . 167) Two son essential drivers: firstly the formalism of six operations the bidualité, he just mentioned. On the other hand, the need to find adequate generalizations, above a basic pattern more or less general, the types of "coefficients" already known above a base body, are carried out (even if only implied) in the description functor cohomological already known on the category of projective and smooth patterns on the body: cohomology l-adic, crystalline De Rham, or finally (when $k = \mathbb{C}$, field of complex) or cohomology Betti Hodge.

I do not think it is an exaggeration to say that this problem contains the seeds 995 (*), both the "Deligne-Hodge theory" "mature" which is still waiting to break, as the "theory of the coefficients De Rham-Mebkhout" which it also expects 996 (**) and for a single reason that one and the other 993 (**) see about the beginning of the note "maneuvers" (n ° 169), I commented on the initial issue conjectures Weil. (May 29) The start has become autonomous in a note "Context" Weil conjectures "" (n ° 169 (i)). 994 (***) It does not appear he appeared "types coefficients" of a new type, relative to those I anticipated from the second half of the sixties.

995 (*) In making this finding, I have no intention to minimize the originality and importance of the contributions in question Deligne and Mebkhout any more than I think diminish the originality and importance of my own contribution to the birth and the initial momentum of arithmetic geometry, noting that this "was already embedded" in the Weil conjectures.

996 (**) It can be said, is pretty much, that the contributions in question first Deligne (circa 1969) and Mebkhout then (after 1975) address the problem of defining "coefficients Rham" proper (that would insert cohomology Ordinarily Rham smooth patterns in a formalism of the six variances) in both directions very different. Deligne defines a "good" category coefficients above spec diagram (C) only, and functors $R \dashv Rf^*$ in the structural morphism $X \rightarrow \text{Spec Case (C)}$ a separate scheme typed ended on C, and for coefficients constant (alas!) X. Mebkhout defines a "good" category coefficients, in principle, to any separate X-type finished on a characteristic zero K - but it does not grow up to define functors $Rf \dashv$ and Rf^* to a morphism $f: X \rightarrow Y$ such schemes over K, and develop a duality theorem for $f \dashv$ And $Lf \dashv$ (except for $Y = \text{Spec (K)}$ - and yet, only in the transcendental context, probably much more difficult, complex analytic varieties). A Another limitation of the theory developed so far by Mebkhout (in an atmosphere could not be more discouraging it must say) is that it is made now as smooth X (fault, I suppose, to always use the view lens, which provides a satisfactory substitute to the rings of differential operators beam, so convenient in the case smooth).

To desolate sites, these are sites sorry! they say eloquently systematic alienation of my

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theory are still in diapers, instead of as adults had acquired a year or two the theory of l-adic coefficients (for the first characteristics): it is the eagerness of my students cohomologistes, Deligne head, burying the problem left by the master at the same time as the master himself.

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For fragmented that are not made in part by Deligne (filled with all the facilities p. 1209 the spoiled child of science), and the other by Mebkhout (in complete isolation that posed him very people best placed to greet), they nevertheless provide in conductors son precious, to get to identify certain categories of critical factors. These important contributions were present in my mind while writing the note quoted above "The melody in the tomb." Since then, I plunged deeper into the bath of "Yoga factors and reasons" that had already emerged over the years sixty, and I now have a more accurate and complete picture. As I think back on the problem of coefficients (and that at the same time units) in the volume 3 of Reflections, following the outline of the

formalism of the six variances.

Suffice it to say now that I see basically three types of basic coefficients ^{997 (*)} on a basic scheme X roughly one: the coefficients l-adic (the first number **one**), coefficients **Rham-Mebkhout** ^{998 (**)} (interesting especially for type X ended on a basic scheme S, the most cases

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Important are those where S is the spectrum of the rings Z, Q, or C), and finally the coefficients ^{p. 1210} Betti (for type X over C). Only the third of these categories seems determined now without no hypothetical element. To set the first (if only for that type of X ended on absolute basis Z), or to describe his relationship with the second, the existence of a theory of the mysterious functor (which I had postulated in the late sixties problem also seems to have gone down with the rest. . .) Appears to me the crucial ingredient, which I will have to return more detailed manner in its place.

Site 5: Reasons . I spoke at some length on the burial grounds by

My friend Pierre Deligne, with the blessing of the congregation in full force, to be useless dwell here again on this. I would rather stress here a new fact that just appear to me, and which should have appeared there are fifteen or twenty years. There is a more months, building "shaped" the category of motives over a basic pattern more or less general (a finitely scheme on Z say, or only on the spectrum of an algebraically closed. . .) Seemed like a thing definitely "on the horizon", drowned in the mists of the distant future. This mindset was probably a tenacious legacy of the already distant days when a motivic thinking had started on the bases can not more hypothetical, then we do not even yet had the cohomology l-adic formalism. he is also this "mitigating factor" for me is that my foundation of writing assignments for former students (and those marked by the influence that they can exert) vis-à-vis the major key ideas that I had introduced and developed in certain directions during the sixties.

^{997 (*)} If I talk about types of coefficients "Fundamental" is suggérer.par for this designation all other types of Important factors that I can see now, need to be described in terms of these, either by "combining" suitably, either by bringing suitable structure enrichments, or both at once. Among the enrich-structure chissements envisaged on the coefficients of Rham-Mebkhout, there is (in addition to the "filtration by weight", which seems "internal" to the coefficient category envisaged), a "filtration Rham" which plays a leading role in motivic applications. It is possible that this additional structure has little meaning (from the viewpoint of a formalism six operations) that when combined with the a "discreet" structure to Betti, which should help to formulate good properties that must satisfy the filter. I think back more detailed way on these issues in "The reasons my love "(in Vol. 3 Reflections).

^{998 (**)} I recall that for this type of coefficients De Rham-Mebkhout now I see two dual variants of each other, that of Mebkhout and one I hesitate to call "Deligne" while it is a child repudiated by him! (May 29) For comments on repudiating child, see note "... And hinders" (n ° 171 (viii)). For details on the coefficients Rham see noted "The five photos (crystals and 3-Modules)", n ° 171 (ix).

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the things that they were on hand, has absorbed so much of my energy between 1958 and 1970, that motivic my thoughts (and others on topics that took figure of "luxury" under my tasks compelling the time) were consistently reduced to the bare minimum, I allowed myself against almost a guilty conscience that would make the "truant"! Anyway, I stayed under the impression that the problems coefficients, that was what was ripe to be done right away (but others saw that I was already busy elsewhere. . .), While the reasons for the time, it was just good for a book "mathematical fiction" if I found the time to write, surely, things would have very quickly changed pace, if I had indeed set to write, instead of me wade on tasks that no then the world has been keen to continue, so that everyone is happy to use that I did. . .

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Still, I finally realize this thing, in itself evident yet again

p. 1211

that goes before: that the moment one takes the trouble to describe the coefficients enough "fine", ie, taking into account all the known structures associated with a pattern, you end up describing **the pattern itself** . Or more correctly perhaps, we finally describe a category, containing the category (triangulated) units as a **full subcategory** (which is not bad) - as the cat-series patterns on the body complex appears (if we assume a relatively strong version of the conjecture Hodge) as a full subcategory of the category of Deligne-Hodge structures. As to characterize ser exactly, in terms of "algebraic" directly adapted to the coefficients with which we work, what **is** exactly this full subcategory, ie **what** factors exactly "are patterns", you come here in matters that may be much more difficult. These are those for **compati-bedded** between various geometric-arithmetic structures associated with a pattern (which I compatibilities

already alluded to, I think, in the note cited "The melody in the tomb"). This is the solution of those problems (Which seem unrelated to the actual construction of a "theory of reasons") that may be indeed "for a hundred years." In any case, experience shows us again and again that such bets (on the more or less "unaffordable" a matter) have little meaning, except that discourage where courage is not faint. . .

(April 1) Some comments yet on the formalism of " **Galois group** (or **fundamental group**) **motivic** . "This concept (which I cleared and started to develop in 1964, before he had the honor to know my future ex-student Pierre Deligne) gives rise to intuition and formalism of great precision and finesse. Its existence and its essential features are independent of the construction particular that was adopted for the concept of pattern on a body (or "smooth" pattern on a diagram any), as long as it meets some reasonable conditions. I told Neantro Saavedra the task of putting in publishable form, in a context as general as possible, Dictionary I had reached around 1964 between on the one hand, the geometry in categories I called "tensor rigid "(category k -linear operation with" tensor product "satisfying suitable conditions k here being a **body**), and also the theory of linear representations of pro-algebraic groups over k (Or, more accurately and

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more generally, "sheaves proalgébriques" k). It led to the good job
p. 1212

late in his thesis, published in Lecture Notes in 1972 (LN 265) 999 (*). I pushed it farther dictionary 999 (*) (10 May) Since these lines were written, I had the opportunity to read the book in question, whose author did not see fit to send me a copy. I noticed that in this book, Saavedra did figure brilliant inventor the new philosophy exposed to it, faithfully following the notes I had passed him, and with hardly pronounce my name (either for the concepts introduced in this book and for crucial results nor on already known concepts as the crystal laminate module or pattern). The very name "tannakienne category" which he renamed the main concept, is a hoax so brilliant point that has certainly not more invented by himself, that the theory which he has as the author. This "paternity" also was all temporary, and my friend Peter is already loaded, ten after the publication of 904

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elsewhere (especially regarding the translation of filtered or graded structures on certain etc. functor fibers or that of a term "polarization" associated with tannakienne category), it is in fact the thesis of Saavedra 1000 (**), or in the "memorable volume" LN 900 (where the thesis Saavedra is redone and the concept of motivic Galois group is at the center of the problem, not my name there is more pronounced about that, as for other related reasons).

I also note that the first step in determining (up to equivalence) of the class patterns on a finite body, which was discussed previously in 1001 (***), was the determination of the group Galois moti

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vique said finite field, which must be commutative (topologically being generated by the element p. 1213 Frobenius), and is in fact an extension of Z (generated by Frobenius) by a pro-algebraic torus Q 1002 (*). The second step was the description of the element of $H_2(Q, T)$ which (according to Giraud theory) classifies the G -sheaf functor fibers 1003 (**).

As I expressed in the note "Memory of a dream - or the birth of reasons" (n ° 51), I fell the motivic Galois group seeking the link between representations l -adic, for variable, a Galois group profinite $\text{Gal}(K/K)$ in the modules l -adic, for example obtained by taking the $H_i(X_{\mathbb{A}_K}, Q_l)$, where X is a smooth projective scheme X and i is an integer (or optionally, a submodule suitable thereof). Greenhouse watching the image of the Galois group $\text{Aut}(V(l))$ for all l , which is a Lie group l -adic reductive, and it seemed that its structure (in the sense of the theory of Lie) was independent of. In seeking the deeper reason for this phenomenon (itself hypothetical yet until today), putting it in connection with the conjectures of Tate, I discovered the concept of motivic Galois group, following that of "pattern" and "motivic cohomology".

If there was a simple and profound thing I've taken to date, and there has been creative act in my life mathematician, it is with the birth of this important concept, connecting the geometry and arithmetic. Wherefore, that memorable April 19 last year, I was suffocated by a feeling of unimaginable **impudence**, seeing this thing properly with this great casualness, as the last of trifles that would improvise here at the moment to turn a technical paragraph: see, it's stupid like cabbage, you just have to apply here 4.7.3 proposal of our small article exposing the theory tannakiennes categories. . . 1004 (***). Here's how to do mathematics in the 1980s, after volume, to arrange for her to come back (according to the expectation of all) than any previously designated for this. For some details for this brilliant operation on a body (the first and only such a scale before the operation "SGA 4 1

SGA 5 "made in the same inimitable style), see the following notes" The Sixth nail in the coffin "(n ° s 176 1 to 176 7).
 1000 (**) (May 10) This is a presumption that turns out wrong. It was due to my belief that Saavedra would absolutely not
 able to "close" the program I had told him, when already the only mastery of perspective "representations
 linear sheaves proalgébriques "seemed long to overtake, and his mathematical background was more
 reduced. Given the way Saavedra exceptional means, for me it is unthinkable that the less than two years between my
 departure (where he had no notion of cohomology, or on the structure of algebraic groups) and the publication of the book, it
 has been
 the ability to assimilate (and this perfectly, as evidenced by the holding of the book) the crowd concepts all-out with
 where you juggle it. On this subject the note "Monsieur Verdoux - or cavalier" in the sequence of notes already quoted "The
 Sixth nail in the coffin. "
 1001 (***) (May 10) I find that this determination, too, is in the inexhaustible book Saavedra (without referring to my
 modest person, is needless to say). It uses the cohomology theory of global class field (determination
 group $H_2(Q, T)$, where T is a multiplicative group Q) - it is therefore also part of what my ex-student (the
 means seemingly superhuman) have assimilated in less than two years. . .
 1002 (*) This is the motivic Galois group that classifies the reasons **semisimple** . For general reasons must be
 sound produced by the G additive group $_{\text{has}}$ over Q .
 1003 (**) The crucial point is that this class becomes zero (due to the existence of functors fibers "l-adic cohomology") in
 all seats $l = p = \text{car.}k$, and the existence of the functor-fiber lens gives us sufficient information on the fate of
 this class in the missing place p .
 1004 (***) As I write this, has become for me the association with any similar way to introduce the definition of
 The function coefficients in the beam-adic, without reference to a person and as the latest banalities that would
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bright

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in previous years 1970 1005 (*).

p. 1214

But I leave the subject, okay - I was supposed to visit a site, not making sense. I point
 therefore, as in the case of profinite fundamental group, if X is geometrically related schema on
 a k , it is necessary to distinguish between the fundamental Motivic group of Scheme X itself, and the group
 fundamental Motivic " **geometric** ". The two do not coincide, **even** if k is algebraically closed - the
 that the basic motivic group of k does not mean trivial (it is connected, no more!). he
 must be introduced the fundamental Motivic group "geometric" of X , which is supposed (among others) establish
 a link between the various groups of Lie l-adic associated (as quotient) to the fundamental group profinite
 geometric $\pi_1(X_k)$. It is defined as the natural homomorphism core

π_{word}

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$(X) \rightarrow \pi_{\text{word}}$

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$(\text{Spec}(k))$

(Relating to the choice of a fiber-functor on the category of smooth patterns on X).

The point I wanted to get to is that this core, we might note π_{word}

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(X/k) , should be

first step towards building a "motivic homotopy type (geometric) X_k @which I have already
 refers in passing above 1006 (**). The description in the form of this "homotopy type" 1007 (***)
 whose "cohomology" should be other than motivic cohomology x , is part of the conceptual work
 interesting perspective on the construction site "patterns" in a decidedly different direction

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(And to a large

p. 1215

measure, probably independent) from the central task, which is that of the actual construction of the categories
 patterns and six operations formalism for them.

Site 6: Standard Conjectures. As I explained in a previous footnote page

(Note (*) p.1202), these conjectures can be heard in two different senses. First, in the sense

literal as I had made at the Symposium in Mumbai 1967 1008 (*). In this form there, they

seem to me to summarize the most crucial issues now in the theory of cycles

algebraic of all viewpoint of at least said equivalence "homology" for these cycles.

In formulating these conjectures, my main motivation was however not directed at

cycles to themselves, but to the way they provide (perhaps...) to build a theory of motives

semisimple over a field, satisfying the wishes that should be "common knowledge" for fifteen

or twenty years (and yet still remaining hidden...). I will indicate in Volume 3 Reflections di-

paid weakened variants of these conjectures, which would be enough to build such a theory (and whose lower is practically necessary and sufficient for this purpose). As I have already noted elsewhere, even as in original form guess would prove valuable in a given field k (k over, for example, if for all k), this does not mean by Himself that the cohomology classes might be called "motivic" 1009 (**) (which they can hope to make true various conjectures, the type of Hodge improvise the same brilliant author. On this subject the sub-note "... And the non-sense" (n ° 169 6) in note "maneuvers" (n ° 169), p. 891.

1005 (*) And even now, in the sixties - see notes about the "Eviction" (n ° 63).

1006 (**) in the note "Requiem for wave skeleton" (n ° 165).

1007 (***) as the object type, I expect it will be a relative homotopy type (meaning Illusie) in the topos "extension" (the Giraud direction) of fpqc topo Spec (C) associated with the sheaf (this fpqc topos) functor-fibers on the grounds of the Class smooth on X. The relative cohomology (the basic topos just described) this homotopy type is quasi-coherent (And "coherent"), and can identify with the motivic cohomology X_K . Using a complex point of X (if K coach. zero) for a functor-fiber Betti, the homotopy type-fiber corresponding to be canonically isomorphic Q-homotopy type (neglecting twist phenomena...) associated by way transcendental $X \otimes_{\mathbb{K}} \mathbb{C}$, at least when $X \otimes_{\mathbb{K}} \mathbb{C}$ is 1-connected.

1008 (*) Algebraic Geometry, Bombay, 1968, Oxford University Press (1969).

1009 (**) I think I can offer a reasonable definition of motivic cohomology classes on an algebraic variety

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and Tate example) are necessarily algebraic. If we discovered one day that are classes non algebraic motivic cohomology, this would probably mean that the importance of cycles algébriques in the theory of motives, ie in the arithmetic-geometric study of the cohomology of varieties algebraic, would be less that there was place for me to believe the beginnings of the theory. Still the actual construction of a theory of the reasons that I see now is a priori independent current conjectures (type Hodge, Tate, or "standard") on algebraic cycles.

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This prevents the standard conjectures and their variants on the one hand, and those of Hodge, Tate and p. 1216 Many variations of the other conjectures that such statements involve **existence** cycles algebraic (ie algébraicité of cohomology classes), or (in modified versions) statements existence of cohomology classes called "motivic" are intimately connected to each other and that the description of the main "types of coefficients", and, ultimately, that of the patterns of class itself 1010 (*).

Again, a work settlement of ordering and information, which was done for almost Twenty years has not been done (or, above all, made public) by those who preferred to today bury fertile ideas (when they were not published) or slag (when they were), and in book profit (immediate) and credit (later), rather than to inform and make available all fascinating issues, crucial to our understanding of the links between geometry, topology and arithmetic. I see what is missing here is not the competence nor the brilliant gifts, but simple honesty and some **decency** also in relation to a "community scientific "dispenser of prestige and power, those who do not feel so far kept the any obligation, to any "return" as an attitude so little "service". That is why, then I lost contact with the subject for over fifteen years and I'm not "in the know" of nothing much to say, it's me yet who will make an effort to get back into the bath of what was familiar to me once, at least to repair my best, in Volume 3 of Reflections, omissions younger and more talented than me and do at the end of this purpose they have not been generous enough to do. There I think I made the rounds of these "sites" that seem to present (and already from the moment of I left the mathematical scene) "the

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hottest ", in the context of building this" geometry p. 1217

Arithmetic "I threw them throughout the sixties bases. I do not mean to say that I made Summary turn **all** substantive issues that I am perhaps the only one to see and that I hold heart. For all I know, they are still at the point where I had left when I left mathematical scene, and many have not even had the good fortune yet to be explained in the literature. Among them, I point the **Riemann-Roch discrete conjecture** in the schematic framework in 1011 (*). Equal-projective and smooth, at least when the basic body has characteristic zero. In the general case, the crucial event (which he discussed above) is that of a finished base body. Modulo description of motivic classes in it think I can move forward, "the" good definition of motivic classes. Compare with the comments in Note b. p. (*) at 1202 page.

1010 (*) This does not contradict the statement that I just made, that I foresee the construction of the category of reasons (say on a body) is "independent" (ie "technically" or "logically" independent) of various conjectures

considered. These "close links" I am talking about (which, p. Eg., The twelve variants I@ seen the kind of conjecture Hodge and Tate suggest as many different types of "coefficients" cohomological) are heuristic nature, not technical - as the link between the formula (called "speculative") Lefschetz-Verdier and the trace formula for correspondence Frobenius. In the latter case, this essential link heuristic, which is not a logical arm © was duly noted in the two sub-notes "The real math...", "... and the" non-sense "" (n ° s 169 5 169 6) in note "The maneuvers ".

1011 (*) This conjecture is explained for the first time, it seems, in the sub-grade n ° 87 1 of the note the suggestive name "The Massacre "- having nothing but conjecture is one of the things massacred SGA 5, disappeared without a trace of a **name** in editing-Illusie.

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ment, there is the generalization of the theory of **local class, and overall geometry** in a statement **duality** which itself is essentially kind "geometric" (while giving classic statements "arithmetical ticks "as corollaries). This is discussed in letters to Larry Breen 1976, reproduced in Appendix in Chap. I "In the Fields of Pursuit" (which therefore appear in Vol. 4 Reflections). In such statements the main work ahead will be a careful description of the categories of "coefficients" in which we work. An important role is played by some autodualité discovered by Serre 1012 (**) in the category of algebraic groups unipotent to isogeny-radical closely above a body of k because. $p > 0$) (autodualité which is still unknown to me he appears outside the handful of people to whom I happened to tell it). The question of generalizing such statements to dimensions SUPREME EXTERIOR is (for me at least) a total mystery (but Milne have lights in the case of a surface algebraic. . .).

The duality of issues back, I think, in the late fifties, when I had also branched out the construction of a **complex** (of channels) " **Jacobian** " proalgébriques of groups, associated with a schema finite type over a body (to start...), in terms of "local jacobians" suitable associated with these various local rings, in analogy with the complex "residual" or "Dualising" I had built some years to Coherent duality. All these dual issues were seen relegated to second place in the sixties, for tasks including developing

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ment of "non-sense" of étale

p. 1218

and l-adic and language topos. A tip of my program on local and jacobians overall relative, was completed around 1977 (without mention of my humble self) by C. Contou-Carrere, who was quick to pack saw the reception given him by Deligne is Raynaud and 1013 (*). It takes aujourd'hui of some courage to take and develop ideas that are too clearly mark my (then even they would try his best to hide it). The only one who is stubborn it is Zoghman Mebkhout and the fate that was reserved and which culminated in her prowess Symposium Pervert, show quite clearly the risk that short.

If I wanted to make a list of good questions that I had discovered between 1955 and 1970 (and which I have talked about me here and there), I would still for days and even weeks without doubt if I wanted

be so little explicit and get into the ins and outs. This is not the place to do it, and I

doubt that I ever will. Besides if I want one day (who knows!) A young mathematician

to invest in one of these questions, just to get your feet and make themselves known, it is better that rediscovered itself, rather than run the adventure of getting some stick label.

Beware of Pervers Conferences that the future holds. . .

18.7. (7) Evening fruit

18.7.1. (1) Respect

Rating 179 (2 April) It©been five weeks (since February 26, with the note "Silence", opening later notes grouped under the name "The Four Operations") I@ board review the facts principal of "material" or kind (ever so slightly) "technical" regarding the Burial. In "The Four operations ", I limited myself to the aspect of" scam "in the strict sense of the term - one in which exceeded located 1012 (**) In addition to this beautiful idea of Serre, also influenced me the view "geometric" introduced by Lang in the body Global geometric classes and Serre in the local class.

1013 (*) See note "Coffin 3 - or jacobians too much on" (n ° 95) and the sub-grade n ° 95 1 , about some of misadventures Contou-Carrere in the great mathematical world.

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18.7. (7) Evening fruit

This "threshold" which was mentioned in the note of the same name (n ° 172), separating the **bad provisions**

(Speaking with the reflexes of "automatic discharge", despite often the most basic instinct of mathematical ticien) of **bad faith** patent and characterized plagiarism. In the part that I just wrote, "The yards sorry, "I see myself faced especially to the" first level "of Burial, below the" threshold "- the funerals ment of a broad vision

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and key ideas powerful, certainly that person is obliged to take, and all p. 1219 the world is right to ignore or forget - even in doing so to "bury himself", condemning his work (or at least the part of this work is directly affected by the vision challenged) to infertility more or less complete.

There I seem to have finished making the turn at last! Regarding the "tour of construction sites" (abandoned) he brought me a more detailed understanding of the Burial of my work, to bring me back Contact the same time, ever so slightly, with themes that I had lost sight for fifteen years. This did permits, especially, to get a clear idea of emergency orders in what I propose to put black on White in the next volume of Reflections. My purpose is not, of course, ask foundations meticulous science in labor - this is something I did enough, and if there should be more no one else to give such a task, as I once gave me, too bad for everyone and for all! My purpose is rather to identify some key ideas, in an overview Service born between 1955 and 1970 and I found today (especially through the efforts of some of those who were my students, and with the acquiescence of all) either forgotten or put to ridicule or without appropriate shamelessly and mutilated and drained of much of their strength. By resuming today I finally loose the Flanged knowledge instinct in me that often, in the sixties, I kept the bare minimum for the endless tasks of "service" benefit. That time is gone - yet I know that in this new phase in my mathematical passion, drive service is not less present than it was once. I do not "serve" no less than before this "community" great minds eager to learn in 1014 (*), which continues to give my math investments deeper meaning as a personal hobby and a way to autoagrandissement.

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In these investments, certainly "the boss" him either not more missing than before. Faced with p. 1220 malice and derision from the very people who for me were "my family" in the world mathematical, wounded many times in one basic decency of feeling by those I loved and whom I trusted unconditionally ago in me this irrepressible movement before those lost the sense of respect and **show my respect for me** , for respect for these living things, strong and beautiful as my hands I have brought to the light of day. The best testimony, perhaps, I can bring this respect is by making myself a slave to those things for a few years 1014 (*) I am speaking for the first time about the "mathematical community" in the first part of Crops and Seeds, in "The" mathematical community ": fiction and reality" (n ° 10). With reference here to a "community great minds eager to learn ", it might seem that I again flaps on something, the fictional character became clear in the quoted section. But in Part VIII of Fatuité and renewal, I had already been brought for the first time in my life (better late than never...) to the finding of a collective dimension in my own "Adventure of Knowledge" in the mathematical level. (On this subject, the two sections "The solitary adventure" and "The weight of a past, "n ° s 47, 50, specifically, pages 134, 135.) It is also clear that the " community "(or" community ") that saw this collective adventure, is of a different nature than any sociological entity, embodying themselves in an **environment** determined

a **time** given, with such a "mentality" special, or (today) with such a structure of power and such class interests. This "ideal community" to which I refer, "without boundaries in space or in time," no less "real" for I, as a sociological entity. It is essentially, in that it is she (as I wrote in the wake of the same sentence) that "keeps on giving to my math investments a deeper meaning than a hobby staff and a way to autoagrandissement. "It is not over" fictitious "than I am myself, who feel make part, more lucidly than I once was doing. The "fiction" consisted, not in the perception of the existence of such a "Community", but in the confusion between it and an environment which I had identified.

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the precious years that still remain to me assigned. Thus, mathematics thoughts I account develop in the coming years in the wake of Reflections, will they still together the resumption of a **breeze** and the **gift of service** , an **act of respect** .

Before the end point in the burial, I would like to make a short record, beyond the "facts hardware ", that this reflection taught me. First I will look at what she taught me about others, to finish with what she taught me about myself.

The fact that still most striking now, among those emerged into the light during the reflection is the **degradation of morals and minds** in the mathematical world of the 70s and 80s. This degradation is expressed, among others, and a hundred thousand "little things" as those revenues me

flashes all over the eight or nine years - the "nothings" confusing enough yet for provoke thought in the first part of Crops and Seeds and the main question: how (and when) things they are get there? And what was my role and what is my place in this deterioration insidious and relentless that I see today?

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This deterioration culminates in operations like "" SGA4 1

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"- SGA 5" or that (most incredible

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yet) Symposium Pervert, far surpassing cynicism and disregard everything I could imagine, the day before the day where I discovered my defending body.

This is not the place to come back to these "nothings" (including more than one was reported in my thinking by the way, here and there), or on major transactions (served by small operations). The spirit that is expressed in each and the other, the "nothings" and the vast scams, is the same. The "threshold" that can sometimes be good draw between the acceptable and the villainous itself is fragile and artificial well, a kind of safeguard which, anyway, no one (apparently) does not care. I do not regret through this burial where my person is involved crucially, having had opportunity to look more closely than ever, perhaps, this spirit, which is certainly neither the privilege of this one Burial (initiated in honor of my modest person) or the only world mathematicians. I can only say that I have no knowledge that this spirit reigned in this world, or in any other science, at another time than ours. It is a sign among many others, no doubt, the final stage in the decay of a civilization and of which, despite everything, still make sense.

In recent days, my thoughts lingered more than once on this strange coincidence, that my departure mathematical scene, there are more than fifteen years, had been due to shock some corruption in science, which I had chosen for a long time to close your eyes (while believing I stay away from it). I got confronted suddenly saw, in the same institution where I intended to finish my days in 1015 (*). There he was the interested complicity, almost universal, scientists with military aircraft. This insidious takeover of the military on the scientific world as a whole is also a recent phenomenon, only appeared (at least to the extent that we know labor holding) since the last world war. Certainly if this "shock" -There has disrupted my intended path (planned by me as by all) as to trigger my departure without return of a world to which I had identified so far (with tacit caveat...), is that there was in me a need for renewal près-health and urgent, I have realized that in hindsight. I had subsequently

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tend to minimize what

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had the special opportunity to trigger this unusual departure. But I know, too, how are huge (at the same time invisible) these inertial forces that tend to keep us indefinitely in the same "trajectory" justly, and who oppose the inner renewal - and that makes me measured

1015 (*) See note on the subject "The pullout wholesome" (n ° 42), and also "brothers and husbands - or double signature" and its sub-notes

(n ° s 134, 134 1)

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18.7. (7) Evening fruit

rer also the power of the internal shock he had to tear myself away from a trajectory as firmly drawn that was mine.

What I'm getting at is that the "special occasion" that triggered my departure is not without have a **meaning**, surely. This sense in any case was very strong presence in the early months, and probably even throughout the first year that followed my departure. Subsequently, under the influx of impressions new and the same dynamic that first tumultuous renewal, it was natural that the sense recedes into the background and it finally disappears from view. But even as I cease to perceive such "Meaning" of my past or present actions and their fruit, that sense has not disappeared. And my return a mathematical activity, with more detailed contact he implies with this world that I left, unexpectedly brought me to this forgotten past. For one of the first fruits of this "back" (return equally unexpected had been my departure once. . .) Was discovered in this world that was mine, another corruption, I do not think I ever known him. If I try to give a name to this new thing, it occurs to me: **loss of respect**. I felt painfully more than once during the past years, when I saw "as those that I loved, crush quietly as another that I like now, and that he recognizes me. "In thinking about the burial, I found it more than once again and in more virulent tone, directed this time against such things that I had given birth by my hands, or against such successor who dared to be inspired. For those moments, I met truly

the "breath" and "smell" of this spirit, which has lost the sense of respect. But I know, too, that this mind-there "does not blow as around my home", even though this is his breath on me, and on those I affection, that I "know" truly - as we do not know the taste of a bitter fruit that the eating only. This spirit today became the zeitgeist. . .
And I see that these corruptions, one that sparked my departure and was waiting for me in my "Return" are not unrelated. If I try to identify with words that vague feeling of a connection, I would say than

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in the attitude of ease of science vis-à-vis the seductions of money the military (to p. 1223 speak of this aspect) and amenities it offers, I detect a lack of self-respect, as well at the individual level and collectively in 1016 (*). And it is the loss of self-respect that I acknowledge the root of loss of respect for others and for the work of living out his hands or those of the Creator. I do not claim to have "understood" neither one nor the other "corruption." There is firstly the "zeitgeist" whose particular dynamic is largely beyond (to me it seems) to individual action. This collective dynamic for me remains a total mystery, I never thought to want to fathom. There are other hand how each be particularly gifted with its faculties of perception and creativity, and weighted all the weight of its special packaging, meets the spirit of the time and made this reply (knowingly or not) one of the crucial elements of his particular adventure.

In my reflection I have long tried to identify some choices, and the forces at work behind these choices, in the case of the two main protagonists of the burial: the deceased, and the Principal Celebrant to Obsèques 1017 (**). What is sure is that I learned things along the way, but not that I succeeded in my task. I may say that I have probably **not** fully successful, in terms of my protagonist. I gathered the pieces of a puzzle, I have gathered, I am convinced that the pieces are good and assembly, pretty much, is correct - but knowledge of **all** me

1016 (*) I'm sorry to risk hitting here, some of my old friends who make them the "ease of attitude," without au As certainly miss estimate in respect of themselves! There is no sure also that scientists at other times, if they had been placed together in front of the "seductions" of the same order, would have reacted differently. The opportunity of the thief!

1017 (**) (22 June) A third "main protagonist" eventually show me, "last minute" in the note "The album family "(n ° 173), Part C (one among all - or acquiescence)., d and e..

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still lacking. This remains a parts assembly that, now, my remaining **foreign** - foreign to my person and in my experience, and by that very misunderstood. The work done will not probably, on other occasions, to recognize me somehow to be careful where I interest to watch out (and I get older more I realize that there is often interest. . .). But this falls short of true understanding. And the question comes if finally the effort in this direction was not a delusion - or the **goal** at least (That of "understanding others" in such conflict) was

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not an illusion (as the **path** followed has

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yet been rich in lessons. . .). I think that really understand the conflict in this **person there** (Or any other in which I have been closely linked and where I see popping similar contradictions), it is without may also **include all short conflict** . And I know that such understanding can come to me a meditation on others (which never escapes my immediate knowledge), but only a Meditation on myself. If the long reflection "The key to the yin and yang" must be fertile, it is not not by occasional fumbles on the person of another, but by the returns on my own life and My own experience, and understanding that I had.

18.7.2. The gift

Rating 180 (April 3) I do not feel led me ultimately to try to look back in a few lines or a few pages of what appeared to me about my protagonist in the funerals is lying. In the current state of things, it seems to me that it would be little more than an exercise in style, not the way for a renewal of an understanding of the fragmentary. For now, I look forward rather arrive at the end point of this reflection on the Burial!

I know, moreover, that this final then point will not mean the end of the burial itself, surely the coming months, with the echoes of all sorts that will me these notes, fruit loneliness, they will be full of surprises and lessons that solitary reflection could not give me. he does not say either that all the surprises that will have me bitter, and perhaps even the future near me he also provided some joy - appreciated especially since she will probably uncommon; as I had the joy also, just last year (a good year!) to receive letters full of heat three among my former colleagues and friends I had in particular esteem and affection in 1018 (*). In terms of overall impact, however modest it may be, Crops and Seeds of "zeitgeist" in

the mathematical world, it is hardly necessary to say I@ me about any illusions. Can-
be, at most, the publication of these notes will she end to such injustice unprecedented and will do
readjust such abnormality too glaring - and again, I may be optimistic. And it is also possible that the
unexpected reappearance of the deceased himself, died and rose gamy for ages, will

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an end, or at

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least one more circumspect muted in snug concert derision that surrounded the work of his hands, he
had left. And if this reappearance does not end at the same time in good form boycott on a vision and
on strong and fruitful ideas, perhaps the least she inciterat such generous young mathematician
others to be inspired without reservation (at the risk of displeasing) and to endorse them in compliance.
Yet if I wrote Crops and Seeds, not for any of these things, some of which will come
perhaps more, who knows! I wrote "for me", of course, like everything I write - as the way
an understanding that gropes. At the same time, the thoughts of others, of those I
loved and which I left one day, when my adventure took me **elsewhere** - thought little me
left throughout the writing of Crops and Seeds 1019 (*). These notes, together with a reflection,
1018 (*) This is letter D. Mumford, IM Gelfand and J. Murre.

1019 (*) This thought is expressed more than once in Fatuité and Renewal (Part Crops and Seeds).

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18.7. (7) Evening fruit

and sometimes meditation, have been and remain for me a **donation** made to those that, beyond myself, I
address me. And I know certainly that that gift may not be received by any, except myself. I do regret
not mean that I did. Moreover, it is received today by such of those to whom it is intended, may
will be there tomorrow. This testimony both spontaneous and long matured, where every page and every word
come in his time and in his place, no less true tomorrow than today. But whether today
or tomorrow, if something unforeseen greeted with joy it will be to learn that my donation was received, were it not
by one, which would be recognized through me. . .

18.7.3. (3) the messenger (2)

Rating 181 more than for the "top" of the table of the burial, I feel prompted to make a
detailed retrospective of my lights and my perplexities about the two other plans, trained
one by the "busy group of my students, with power shovels and ropes", and the other by the "Congregation
whole. "On this one, and its role in the burial, I expressed myself so pretty
detailed in footnote "The Deadman - or the whole Congregation" (n ° 97) 1020 (**). For which
is my perplexities about the role and motivations of my dear former students, they appear most
clearly in the note "Silence" (n ° 84) without

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be seriously reconsidered, however, at no time p. 1226

further reflection. It is at this level, that of the "second level" of the table of Burial, that
my work leaves more to be desired! 1021 (*). There was no where comparable work than I did in the
Note cited "The Gravedigger...." That part of the table deepened in two subsequent notes, in the light
dynamics of yin and yang: "The providential circumstance - or Apotheosis" and "The disavowal (1) -
or recall "(n ° s 151, 152).

The note "The Gravedigger - or the whole Congregation," which is the last note among those written
in the "first breath" in thinking about the burial, is also probably the culmination. With the
decline in nearly a year, I am convinced, however, that some collective motivation pa-
raissait fairly obvious behind the burial of my humble self (seen as an act of "retaliation
for dissent "), although the real key **nerve** of Burial, at the collective will. This
which makes me doubt is that this motivation seems to be entirely absent, or alternatively a range de-
risoire compared to other forces at play in the case of each of my students in 1022 (**). But one of the facts
most striking throughout the burial, it is precisely the "unanimous agreement" between the three "planes"
successive, whose acts and omissions are linked and complement (as orchestrated by a desire com-
mune an "absolute coherence"), as well as at a funeral ceremony in the proper sense of
term! In a remarkable unanimity in such uniformity in the internal provisions and
acts, also guesses a common motivation, even a "nerve" that animates each other.

I do not mean to suggest that this "diffused resentment" that I@ seen here and there, caused by my "dissi-
dence "felt (superficially) as desertion, and (deeper) as a questioning

unacceptable - this grudge is null and void, and that it plays a role. But I doubt

Now that this role is crucial that this is the "nerve" common - which would be common to all, then, **except**
to the very people whose role in the burial was the most crucial of all! (Namely, those were my

It is perhaps less apparent in the following parts, but is nonetheless present.

1020 (**) (June 22) My still unclear perception of the Congregation materialized unexpectedly recently in the already noted

cited "family album" (n ° 173), parts c., d., e.

1021 (*) (22 June) for a continuation (modest) reflection on the "second level" of the table, however, see note on 19 June "Five Theses for a massacre - or filial piety" (n ° 176 7).

1022 (**) This fact appeared in the reflection of the note "Velvet Paw - or smiles" (n ° s 137), p. 644-645.

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students and thus, the first custodians of a legacy.)

This "cause" (relatively rational appearance) what my "dissent", seems no common me- safe yet with the breath of violence

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I felt in an operation such as the massacre of a

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"Splendid seminar" under the complacent eye of the Congregation; and also without common measure with the ini- quity equally violent that spreads in a Pervert Symposium, to the applause of the assembled crowd.

It©not that I was a colleague or an obnoxious boss, and too afraid that animosity accumu-

EAA he provoked discharges until he was around; she expected it to be declared dead and

buried to finally unload against him and those in whom we "recognize the" so slightly. Nothing in

the echoes that come to me here and there, not going in the direction nor a **fear** that my person would have inspired and

who would later found his hand late 1023 (*), or of acts or behaviors so little accurate

which one would make me **grievance** that might feed animosity or violence (which does not yet said his name).

This is a typical situation of violence which I called "free" or "without cause." If this violence then ended up at the center of my attention, in the long meditation "The key to the yin and yang" (which itself is as the heart of Crops and Seeds), is surely not a coincidence. This

violence, I do not know that yesterday, far from it, and it©not in my life that I mathematician

I was confronted for the first time, face to face. And I happened sometimes to forget its existence in

the world of men, it was never for long, for she herself was responsible soon enough

to remind my good memory. And to talk about today - a "coincidence" strange (I

admit) often unwelcome (or at least, unwelcome...), I do not remember being seen face

in my life to signs

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familiar of such violence so as insistent, repetitive, harassing, that

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since my "back to the math" and especially since the writing of Crops and Seeds; and more strongly, in all these months and weeks.

Surely there is here an insistent message, which returns again and again to me, and probably will return to it is heard. I began to lend ear, in the last weeks of long meditation

the yin and yang - knowing that I had not yet reached the end of what he had to say.

In the two months that have passed since, underground work had yet to continue in silence.

It seems to me that what is essential and hidden in 1024 (*) began to settle things more accessories

1023 (*) It is true that I have spoken at length in "Fatuité and Renewal", the **fear** that surrounded, from a time that

I did not know place, "man of knowledge", which I have sometimes seen the signs around my person. But this was

the widespread fear attached to prominence precisely, not my person itself - it disappeared as soon as a contact

is little staff could have been established. I feel that at the level of personal contact, I was rather perceived as "good paste", and as the person who would fear.

It has not been different, I© sure, even among this student which was discussed in "Barb -

or twenty years after "(n ° 27), in which some" jitters "continued to show long enough, each new

meet. This stage fright strikes me today as a sign of inner insecurity ("Unsicherheit") invasive, which later

found compensation and outlet in the attitudes of domination and contempt. Among his many students, I had three

opportunity to know were each, sorely tried by his malevolent attitudes, ostensibly "free". Visibly,

the spirit that has set in and reigns everywhere in mathematics environment has favored the emergence of such aberrant behavior,

which in turn helped shape the spirit and print it disconcerting that mark a hushed brutality. . .

1024 (*) In writing this line, I was aware that the term "hidden" here was a stopgap, a kind of concession to the "consenting sus". Often I have seen, discovering such a thing that I had ignored my life, that this thing was not

"Hidden" but rather conspicuous, obvious, sometimes to the point that it was palpable, but not that I agree to

to see her. This is usually in the discovery of new, whether a mathematical work, or work

self discovery. The cause for such blindness to the blockage of the faculties of elementary common sense or intuition is not a deficiency of these faculties. It lies rather in an almost insurmountable inertia of the mind to depart

unstuck well established consensus - that they be allowed in the entire company, or such longer limited medium whose it is a part, or even whether they are concluded and sealed inside us only such articles of a treaty that

"Boss" has concluded with itself and for its sole convenience. . .

18.7. (7) Evening fruit

apparent (or at least, less difficult to admit). The image of "dwarf and the giant" (provided by my friend Pierre) continued to haunt me. Behind this image, I detect an archetype of considerable strength, that would be as a shadow, or shadow, of the repression suffered in childhood. Its role would be that of an outlet, and compensation, repression of the creative force, long repression internalized in the "helplessness unspoken conviction." . . . In this archetype approached, I think I feel a powerful engine of acts of gratuitous violence, striking one perceived as "giant", as the bearer of a force intact - triggering acts without "cause" other than just a **good opportunity**, when the risk incurred seems nil or minimal.

Maybe I said too much already, whereas with these lines I just touch a tenuous and intuition insistent, signaling me a job that must be done, and remains before me. For this work, the burial is one of the materials only, with many others that come to me in my life called

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"Private". This is not the p. 1229

Instead of continuing or only to approach it. His place is not in notes for publication.

18.7.4. (4) Paradise Lost (2)

Rating 182 (4 April) In this retrospective promised, what my thinking was taught on others, my thought, in spite of myself, insistently to my own person. This is for me a good sign - the sign of the strong need for me to return to what is essential. It is the knowledge of myself that comes, moreover, an understanding of others, and not the reverse. And more than once since I happen meditate, concern "to understand others" was a way of diversion in the essential task of the get to know myself.

Before returning to myself deliberately (and against my impatience to reach the famous "Endpoint"), I would still like to include testimony that came to me recently about my Friend Peter. This is the only witness of its kind that I have learned since my departure from the scene mathematical. He gave my friend a very different light from those known to me otherwise. It reminds me again, very appropriately, that reality is constantly more complex and richer, the images that I can try to make me chugging 1025 (*).

The evidence in question is not direct. These are impressions of a meeting (more or less fortuitous) a foreign mathematician with Deligne, which this colleague spoke (hot again, I presume) to my matching, which sent me into the story in a letter. Courtesy of my correspondent and colleague (which I call "Z" in the following) that made him the story, I give here the translation of the part of the letter concerning this meeting. My correspondent assumes that the scene should be in 1981.

(NB this is also the year of the Symposium Pervert, conference he had not discussed elsewhere between my correspondent and me.)

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"... One day he went to Z. Bures for a conference, and got there in one piece [" room

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tea "to IHES visibly] where they served tea, and where there were many mathematicians.

That the door opens and Deligne enters the room. Mr. Z. tells Scene fairly lively: he Flapi the air, arms dangling, one felt around him a i- LEMENT. All other seemed to stare at him, like a rare bird without

1025 (*) I do not mean to suggest by this that the effort we made (and I make myself constantly) to get a picture of reality, as "faithful" as possible, and adjust the image over the "information" of all kinds from us - this effort to be vain or sterile. On the contrary, there is a dialectic here highly effective to put us in contact with reality and to "know". To the extent where only the image (weighted by the nature of things, an inertia) remains completely inert, frozen, she also becomes an obstacle to the understanding of reality, or rather: an **average** effective failure to shut our apprehensive faculties, and to "evacuate" the knowledge we do have of reality.

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that person could not tell him anything. Z. sat a little apart, near the window, and Deligne rather undecided, sat down beside him. Z did not know what to say. Then the thought came to him to just say, how extraordinary it was the set of ideas around the "topology spreads" etc., and new ideas that you made. ["You" here and in Subsequently, means: I, Grothendieck, to which my correspondent address]. Immediately the eyes Deligne began to shine, he said, yes, this is one of the best things there in the mathematical ; and as it was beautiful to listen to your 1026 (*) conferences. . . and he told: Thinking So just this, and this. . . by listing a lot of things where Z. understood nothing (according

he told me in itself), but he saw the enthusiasm, which had suddenly appeared in his interlocutor. Deligne and added: what a pity, you (*) are removed! He was sure the crystalline cohomology and many other things would not be in this state rather rebarbatif but they would now standing well as constructions cohomology spreads, if you ¹⁰²⁶ (*) there were really attacked again. . . "

Two things struck me in this story. There is the sense of isolation, which seems much hitting Mr. Z. I would be hard to say whether this impression comes from a very special moment in the Deligne life, or if such isolation eventually permeate its relations with all its congeners. I do not have had no other evidence going in the latter direction.

The other striking thing, and also unique among the echoes that come back to me is the appearance Sou Doe this enthusiasm, this heat, at the mention of my name and a past. He was a past that long since he had decided to declare null and void. And roots as he had in this past. And in the past, too, there was still a childhood freshness, freshness he had banished his life of "adult"

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important and admired man. It must be part of fashion, around him, not to p. 1231

referring to the past, the time when he was still a student among others, enamored of a beautiful passion. . . - nor in the house of the opulent man, surrounded by stylish furniture, one speaks of humble beginnings, or needy. . .

And now this stranger, sitting at his side by the merest chance, suddenly begins to speak and heat, as if this were the most natural thing in the world, of what no one ever talks about (not before him, at least. . .)! Surely, it was as if suddenly this select atmosphere stuffy and had fainted, and this heat of an unknown awakens in him the same heat, and - for a moment - the connects again to a distant source, raw forever forgotten and lost. . .

18.8. Discovery of a past

18.8.1. (1) first breath - or the finding

Score 183 I come finally to the most personal part of this balance-retrospective started there more a month. It remains for me to quickly review what this reflection taught me **about myself** .

The first thing that reflection has made me discover is a **past** - my past mathematician, on which I had never bothered me before to stop me, was it that for a moment. Behind the apparent flatness of a large area skin and without problems, I saw again opening depth all that is commonly overlooked, retracted (as a surreptitious kick sent well broom) of conscious comfortable image that was wont to do yourself and what surrounds us. From ¹⁰²⁶ (*) As above, "you" here refers to me, Grothendieck.

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18.8. Discovery of a past

"Burr" (or sweepings ...) never discussed, at least not in my mathematician living there action insidious, and sometimes intrusive, the fatuity in relation to such of my friends. From the beginning, this fatuity had taken the form of a kind of mathematical elitism, which remained unspoken and which I had no conscience, as my attitude seemed obvious. This elitism (or "méritocratie" as appellation Chevalley and Gaj), had to harden over the years. He crystallized this attitude "sport" that I finally discovered towards the end of "first breath" of reflection. Under outside genuine, this attitude sanctioning of jealous possessiveness provisions vis-à-vis what was perceived as "turf" for myself and for those he liked to host there, seen their brilliant qualities.

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These provisions very "boss" do not exhaust fortunately the content of what was between 1948 and 1970 p. 1232 my relationship to my friends, colleagues and students in the mathematical world, or mathematics itself - it takes a lot. However, they were in an insidious base note, I have never taken worth noting before last year, in the first part (or "first breath") Crops and Seeds.

This gradual discovery culminates with the "Sport mathematical" section (n ° 40). It seems to me mark the moment a qualitative shift in thinking. I felt in the moment as

through a pass , which would have opened me a sudden breakaway on a new panorama. . .

Looking back another year, I see that first long period now of my life mathematician among mathematicians, between 1948 and 1970 as a kind of **barter** the "birthright" that belongs to me (as it is for each), to live fully (if this is my choice) adventure special and unique, against the "mess of pottage" of identification (I would have desired without reservations, never quite achieve. . .) With a "mathematical community" idyllic, fictional, and even time dispensing of comfortable benefits ^{in 1027} (*). For this image, I do not pretend to have any say on this period of time, certainly too rich to be locked in a formula in the punch. But the image I seems to understand an important aspect, appeared for the first time in this first phase of reflection. This

appearance reappears in the name "Fatuité and Renewal" has taken (after the fact) that part of Crops and Sowing.

The most personal and deepest part of the first phase consists of the last three "chapters" in 1028 (**) VI-VII: "Crop", "The child has fun" and "solitary adventure." In "Harvest" I rebuke first contact with certain moments of my life (not just my mathematician of life, this time) - moments responsible for renewal of strength. It was as if, moved by an unknown force, by any secret and imperious voice, I tried to find the same provisions **of innocence** ,

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to cross the threshold p. 1233

I still felt obscurely before me. Without that I would have known then predict, of course, I had to time to the discovery of a possessive attitude vis-à-vis the mathematics itself. I kept to climb a slope, without haste and without hesitation, as if my feet were following an invisible path they only "saw". I knew, without telling me, he led me where it was, so that little by little, step by step, the fog dissipated.

Thus I reached the new threshold in my journey, and this **collar** instead:

"... And I felt, soon arrived at this point, the one who comes to a gazebo, where he sees deploy the landscape he has traveled, which every moment he could perceive only

1027 (*) This is the ambiguity of which was discussed in a previous note b. p. (Note (*) at p. 1219).

1028 (**) Of course (and as I says in the Introduction to R and S), these "chapters", grouping related consecutive sections by a common theme or particular affinities, were introduced afterwards, when completed writing what would be (only) the first part of Crops and Seeds. In Fatuité and renewal, it occasionally happen to them refer to as "parts" of R and S (not to be confused with the five parts "Fatuité and Renewal" etc. in What all of the reflection from February 1984 to today has grouped).

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portion. And now there is this perception of scope and space, which is a release. . . "

As soon crossed this sensitive point of reflection, it deepens into a meditation on my own. Since the very next day, I feel the need to introduce the image of the "boss" and "worker", aka the child picture which had become familiar to me for two or three years. But I was far from suspecting how it would be useful in thinking still to come, while for nearly two months now, I thought I about to reach the end, to get back to my illico mathematics notes to "On Continued Champs! "

In the four sections forming the "chapter" "The child is having fun," I'm back in touch with some aspects and events of my relationship to mathematics. I had already extensively surveyed nearly three years earlier (July-December 1981), but I had ample time since to forget them. My

About this time is best to put me in provisions to probe the meaning of my unexpected return to a mathematical investment long-term, and reach "me" be between the two passions apparently mutually exclusive, which now dominate my life: mathematics, and meditation.

This "exclusion" of these two mutual passions also appears to me now less draconian, it has another two years. In "In the Fields of Pursuit" mathematical thinking gives way sometimes, or even becomes the occasion for reflection so little personal, where my person, as a being gifted sensitivity and feelings of curiosity (not only mathematical) and destiny is no longer entirely absent. And in reverse, in this reflection on myself what

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Crops and Seeds, this

p. 1234

even thinking puts me in touch with old loves math, and becomes an opportunity here and there primer of mathematical thinking in 1029 (*).

It is possible that these possibilities of coexistence or symbiosis between these two different expressions of the drive for knowledge in me, must, by the very nature of things, remain fairly limited. But he was clear at least for me, when thinking of last year (and already from long meditation continued three years), these two passions are in no way antagonistic nature or even gasoline different. In the last part of the reflection, "The solitary adventure", I try to identify as closely what exactly these passions differ, and "adventures" as they open up to me the one and the other. It is During this questioning I discovered this obvious fact, which I pretended to ignore my life: that mathematics is " **a collective adventure** ," and my own mathematical adventure takes meaning that its links to the wider collective adventure which it belongs.

Actually, I'm first touched this fact in passing, in "The solitary adventure," while my purpose at this point is rather to define in words something that was well known to me against, and Yet I continued to have trouble fully accepting: that meditation, it is an **adventure lonely** . This formulation effort of something "known" is certainly not useless, far from it! It made me deepen this knowledge, while making me discover in stride this obvious fact and again (to

me at least), link connects me to **another** adventure (which at that time I wanted, or someone or something in me would have wanted to distance. . .), Mathematical adventure which itself is collective. The land is ready now for the next day in the "Finding a division" section, I enter at the heart of my perplexities. That is the conclusion, first, that "putting the boss," and even though would delude himself (as he would rather be in his nature...) can only be the collective adventure - the only one likely to bring him "back" substantial. "The only child is lonely by nature"; it is

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the only child that can attract an adventure that no one else in the world wants, and knowledge,
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1029 (*) (May 10) These "thought starters" have also, now, paid off, by the renewing of my understanding certain themes, left on the shelf for fifteen years.

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While tangible and often obvious that he can share with anyone yet. And now it© there, although unfortunately at the option of "boss", that is the "preference of the same" in the case of **my** "business".

This observation leads to the finding of a **division** in myself, **the boss-child division** . It©the first time I make such a finding in extreme attention and rigor provisions. This is not a **decree** , that I have formulated in accordance with a particular "way of seeing" or philosophy or what not, and who claims a more or less universal validity. It is a simple **observation** indeed, from a careful examination of a case very particular case, that of my modest person, at some stage of my development. Perhaps this division then disappear one day, but only if the owner continues to attend to the necessary, while leaving the worker-child work at will. This is not my concern today, and it was not to be. AT each day at a time. . .

(April 5) It is true that this division had been revealed to me there will be nine, in a dream, with a parable staged with overwhelming force. That was two days after discovering meditation, this power long ignored in me, at my disposal at any time - and that is by going to the bottom of the meaning of this dream I found it in me that is not divided, **the other** in me, so long silent and invisible, "a being very expensive, increased death a long life. . . ."The new thing, the essential thing then appeared, it was **not** the division, I knew only too much, not that that dream revealed to me with such force on the nature of this division, incarnating two familiar and loved ones of which one nor the other had the name and were **the same** - but it was these **reunions** , coming after four hours of intense meditation, like intense birthing labors.

I knew then, and in the days and weeks that followed, that the reunion was not the end of the division. But thanks to them, I saw that division with new eyes - as an important thing, certainly, but all in all "accessory" to a more essential reality, one by one , **undivided** , indestructible, of this in me that I had found, and that I later recognized as the "child". This double

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This knowledge was then very lively and acute. She was blunt in the years p. 1236 followed, in the sense that the knowledge of this division "accessory", yet very real and tangible, has tended to be retracted. While "the boss" had been led to "bet" thoroughly on meditation (The famous "three legged horse"...), He longed to suggest (without daring, or clumsiness, to say never in the clear. . .) With meditation and all that, the division now, it was a thing of the past, there were any more as well say, just a little smudge here and another there, okay we© not going deny it, but it was still almost as if there were none; had to look at the môme-worker so happy to give their heart and a walking boss cake on tiptoe especially to bother him - true romance, as saying! I wonder if the reflection of last year, the before the turn (with the "mathematical sports"), especially where I make a very unexpected retrospective on "my passions" (in the section of the same name, n ° 35), is not just a little in these tones-again where lighting power a hint of pink. . .

Still, this "finding of a division" then I opportunely called into contact with a actually I had tended to lose sight of for many years. At the same time, it made me find in a new light, with new eyes, this division very clearly perceived eight years before. I can say without reservation or doubt, because I remember that when this "Observation", there was no association with the episode of the reunion, and that he had me just taught about a certain division and its nature! This association has finally stand that sometimes, when I took over the notes of the day. This shows how the content

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"Accessory" (and unwanted!) The knowledge appeared during this episode, was whisked away. That must be more easily, there was no at that time, and after the turning point of reunions, thinking about this content there, and the image (appeared in later years) the "boss" and "the ouvrier-child", the better able perhaps to express this content, yet lacking.

It seems to me now that it is this "observation" renewed the division, which is the most thing important that I learned about me in this first part of Crops and Seeds. This finding holds in some lines from one of the shorter sections of this part of the reflection. On to

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would think that if

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it was to get there, not maybe there would be continued over a hundred and fifty pages the mysteries manifestations of the conceit through my life of mathematician. Nothing is more true surely, in terms of "Common sense" current. But it is also true that "common sense" to cut billhook is not capable understand the delicate and deep channels of a discovery work, whether self-discovery, or cruder work in 1030 (*) of mathematical discovery. I am convinced that in this long Crops and Seeds reflection, everything is in its place and time, prepared and matured by all those that preceded it.

18.8.2. (2) Second Wind - or survey

Rating 184 (April 6) With this short observation of a division, towards the end of March last year (there is a bit more than a year), I first grew completing the Crops and Seeds reflection. I had no idea that he would come even five times as much (counted in pages)! In the following days, I take care and other things, and my thoughts begin to return on mathematical themes. Yet

"Little point" still left open in reflection, still trotting in my head. Beyond a perplexity that might seem pure detail, I should feel vaguely that I had not really done

yet turn the forces at work in the "tilt" of the boss to a mathematical investment

lengthy. Or, if I properly updated the essential springs, my understanding was still

pale and fleeting, not having "placed" enough for the thing it penetrates further. This last

small point "would become the means by which I went back to what remained imbued with a sense of blurring. This resumption of reflection takes place in the section

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who was then (and still for three weeks)

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supposed to bring Crops and Seeds, which soon took the name "The weight of the past." This name expresses the unexpected discovery of this **weight** from my past mathematician, along with the strength of the link continues to connect to the collective adventure. And yet, what I foresee that day is that the summit of modest proportions of an iceberg whose huge submerged part would gradually appear, over the month and the entire year that followed. . .

This section closes this first breath of reflection is both as a primer and a

the second call. The "weight of the past", obviously, has its root in my attachment to a work, and

even more than the finished work, carried out in the attachment to the main ideas and visions which

I feel good, I "know" intimately fertility and power, and I realize more or

1030 (*) If the work of scientific discovery appears to me as "cruder" than self-discovery, it is (I think)

for two reasons. For one, it hardly involves our own intellectual faculties, ie a fraction of

our being. (The scientific work tends also to hypertrophy that part of our faculties at the expense of others

and an overall balance of the person, and ultimately, to transform it into a monster computer. . .) On the other hand,

internal resistance (opposing the discovery of reality) into play by scientific work, are usually without

in common with those who oppose self-knowledge. This is also why "scientific adventure" only

very rarely, and almost never these days, a "truth Adventure" - an adventure, so that starts to contribution

our humble abilities and courage to take an unwelcome truth vis-à-vis ourselves first, and vis-a-vis the world then outside.

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less confused and yet for years they vegetate in barren and arid land, and secretly

insidiously hostile ... So this reflection "The weight of the past" which remind my good memory and

work and my relationships at work, is it an opportunity for a long note in which for the first time since

my "start", I speak about the work and the fate that has been done to him. What had been felt

confusedly for ten or fifteen years, finally takes shape and manifests in words, sometimes hesitant to

come, and which, once written down on paper, clearly tell me a message that I had previously avoided

take notice. Subsequently, given the length of this note written in one go, I split in two,

with the names "My orphans" and "Denial of inheritance - or the price of a contradiction" (n ° s 46.47).

This double notes can be considered is the kickoff for reflection on the Burial 1031 (*).

This would play three weeks later, on 19 April, under the influence of emotion aroused by the "Measurable volume "LN 900, dedicating the exhumation of the grounds under the guidance of the" new father "Deligne. This "second wind" of reflection continues intensely until late May - mid-June, it takes end (as I think I am again about to put the final point, the real thing!) by

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the épisode- p. 1239
disease in 1032 (*).

This second blast is not, strictly speaking, a reflection on myself or my past, but rather an "investigation" of the burial that I had just discovered, along with an effort to "digest" somehow and progressively, the obvious facts and yet (probably saw my ineradicable naivete!) amazing, amazing. If she still learned something about myself, it©mostly me making startling strength of my attachment to my past and my work. I was touched to the quick, light Artwork as torn into pieces, such pieces for the bin, such other to in mock, and such others appropriate shamelessly as the trifle to all comers. . .

I knew then that I was not "out of the arena" again, as I had grown in exultation that had monitoring the crossing of a "neck" and the vast panorama that was then opened before me in 1033 (**)! Or to put it differently, I could measure then all the **weight** of the past, and the strength of the mechanisms egotistic who continue to attach myself. This was a big surprise!

There is yet another thing about myself that I discovered during this second phase reflection, likely to complete what I had learned in the first. In it, I put Updated especially some "to" a fatuous attitude in me by attitudes of **exclusion** vis-à-vis such colleagues or even friends, for one reason or another, I do not tidied in the world of "elite" I felt myself part (tacitly, it of course!). **The place** of the same coin is a

attitude of **complacency** and ambiguity in my relationship to younger mathematicians (in particular, to my students), I had virtually co-opted as part of themselves, of "My World"; either because their brilliant means or simply because I had accepted as students and were soon when perceived by me as under my "protection". I begin to put the finger on this attitude in note "Climbing" (n ° 63 ☉of May 10, followed by the note "Being apart" (n ° 67☉of May 27, one and the other devoted to my relationship with my young

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brilliant friend Pierre. This reflection deepens in p. 1240
note "Ambiguity" (n ° 63 ") June 1, where it concerns my relationships with my students in general. This is 1031 (*) This situation unfortunately does not appear in the table of contents to the Burial I (or The Emperor©dress China), where the double-note in question form the procession II (Orphans), not the parade I (which is posthumous student). it

due to the order in which the references to follow one another "notes" (n ° s 44-47) within the ultimate section "The weight of a,
past"(n ° 50) Fatuité and Renewal section that these notes are supposed to comment.

1032 (*) On this episode disease, see the two notes "The incident - or the body and mind" and "The trap - or facilitated and exhaustion" (n ° s 98.99).

1033 (**) This exultation is expressed in "Finish the ride!" (n ° 41), and is muted five or six weeks later, in note "One foot in the ring" (n ° 72).

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I finally reveals some ambiguity, because they have never been identified and examined by me, had me followed until recent years. I also faced again this ambiguity far all

lately, in a slightly different context, in the sub-note "Eviction (2)" (n ° 169 1) (in the second part of it, dated 16 March). I see myself led to conclude that the eviction of me seminar SGA (which is the sum of an investment of ten years of my life) 1034 (*), eviction implementation by the care especially of some of the closest among my former students, is simply the natural harvest an ambiguous attitude pleased me that I was to interview them regarding their right place and mine in SGA work with vast dimensions, in which one or the other of them had invested within one year or two.

18.8.3. (3) Third breath - or discovering violence

Score 185 I still have to review what taught me about myself the "third wind" of reflection, beginning 22 September (after the end of the episode-disease) and about to touch to an end in 1035 (**). This is, above all, reflection continued in "The key to the yin and yang," which is the part that seems to me the most personal and deepest of crops and sowing. Without About deliberate, it©me and my relationship to the world that usually appear at the center of attention. When it seems to deviate at times, to bring to the themes in more general appearance, or to dwell on the person of my friend Peter is always at the center, however, the actor-observer in

one that feels, perceives, questions and probe, it returns without delay, as drawn by an invisible force. Before anything else, and without wanting to be, so it is a **meditation on my life and myself**, addressed by an unexpected way: that of the Burial.

This is the part of the reflection also appears to me to be the richest, the one by which I most learned. Many things "known" themselves

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located in relation to each other, and things that were

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only interviews or approached, or "sues" but neglected, drowned in the confused darkness of all-coming, began to emerge from the shadows and reveal and weight, and their contours. It was like a new opening, the prompt for a major new departure into the unknown - at a time when it seemed that famous "mathematical investment lengthy" would end for years at work

Discovery myself. . .

There is no question here to review in detail the various stages of this long reflection, or make a "list" of what she taught me. I would rather say in a few words which I think is most important for the knowledge of me as so matured that material still continues over days, months and years.

This discussion began in the mind of a "parenthesis" I opened (the space of a note or two breaking everything. . .) To the reader (and at the same time, put myself) "in bath" a dialectical view yin-yang (or "male-female") of things. The reason for such open parenthesis was the need to get to locate in terms of an intuition of yin and yang, a striking impression

1034 (*) For the latest episodes of this eviction, see note "The Funeral -" im Dienste der Wissenschaft "(n ° 175).

1035 (**) I set aside here the fifth part of R and S, which originally was a "digression" within the Funeral Ceremony (Or even, within "The Key of yin and yang"). This part is not completed at the time of writing this retrospective on Crops and Seeds, and is not included in it.

(June 22) It emerged during the following weeks as part of the thinking "The four operations" (or the Burial (3)), according to "The key of yin and yang", is a "fourth breath" Crops and Seeds, which is not included in this final retrospective.

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18.8. Discovery of a past

I was given the review of a "Eulogy of Death" in 1036 (*): that of a deliberate to "overthrow" roles in an original relationship yin-yang. This "bracket" opens on 2 October. It is November 10 only after tight hundred pages of reflections on games of yin and yang in my life and in particular in life in general, and (finally) in the game of mathematical discovery, the time seems finally ripe to **formulate** at least 1037 (**) this association of ideas rather appeared six months earlier, waiting can fathom in full knowledge Fourteen days later again in 1038 (***). (And it is near two months later still, on 14 January that finally closes the famous interlude on the yin and yang, without that I realize for some time that it had already closed. . .)

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Very quickly and without having sought neither expected is "conflict" in human life and the person p. 1242 is at the center of attention. Energy ego suddenly and powerfully mobilized by the discovery of the Burial, came there in unexpected extra strength to confront me again, and on the go, the "Conflict mystery" which for years interpellait me in 1039 (*). While in previous years, that mystery was gradually came to the forefront of things I wanted to fathom and understand, as far as was possible, without ever even I have "taken the plunge" and be launched me whole. . . Gradually during the reflection reveals what, in my life has been like the "hard core", the center this formidable mystery, as the heart of "the mystery of evil": violence may be called "Free" or "unjust" violence for the sake, they say, to hurt, harm or destroy - an violence never said his name, often muffled, under airs innocent and affable ingenuity, and especially more efficient to touch and destroy - the "claw in the velvet" delicate, lively and no thank you. . . On this Violence then that attention ends up wearing, during the discussion continued in the following notes "The claw in the velvet" (n ° s 137-140), and she also remains the center of attention until the end of the key. It still form the high point in the final notes evoking the "endless loop" of karma, passed from parents to children and from children to grandchildren, from generation to generation since the dawn ages.

This is the first time in my life that I am confronted with this mystery of violence "without hatred thank you" - a violence deeply embedded in the lives of men, and that marked my life, since my youth, with an indelible imprint. It is also the first time I am doing the finding of this footprint in my being. That is the conclusion also, at the same time, simply because of **the existence** of such violence, its fearsome omnipresence in my own life and in that of each 1040 (**). This simple observation alone

contains the seeds at the same time **accepting** therefore formidable. It is this, perhaps, that is what I

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learned the most important (or at least **begun** to learn), during the whole p. 1243 reflection Crops and Seeds.

It is not there a culmination, a culmination of a reflection. Rather, it is a first step still carrying me beyond a threshold leading into the unknown. In my journey and my maturation this humble not seem to me a greater range than the embryos of "answer" I glimpsed (as the days that followed) to the question of "causes" of the "causeless violence" 1041 (*). This question itself only makes sense, otherwise heavier than a simple matter of "mental mechanics" once 1036 (*) For this "praise Funèbre" (by skillfully dosed and administered compliment...) See two notes of the name (n ° s 104, 105), and the note "Jewels" (n ° s 170 (iii)), which provides a partial summary.

1037 (**) In the note "Reversal (3) - yin or yang buried" (n ° 137).

1038 (***) In the early days of the note "Velvet Paw - or smiles" (n ° 137).

1039 (*) This "interpellation" began to be perceived especially since my long meditation on my parents, which continued between August 1979 and March 1980.

1040 (**) This finding is the high point of reflection continued in the note "Without hatred and without thank you" (n ° 157).

1041 (*) See the note of the same name (n ° 159).

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full view and assumed the existence and scope of fact on which we question.

Some will say that I^o out of the subject, that the finding of a general psychological fact (or I claim to such), regarding each and all, belongs to objective knowledge reserved for disciplines scientists (such as psychology, psychiatry, sociology or whatnot), it is not field (perceived as vague and intangible, if not entirely far-fetched) from the famous "knowledge self. "But I see (not so vague and intangible, but also made clear that mathematical familiar and obvious. . .) That outside the self-discovery, such a finding is meaningless living - he loses making is anything but a philosophical-psychological exercise in style that the development of a "thesis" (very certainly interesting and everything. . .). This fact by itself is a **discovery**, a discovery intimately personal that nobody in the world can do it for me, and I can not do instead no other person in the world. This discovery is a step, the last one almost in a journey to discover myself. She do relative to something important, daunting, me marked and I had held until now neglected, as if it was a special kind of bad luck (Perhaps taking such and such peculiarities in my humble person) that I got exposed seen all Throughout my life, and I^o seen others be exposed or impose, as long as I take the trouble to open eyes and look around me.

It is no coincidence that matter, surely, that from the beginning of this reflection on violence, I am me been led by the same inner logic of thinking to do (for the first time in my life as) a back on the few cases I kept remembering where it is I who

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was doing to others, and without

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think twice certainly violence "beyond belief" 1042 (*). The value of this return is not it gives me the opportunity to fight the guilt (and in public, what is more) - something I also completely failed to do. But is that it has opened a door to a deeper understanding of the violence - a door that^oup to me now to pass, when I please,

18.8.4. (4) Fidelity - or women in mathematics

Note 186 This is what I see as the most important, from the perspective of the trip to the discovery of myself. This last phase of reflection on the yin and yang, centered on violence, continues all Throughout the past four parts: "The claw in the velvet", "violence - or games and goad" "The Other Self" and "Conflict and discovery - or the enigma of evil" of 7 December to 14 January (which represent slightly more than a third of the Key).

Looking back, it seems to me that the main role of the previous eight parts of the Keys is having me eventually led to this critical reflection. Many of the things that I develop in this part Preliminary were things that were familiar to me for years, and yet that I had "reminded" to allow a "who lands" reader to follow, and to give thought internally consistent, which otherwise might be lacking, or being apparent to me. At times the style is affected by these interior dispositions of one eager to get it over with these reminders, to finally arrive at the "bright Topic" - while often these supposedly recalls were a far more reaching, and I worthy poses so little about them, that this "bright" which I could not wait to arrive (and which, hurry or not, I do not Sometimes more than a month later. . .). These provisions seem especially sensitive to me in three parts consecutive "The couple", "Mother Death", "Denial and acceptance." Even then, it is true, by taking

18.8. Discovery of a past

and sometimes a new day - it was even for things as if impersonal at first, that the inventory of these "doors to the world" that are each groups of couples (or "keyhole") yin-yang bound by immediate affinity.

But with the following three parts (also those that precede the last four, centric theme of violence) that I approach

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again the shores hitherto unexplored: "The yin and mathematical p 1245.

yang ", " The reversal of yin and yang, "" Masters and Servants ".

It is in the first of these parts has its place "surprise" that would throw a new light on the direction, or sense at least the Burial. It is therefore, in my approach to

mathematical and, more generally, in my spontaneous approach to the discovery of the world, the tone core of my being is **yin**, "**feminine**". In other words, while the conditioned ego structure, the "Boss" of my company, is yang (not to say, "macho" zinc strand), my original nature, "child" in me (who is also the worker who shapes the child discovers playing...) is "female" dominant.

It also not this feature alone distinguishes my "style" approach staff

mathematics than any other. It seems, indeed, that even among mathematicians, it is not not so rare that the base note (or "dominant") original is yin. What is exceptional by in my case against (me it seems) is that in my approach to discover and especially in my mathematical work, I have been all my life fully faithful to this original nature, without any hint making any alterations or corrections, either under the desiderata of an internal Censor (wherein anyway there never saw the fire, so they would not suspect a sensitivity and creative approach "feminine" in a case "men" like mathematics!), or for the sake of me comply with the canons of good taste in force in the outside world, especially in the world scientist. There is no doubt to me that this is largely due to this loyalty to my own nature, in this limited area of my life at least 1043 (*), my mathematical creativity could be fully deployed and unhindered, as a vigorous tree, firmly planted in the ground, freely deployed pace nights and days, winds and seasons. This was so despite the fact that my "gifts" are rather modest, and that the beginnings did not announced

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auspiciously in 1044 (*).

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By the time I make this unexpected finding on my approach to mathematics, in the note "The rising sea. . ." (N ° 122) 1045 (**), it comes a little as a kind of unexpected curiosity, a bit © margin "of my life, where others in relationships all bear the mark of my options and yang superyang. It is later in thinking only, centered on the dynamics of conflict, and on the occasion of a return on the 1043 (*) As I have had occasion to say and repeat on several occasions in R and S, one of the two forces egotistic strongest that have dominated my life since the age of eight years (until 1976, when I was forty-eight years old), was repression

the "feminine" traits in me, the benefit of experienced strokes as "manly". It was during the discussion "The key to the yin and yang "only, I realized that this repression has not exercised in my mathematical work (or, later in meditation or self-discovery work). The dominant "female" original of my being has been able to give their heart, in a generally perceived activity (and rightly) as "manly" par excellence! (See the note about "The more "macho" arts ", n ° 119.)

1044 (*) If I say "small donations", this is not false modesty. This is something that I could still see and yet, both in contact with brilliant mathematicians, incomparably more vivid than me to capture the essence and to learn and assimilate new ideas, as in labor relations such anonymous students and without luggage mathematics seriously, but whose curiosity and mathematical creativity were momentarily put on the alert.

I speak a little of my "debut" (at least, the beginning of my contact with the world of mathematicians in 1948) in the "welcome Abroad" (n ° 9). It three years earlier, however, in 1945, that begins my "mathematician of life" where most of my energy is devoted to mathematical research. Until 1949 or 1950, Prospects for me, as a foreigner in France, find a livelihood as a mathematician, yet seemed to more problematic. If it would not be presented such an opportunity, I planned to learn carpentry as livelihood that could be to my liking.

1045 (***) See also the subsequent note "The arrow and the wave" (n ° 130).

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Burial, that I realize how much the relationship of my fellow mathematicians to my person and above all, my work, saw this unusual feature, involving them in reflexes reserve (when it is rejected) before an approach style felt obscurely as "displaced" (to not say unseemly). Such reactions were common since I started in the mathematical world, but temperate in times lenient by the atmosphere of mutual respect that prevailed, at least in mathematical circles where I had the good fortune to land. Later, they had to be repressed without more, given "the power of the results of Grothendieck" (to quote a letter to Borel Mebkhout where these "Reservations" are mentioned). They have become the rule by cons, and sometimes extending comfortable behind a some discretion tone (which is still required) since leaving the mathematical scene, while former compliance has eroded and disappeared long ago, and that the person (believed dead and buried) is more present to give the reply ... This unexpected aspect of the burial, as the funeral symbolic of the "mathematical feminine" in my humble person, is probed in both notes "The providential circumstance - or Apotheose "and" repudiation - or recall "(n ° s 151, 152) of 23 and 24 December in the middle so meditation on violence.

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There is one final aspect of my person I would like to mention again, appeared in writing of the Key p. 1247

yin and yang, in the last of the cited parts, "Masters and Servants" (which immediately precedes the turn of the thinking initiated with "claw in the velvet"). This is the "Service drive" and the role that it played in my choice of investments and mathematics as main force at work in vast, endless foundations of tasks that no one else after me has yet found the courage (or humility...) to take over and continue. This aspect, present in me with exceptional strength, testifies eloquently of the "female" dominant of my original nature, which is preserved (or even a refugee...) in mathematical activity (where nobody would have thought of going to look for. . .).

The thought occurs to me now that it is even possible that this drive helps its part, not nature ego this time, in this "tilt" that took place in favor of an intense mathematical activity reléglove in the background, for an indefinite period, the working meditation. The latter, by its very nature, is a lonely job, a job that (I think), unless mistake, can not register with a view to a Investment for all or some "ideal community of beings eager to learn." it SEM blerait so that there is a deep urge distinct from the ego desire confirmation or approval, an impulse expressing the deep ties of the person with the species to which it belongs, which must be frustrated in a lengthy meditation work, in the sense that I want. And this may be a cause further, in addition to those (already alone powerful enough) that come from the structure the ego (the provisions of the "boss", so), that makes such work seems something so uncommon, that I @ not sure I ever met trace others.

18.9. De Profundis

18.9.1. (1) Gratitude

Rating 187 (7 April) I believe I have finished a tour of this retrospective-balance, what taught me the entire reflection Crops and Seeds. I only excluded from this retrospective part five Crops and Seeds ¹⁰⁴⁶ (*), which is not complete at this time. It started as 1046 (*) (22 June) And also, the fourth (I am writing)! See note b. p. (**) 1240 page. 926

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a "digression" in the "Key of yin and yang," digression which eventually spread throughout a month, and materialized in a hundred pages of "reading notes" on the autobiography of Jung. As the end of this digression was still not clearly

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view, I postponed. I looked forward especially p. 1248

to finalize the burial, whether written, typed, printed and sent to the right and left, finally - and we speaks more!

I suspect also that this fifth part will bring me unexpected light on the same In-INTERMENT, yes! - by considering that I plan to Jung@relationship with Sigmund Freud, during which years had master figure to the young Jung, still seeking his way. In first reading Chapter (autobiography) devoted to this relationship, I only saw the fire - and a number of unusual things caught my attention, I returned to some, I traveled again this chapter. visibly, this relationship is tense ambiguity, that Freud himself seems to have felt strongly, and Jung likes to totally ignore (as would the first seminarian came...), putting Freud@discomfort on on behalf of its sole "neurosis" (that is happy to describe in bright colors, perhaps even a too bright to be quite true. . .). Still, various associations came with me

relationship to me and my friend (also) non-student Deligne associations that I intend to follow and possibly to delve a tad. I have a feeling that what happened with the Burial, regarding psychological mechanisms involved, is not a competition unique circumstances and atypical possible, on the contrary! And I suspect that Jung's relationship with Freud could provide lights further in this regard.

But for me now at least, this fifth part (which may have the name "Jung - or the sinking of an adventure" in 1047 (*)), it is not the burial, even if it came out - and I would say: it is no longer Crops and Seeds! It's **the After** - just as the echoes of all sorts, including surely green and not ripe, which will return me to send the three parties "Fatuité and renewal ment", "The Burial (I) - or the dress of the Emperor of China" and "The Burial (III) - or Four Operations" in 1048 (**). The that is already a thousand pages or more, once that part to be completed typed net - it's not bad like that! Each day has enough trouble of its. . .

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This rush to finish and "send it" is probably above all haste the workhorse that smells p. 1249 powder, impatient to get into the fray in 1049 (*). But perhaps, more profoundly, there he has the desire to break away from me a certain past. These "thousand pages" materialize strikingly all **weight** of the past - and see this work done there, until the last stewardship tasks (including any last will probably send Crops and Seeds to hundred and thirty recipients already included on my list Interim shipment. . . 1050 (**)), it also seems to me, almost instinctively, as the moment also where I have **dropped** the weight. Illusion? Only the future will tell me. . .

So now I turn to the "final agreements" before the famous "end point", that for more than a year now I have grown to see me, and day by day, week by week, month by month found himself repulsed by the influx of the unforeseen who claimed his place.

1047 (*) Thinking write "stalemate", I found myself writing "funeral" instead. It is said that the new name suggested by this slip "Jung - or the burial of an adventure" is equally appropriate, or even that no longer touches just yet, that one I had planned.

1048 (**) Do not confuse the fourth part of Crops and Seeds, with the subtitle "The Four Operations", with following notes grouped under that name, which in this part (notes n ° s 167-176).

1049 (*) There is already talk of such provisions in the final section of "The weight of the past" (n ° 50) "Fatuité and Renewal" in a slightly different light (where the "workhorse" is replaced by the bull hence to the pursuit of a piece of cloth red one "waved in front of his nose." . .).

1050 (**) The famous "weight" will become more "striking" again, with the coup two hundred thousand pages (200 X 1000), instead of thousand!

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What is left to say, in these agreements? There is gratitude, speaking by "thanks."

This reflection is the result of loneliness, and yet I was helped in many ways.

Help most obvious came to me to Zoghman Mebkhout, in many ways also: through patience with which put me "in the bath" philosophy around the theorem-God Mebkhout; over there confidence that in me by informing me, against all odds, difficulties and setbacks that was hers in its relations with those who were my students; by his help to find me in a bushy mathematical literature, with whom I had lost contact; Finally, for the friendly interest and without reservation that he carried, from the moment he became aware at that job in which he saw me engaged, in which he especially (I think) perceived and received the **testimony** .

I am also grateful to Pierre Deligne to have moved to see me and take *connais-*ciency (at last October) while the written part of the Burial, and to me his *commen*

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tary 1051 (*). This visit helped me, too, in more ways than one.

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Finally, I was helped by the good will and mood of sympathy that I found with secretaries the USTL that ensured typing the manuscript: Ms. Boulet, Ms. Boucher, Ms. Brown, Ms. Pantry, Miss Lacan, Ms. Mori. Two of them took their own time to ensure an on time

Part of the strike, without wanting to accept payment for this work - a gesture that touched me deeply. It is Miss Lacan, on the other hand, to be assured alone strikes the entire second half of the entire my notes for Crops and Seeds, with care and exemplary efficiency. To all and to each I happy to express my gratitude.

I also think of all those and all those who in many times during my work have

I could seem to disturb this work and my peace, an often unwelcome way in 1052 (**). Surely these "Disturbances" themselves, which at times proved me and some still let me in the residue of sadness, they also have a role to play in the work of mine, and to bring me a message he not up to me to listen and learn. When sadness or resentment resolve into gratitude, I know

that the message was received. . .

18.9.2. (2) The friend

Note 188 These final agreements of the burial were, for almost a year now, all found their name: De Profundis ! In the Introduction (I 7, "The Funeral Scheduling") I even suggested to me later still, announcing (perhaps imprudently...) it is the "complete satisfaction" of the deceased who form "The final mark and the final agreement of memorable Burial". I was excusable then to this prognosis (As if it was over something) - at the time of this writing (in May last year) it seemed indeed a very short-term prognosis, while I thought I was just about to reach such agreements end of "De Profundis".

It is true that so far more acute than last year (when the "second wind" of reflection was coming to an end), I realize

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how I am far from really "turn" of the

p. 1251

Burial, except the only physical facts (which he seems to "stick" to my sufficiency in 1053 (*)).

If it is true, as it seemed at times that include the Burial is also "understand the

1051 (*) For this visit and the details that Deligne made me see the two notes (n ° s 163, 164) forming the "Latest homework (or visit) "of the Burial (III).

1052 (**) Reference is made here and there in these "disturbances" in the notes of recent months. On this subject, in particular, the note "The

messenger (2) "(n ° 181)

1053 (*) (May 10) Yet after these lines were written, more than a month happened to "cram" somehow new facts appeared in two dozen added subscores in extremis!

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18.9. De Profundis

conflict, "it is likely that the time I have left to live alone will not do this" tower "- not deep, at least.

So I can say that it is in very different provisions of those were mine in writing the Introduction to Funeral, as I write this final note to this. Does this mean that I end this reflection without being present that sense of "complete satisfaction"?

I do not think so. Once a vision deepens, such work had inspired the vision and prepared deepening, and that could seem "eventually led" appears **unfinished**, by the appearance of a "beyond" what had been done. Yet the **meaning** of work and the satisfaction or dissatisfaction that makes us feel, is not in its outcome, and does not depend on whether the work is intended or not find completion. The meaning of work is the work itself, it is in the **present moment** - in provisions in which we do, in love we put into it (or in the absence of love...) - not in a hypothetical future beyond our reach.

In March last year, even before he discovered the burial, I write in the introduction (I 1, "Dream and fulfillment," p. iv):

"... I leave this work to the complete satisfaction of one who knows he conducted a work term. There is something, though "small" is it, that I have avoided, or that he stood at the heart of and say that I would not have said, and at that moment I would leave the residue of dissatisfaction, of regret if "small" they are. "

I know now that this work I thought "completed" is not even today, and the will perhaps never. But I also know that this is something, after all, accessory. This "satisfaction complete", I felt strongly at the same time I was writing these lines that try to identify closer, she followed me throughout the writing

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Crops and Seeds. This is an old friend of mine, who p. 1252

had already accompanied me throughout my life mathematician, informing me in a low voice that I good road. I found it later in the meditation work - it is the same.

When I cease to hear, work loses its meaning. That why his voice is precious to me, and I take good care of my work never go away. It is through this that the work was, at

Throughout my life, a source of joy in this "complete satisfaction" of the one who gives it all around. It has not been different in the work ends - this work is " **Harvest** ", which is the same time " **Seeds** ".

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