

本田財団レポート No.122  
第 28 回本田賞授与式 記念講演 (2007 年 11 月 19 日)

**「ラパロスコピー：  
外科医のもう一つの眼 もう一つの手術を考える眼」**

外科医師

フィリップ・ムレ博士

**Laparoscopy:  
Another means to see in surgery  
Another means to appraise surgery**

Commemorative Lecture at the Twenty eighth Honda Prize  
Awarding Ceremony on the 19th November 2007

**Dr. Philippe Mouret**

M.D., General Surgery

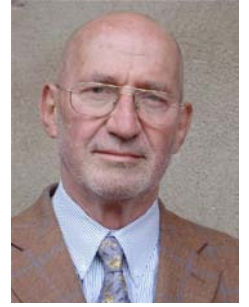
**財団法人 本田財団  
HONDA FOUNDATION**

# フィリップ・ムレ博士

外科医師

M.D., General Surgery

**Dr. Philippe Mouret**



## ■最終学歴

1966年 リヨン大学医学部博士課程 (医学博士)

## ■職歴

### 1. 病院勤務

1957年 リヨン病院勤務医試験合格

1960年 リヨン病院研修医試験合格

1964年 リヨン病院研修医金賞候補

1966～1970年 リヨン病院外科助手

1967～1970年 救急外科医

元リヨン病院内勤外科医、

元パリ病院内勤外科医 (指導教授 Bismuth 教授)

### 2. 教職

1962年 解剖学講師

1963年 検死解剖医

1964年 法医学監督官

1961～1964年 勤務医および研修医向け講師

ほか、以下の各大学にて腹腔鏡手術の講義を担当

パリ、リヨン・サンテティエンヌ、ニース、

クレモン・フェラン (C. I. C. E)、トリノ (イタリア)

### 3. 個人開業

1968年～2001年 リヨン開業医

1981年～現在 トリノ (イタリア・ピエモンテ州) の  
個人病院勤務

2000年4月～2006年7月

ハノイ・フレンチホスピタル

(Ben Vien Viet Phap) 嘱託勤務

ほか、実践教育プロジェクト「Into The Field」の一環  
として Krishna Hospital in Arnad (インド・ガジャラ  
ト州) に出向

## ■学会活動

フランス外科学会会員、リヨン外科学会会員、フランス  
外科医師会会員、

フランス内視鏡外科学会 (S. F. C. E) 創立者・初代会長、

フランス腹腔鏡外科学会 (S. F. C. L) 会員

## ■表彰歴

1992年 Delannoy Robbe 賞  
(フランス国立医学アカデミー)

1993年 Bullukian 賞 (リヨン外科学会)

2000年 湖南大学 (現・中南大学湘雅医学院、  
中国・湖南省長沙市) 名誉博士号

2002年 アメリカ腹腔鏡学会賞  
(アメリカ・ニューオーリンズ)

2006年 フランス外科医師会名誉会員

## ■軍役

フランス医療予備隊軍医大佐

## ■UNIVERSITARY TITLES

Doctorate (Thesis Lyon 1966)

## ■HOSPITAL TITLES

Lyon's Hospitals « Externe » (Competitive examination 1957)

Lyon's Hospitals « Interne » (Competitive examination 1960)

Lyon's Hospitals « Gold medal Interne » (nomination 1964)

## ■HOSPITAL FUNCTIONS

Lyon's Hospitals Assistant Surgeon from 1966 to 1970

Emergency Surgery's Surgeon from 1967 to 1970

Former Attached Surgeon of Lyon's Hospitals

Former Attached Surgeon of Paris's Hospitals Service of Pr.  
Bismuth

## ■TEACHING FUNCTIONS

Anatomy's Instructor 1962

Anatomy's « Prosecteur » 1963

Anatomy's « Chef de travaux » 1964

Lecturer for « Externat » and « Internat » from 1961 to 1964

Participation to University teachings of Surgical Endoscopy  
Paris, Lyon Saint-Etienne, Nice, Clermont-Ferrand (C.I.C.E.),  
Torino (Italy)

## ■PROFESSIONAL ACTIVITIES

Private activity from 1968 to 2001 in Lyon

Private activity in private hospital in region of Piemonte (Torino,  
Italy) since 1981

Private activity in time share in Ha Noi Ben Vien Viet Phap, Viet  
nam from April 2000 to July 2006

Missions of practical teaching « into the field » (Krishna Hospital  
in Arnad, Gujarat's province, India)

## ■SCIENTIFIC SOCIETIES

Member of ACADEMY OF SURGERY

Member of Lyon's Surgical Society

Member of French Surgical Association

Founding Member and First President of French Surgical  
Endoscopic Society (S.F.C.E.)

Member of French Laparoscopic Surgery Society (S.F.C.L.)

## ■DISTINCTIONS and AWARDS

Prize winner of National Medical Academy (Delannoy Robbe's  
prize 1992)

Prize winner of Lyon's Surgical Society (Bullukian's prize 1993)

Honorary Professor of Hunan Provincial People's Hospital  
University of Changsa (Hunan, China) 2000

Award from American Society of Laparoendoscopic Surgeons  
(New Orleans, United States) 2002

Honorary Member of the French Surgical Association 2006

## ■MILITARY SITUATION

« Médecin Colonel » in Reserve corps

このレポートは、2007年11月19日 東京、帝国ホテルにおいて行われた第28回本田賞授与式記念講演の要旨をまとめたものです。

This report is the gist of the commemorative lecture at the twenty eighth Honda Prize Awarding Ceremony on the 19<sup>th</sup> November 2007 Imperial Hotel, Tokyo.

**Laparoscopy:**  
**Another means to see in surgery**  
**Another means to appraise surgery**

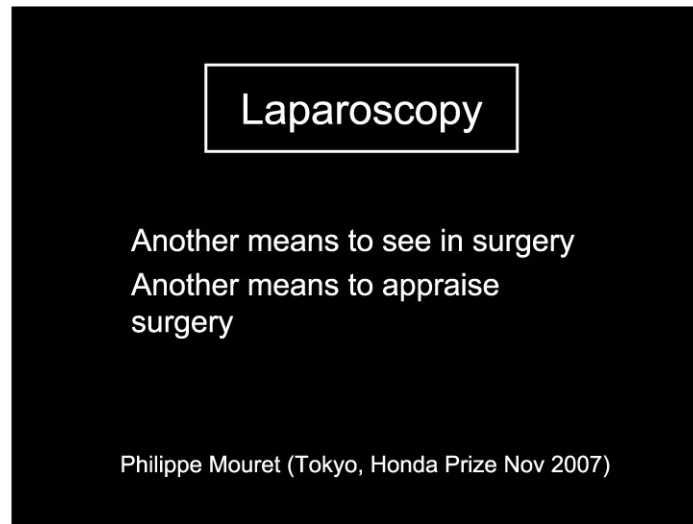


Fig 1

Fig 1 Laparoscopy, before it became a new means to operate, was (and still is) a new way of seeing in surgery. For me it has been a new way to appraise surgery although I don't exactly know even today what was the cause and effect of it. I'll try to give an answer at the end of this lecture.

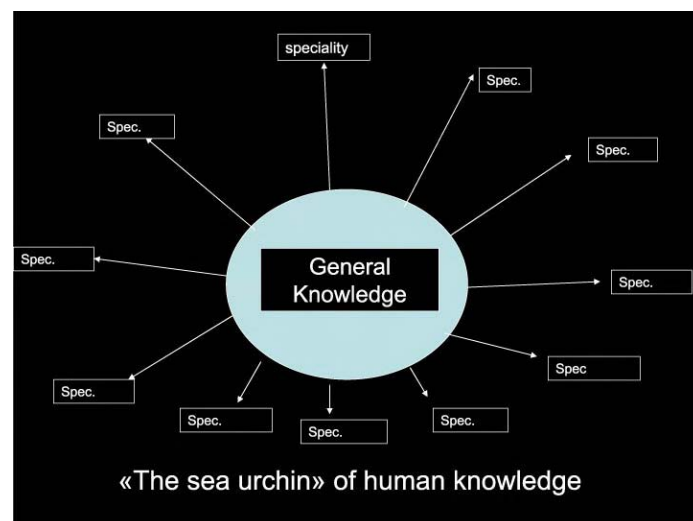


Fig 2

Fig 2 I have today an exceptional opportunity to expose the concept of laparoscopy as I feel it, and to tell the history of laparoscopic development as I have lived it. Much more I have in front of me an audience from various fields who are not specialized in surgery; and it

is lucky for me because the surgical world has very long been reluctant to accept the concept which has driven to the birth of laparoscopy, though the patients themselves, those to whom surgery is dedicated, understood immediately the benefits of my research.

Besides, if I have had the opportunity to participate in the birth of laparoscopy, it is due to the fact that I received a multidisciplinary training at the time when it was still possible to do it. However, laparoscopy has today become a surgical specialty, and it's necessary to talk about it with words as plain as possible to explain it clearly.

The global knowledge of human beings reminds me of the shape of a sea urchin. While more people participate in the body by their general knowledge, specialists go into their specialty, and narrow their space of mind as much so they improve their specialized knowledge.

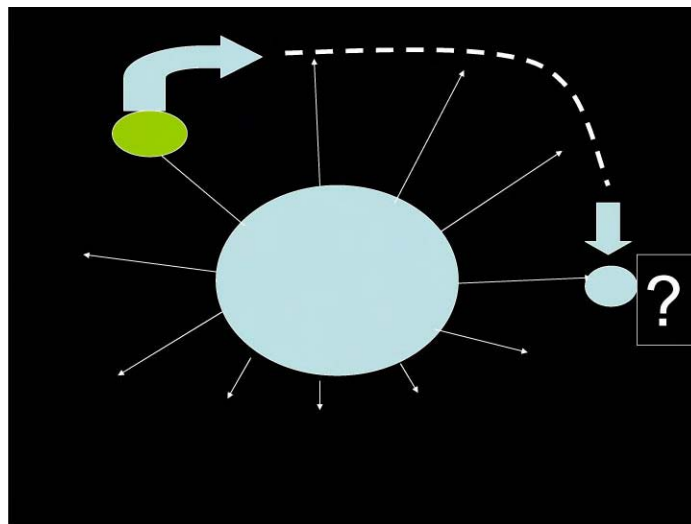


Fig 3

Fig 3 And finally it becomes almost impossible to communicate directly from one specialty to another.

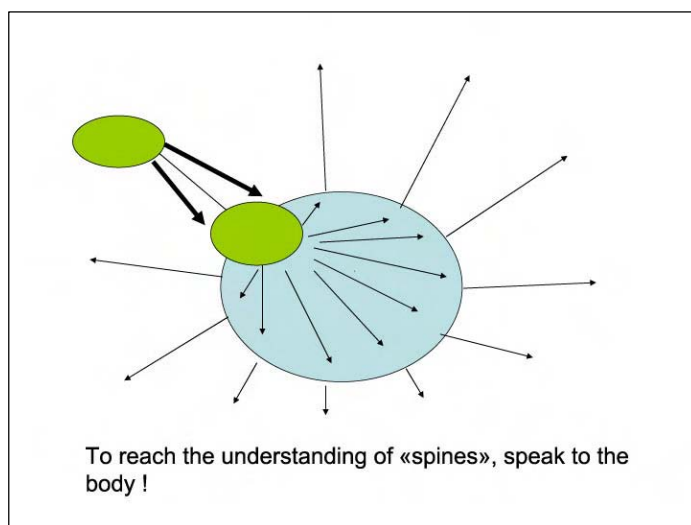


Fig 4

Fig 4 To make certain information understandable, you must transit through the body of knowledge. It is for that reason that I will use analogical thinking widely in my lecture.



Fig 5

Fig 5 The first question I will try to answer is: What is surgery?  
But, before going in the technical aspects, I must ask the fundamental question which may provoke so much emotional resonance: Is surgery a good thing or not?  
The question may be considered preposterous coming from a surgeon! In fact, I have about surgery a very ambiguous feeling. As far as I remember, I have always had that ambivalent appraisal: I like, or better I am madly in love with, my job, still I hate its aggressiveness, and hate the fact that its aggressiveness is considered often by surgeons (and patients) as the normal price to pay for healing.  
To approach the appraisal of surgery, we must remember the situation of the mankind before the advent of surgery.

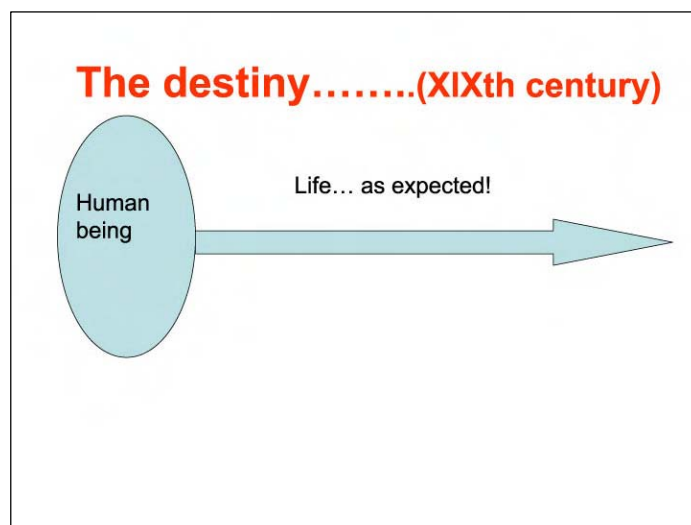


Fig 6

Fig 6 Suppose a young person. His life passes without any identified risk...

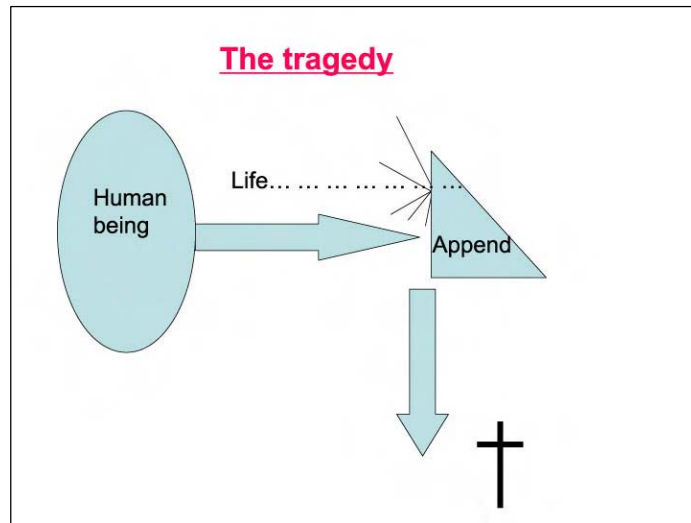


Fig 7

Fig 7 Then suddenly an access of acute appendicitis, a dreadful event, occurs to him. In less than one week, this subject in perfect health is dying without any possible remission.

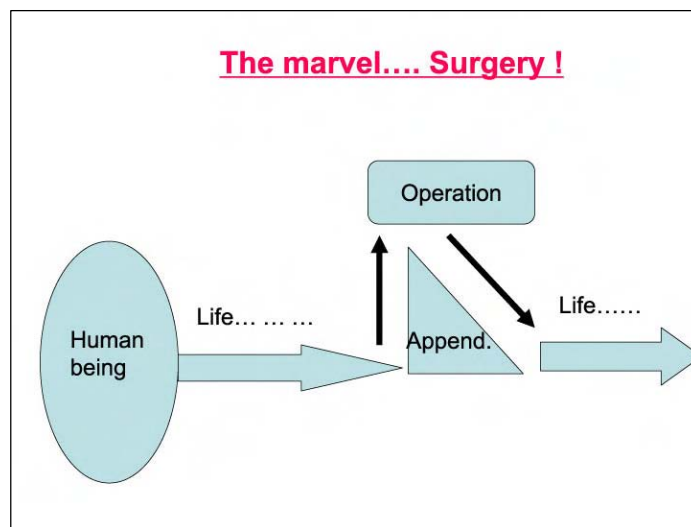


Fig 8

Fig 8 Then surgery appeared and has made possible the cure of that dramatic pathology; and in the majority of cases, the recovery was, almost simply, obtained in few days. Considering the importance that the problem of appendicitis has had in the birth of digestive laparoscopy, I'll take a moment to tell the story of appendicitis treatment. It was at the end of the 19th century. Some surgeons in U.S.A., in the region of Boston, had the intuition that the starting point of those dreadful abscesses of iliac fossa, which were found at the autopsy of those (generally young) patients, was the vermicular appendix. That appears obvious for us today because we know the solution, but at this period, only the autopsy was able to show the anatomic lesions. And on a patient dead from appendicitis, all

the iliac fossa was destroyed by gangrenous abscess and a so little and delicate structure like appendix completely disappeared. So it took a genius to understand that appendix might be responsible, and to be audacious to purpose the removal of the appendix at an early stage of pathology. The removal was done and promised to succeed.

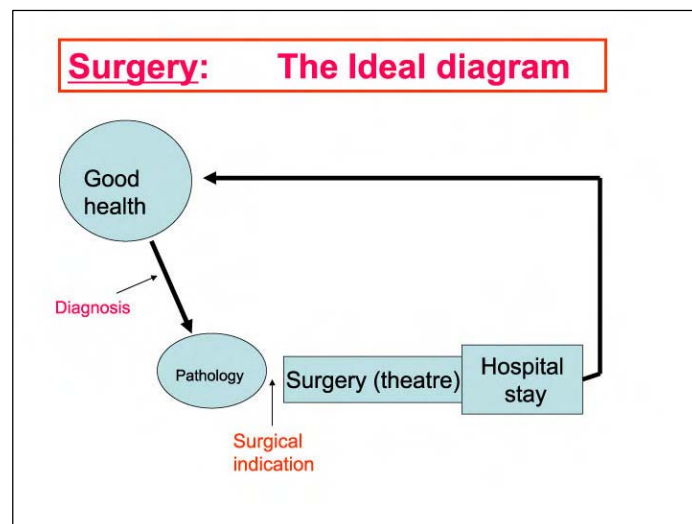


Fig 9

Fig 9 As such, we may draw the diagram of that miraculous surgery which really saves lives. Without any possible contestation, surgery must be considered as a good thing... . And it was the same for a lot of very severe and acute pathologies, which were tackled at the same period. But...

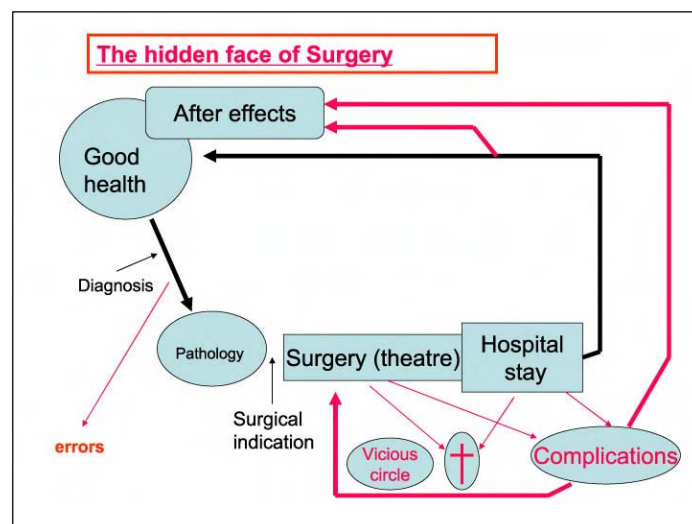


Fig 10

Fig 10 As surgery is expanding and taking in charge of less spectacular processes, or less acute pathologies, the appraisal might become different. When the surgery, with the aim of bringing to the patient only an improvement of his health condition, more security in his life, or at least a preventive technique, becomes more ambitious, the balance between advantages

and drawbacks is less obvious.

But so much impressed by the previous successes, everybody has continued to apply to the whole surgery a Manichean judgment. The appraisal for surgery for opportunity remains the same as for surgery for necessity: if surgery does it, it is necessarily good because surgery is a good thing.

As such it appears to me that surgery is not always so intrinsically good. Errors of diagnosis exist. Of course in such an event, surgery cannot be the appropriate answer! In that case it cannot be good.

During the operation itself or during the hospital stay, everybody knows that there is some vital risk. It's a reality. But fortunately that risk is exceptional. It conceals the real **drawbacks** of surgery which are of two types:

- First, complications resulted from the surgical act and its follow up. These complications may occur during the operation itself or the hospital stay. Some cases necessitate a new surgical act and create a **vicious circle**.
- There is another type of drawbacks. Surgery may entail after effects, and especially serious are **long term after effects**.

These are at the crux of the surgical issues that gave birth to laparoscopic discovery and its success. I'll try to explain that concept because it is in that field that the laparoscopic approach of surgery has mainly brought possibilities of significant improvements.

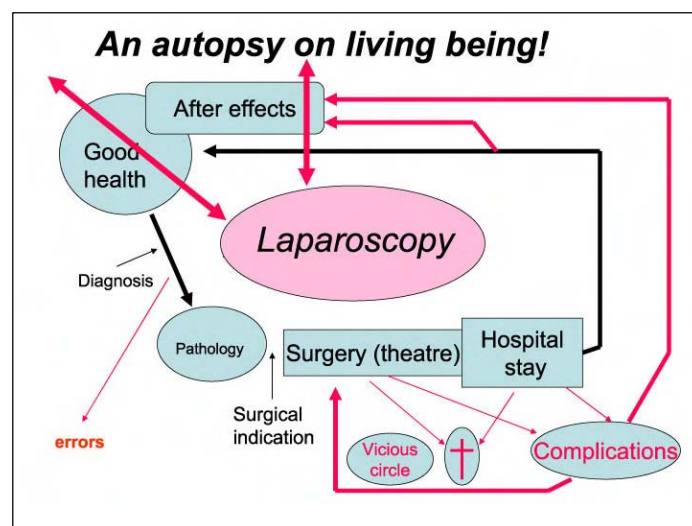


Fig 11

Fig 11 Laparoscopy, which was first an exploration, may be performed in some circumstances not usually met in surgery, and never responsible for death. And we have to remember that all our knowledge about pathologic situations comes from autopsy examinations (anatomy-pathologic method of discovery) or more recently from the surgical discoveries. Laparoscopy may be considered in this context as **an autopsy on living being!**



But, to explain why and what laparoscopy has brought to us, I need first to develop my story a little bit into **what laparoscopy is, what surgery is, and what surgery by laparoscopy is.**

When I prepared this lecture, I wanted to know the level of information available for the great public about laparoscopy, and what kind of explanations was given. I went on the Net and was surprised, while there is a lot of information about what can be performed by laparoscopy or not, the advantages and disadvantages of the method, the risks, and so on, to find nothing about the basics. I had the impression that somebody who wants to know what a plane is and how it flies can only have the list of the companies and the schedule for Los Angeles, Tokyo or Sidney!

So I ll try to explain laparoscopy with my personal means, which are drawings on one hand, and analogical comparisons on the other. I have prepared two series of diagrams of the middle part of human body.

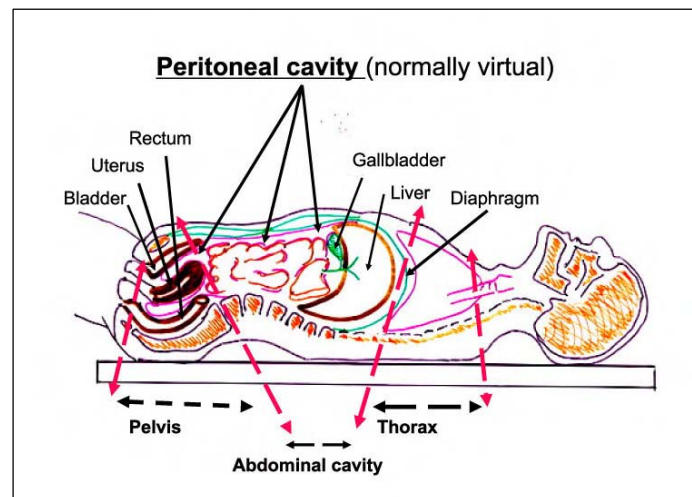


Fig 12

Fig 12 One represents a longitudinal section, showing the situation of abdominal cavity, separated from the thorax in high by the diaphragm; and in continuity with the pelvis region down. The imaginary limit between pelvis and abdomen is the bone circle of pelvis bones: pubis at the front, and sacrum at the back.

What is important to see is the notion of peritoneal cavity which is the field of direct laparoscopic access. It is difficult to see it on the drawing because this cavity contains nothing (virtual) in the normal state.

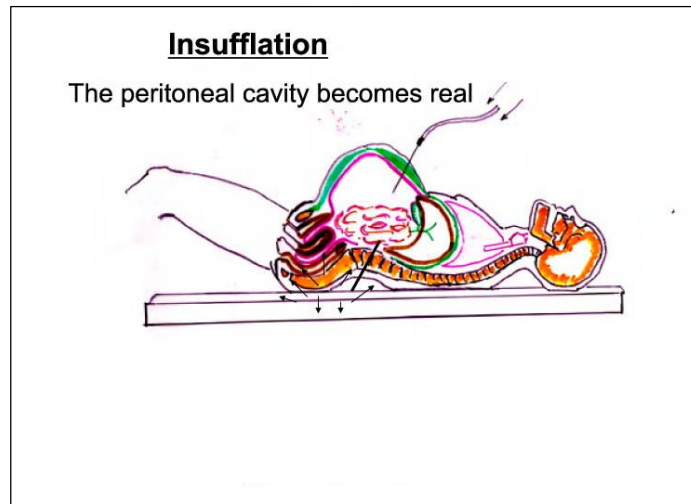


Fig 13

Fig 13 At the beginning of a laparoscopic exam, the surgeon just brought to the fore the peritoneal cavity by gas insufflation and made its space real. This space was necessary to have vision and to maneuver instruments.

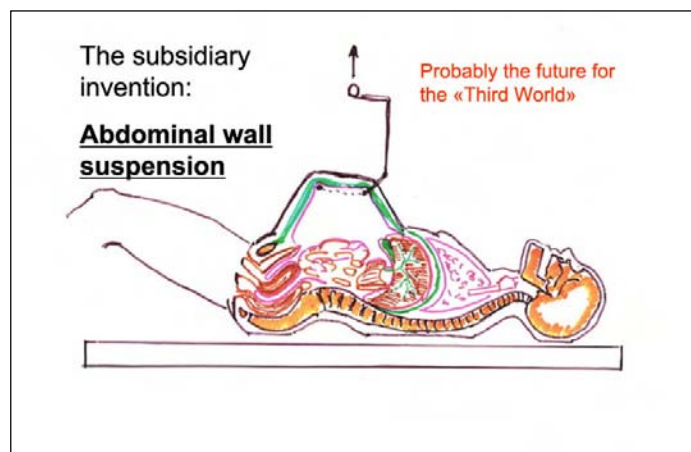


Fig 14

Fig 14 I should note that insufflation, which is presented as the necessary means to create enough space for laparoscopy, can be replaced by a mechanical device which gives the same space: the **abdominal wall suspensor**. This mean that I invented in 1988 is not widely used, except in Japan, where several devices for abdominal suspension were created.

I think that it 's too bad because I am convinced that those devices might be a very cheap manner to diffuse laparoscopy in developing countries. The reason is that it avoids airtight conditions for all the instrumentation, and authorizes the mixing of laparoscopic means with conventional techniques and instruments.

But, saving up is not a common industrial and commercial aim. Is it the reason of the reluctance? Perhaps... , as industry has taken great control of surgical thinking by its involvement in laparoscopic training.

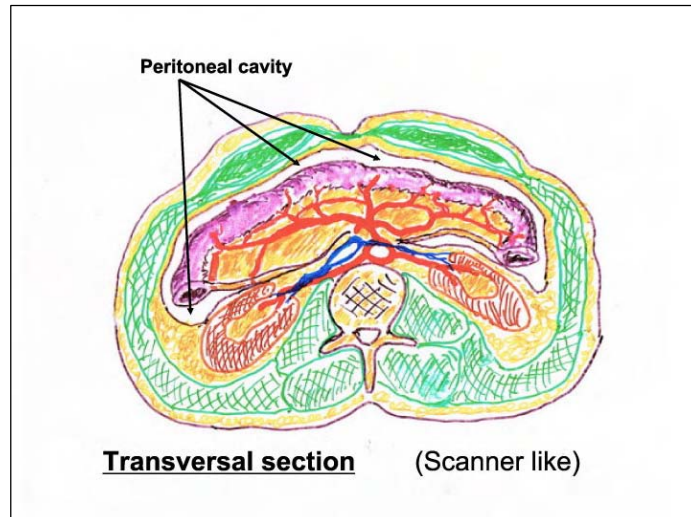


Fig 15

Fig 15 The second series of diagrams is a transversal section, as is seen on a scanner image, that shows the virtual peritoneal cavity here and on the following diagram.

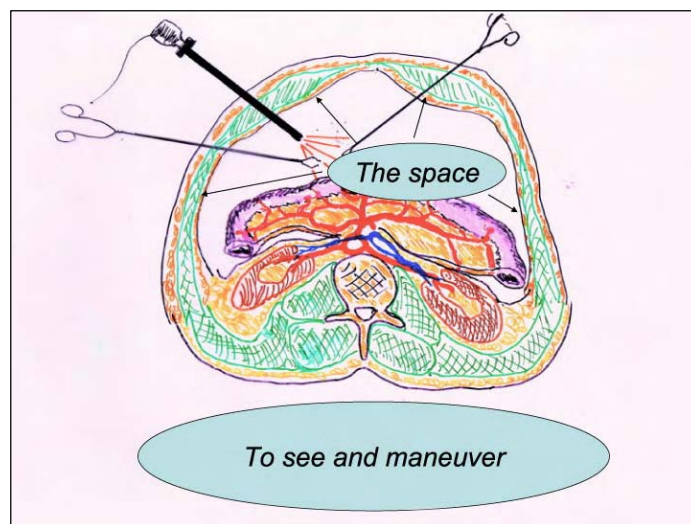


Fig 16

Fig 16 This is the space for vision and actions which is permitted by the abdominal wall elevation (pneumatic or mechanical).

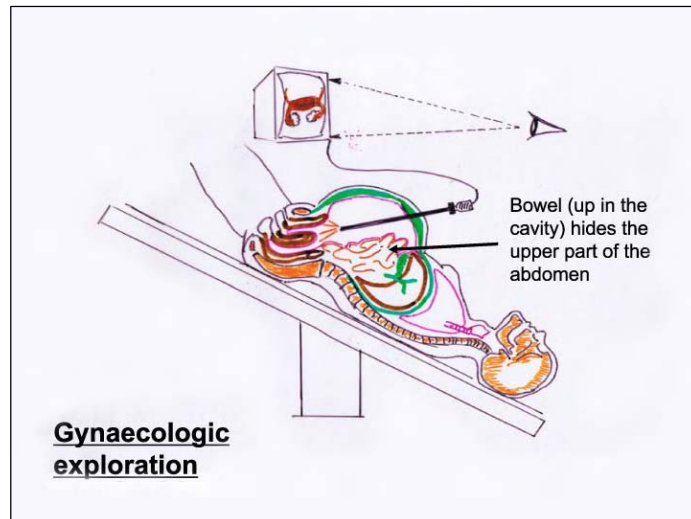


Fig 17

Fig 17 Traditionally, laparoscopy was used by gynaecologists for the pelvic examination of the patients. The main idea to make possible the vision of the pelvic organs was the incline of the table to make the mass of the bowel falling in the upper part of the abdomen. Of course, by doing so, all the organs of the upper part of abdomen are hidden. And that position is specific for the pelvis examination.

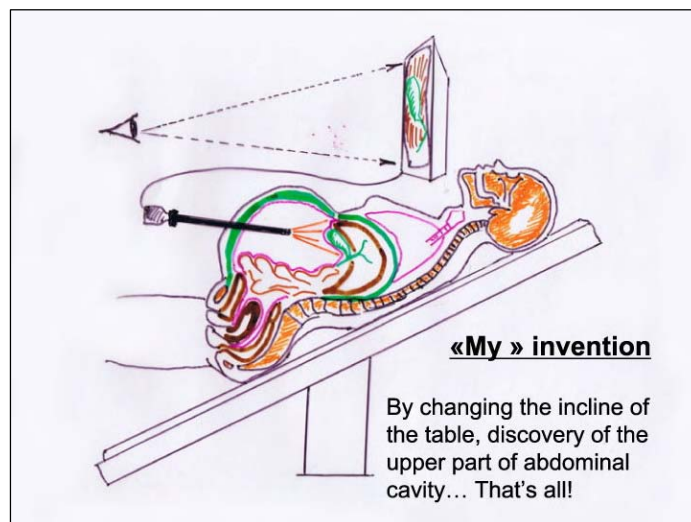


Fig 18

Fig 18 That I consider as “my invention” was only to inverse the decline of the table to make the upper organs accessible for examination! I was able to do it because I have had the luck to work with a skillful and intelligent anaesthetist, who accepted those intraoperative movements of the table that anaesthetists usually do not like and even refuse.

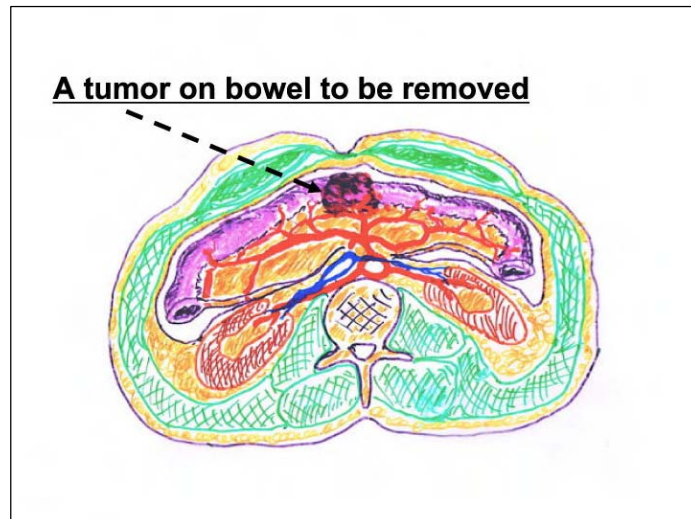


Fig 19

Fig 19 To explain the different concepts of practice between laparoscopy and classic surgery, I have drawn a series of diagrams showing the approach to the removal of a tumor on bowel.

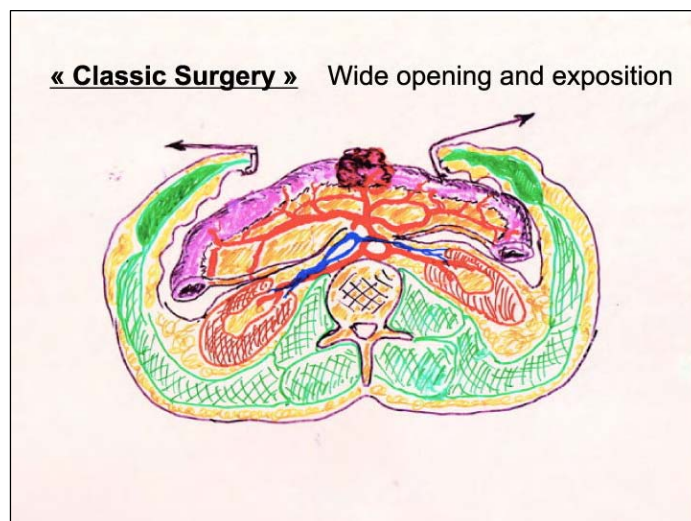


Fig 20

Fig 20 In classic surgery, the abdominal wall is opened widely while the lesion is exposed by a retraction of the wall.



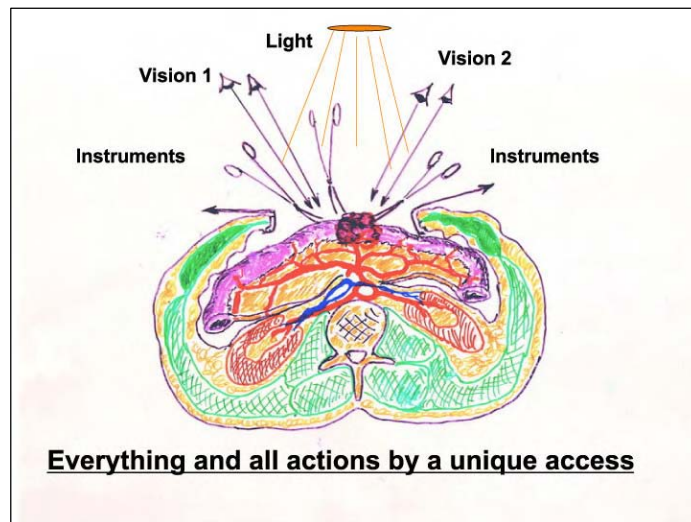


Fig 21

Fig 21 You note that a lot of things go through this unique access in laparotomy:

- The light
- The vision of surgeons and his assistant(s)
- The instruments in his hands and in the hands of assistants

It is obvious that the size of the incision must be large enough to make surgery comfortable (and safe).

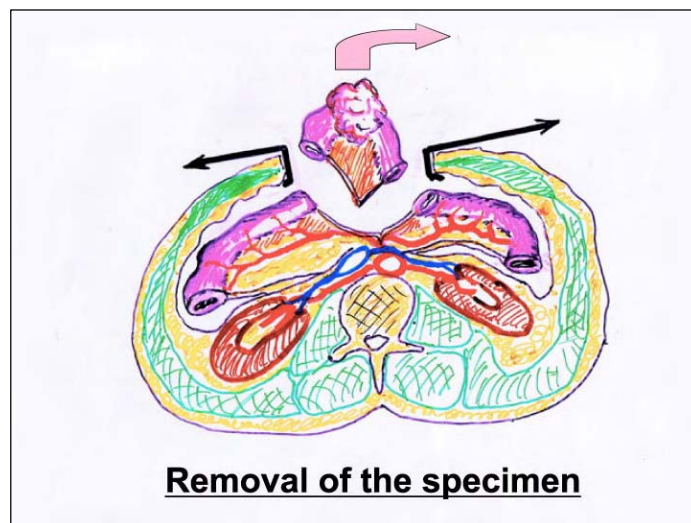


Fig 22

Fig 22 The bowel bearing the tumor is resected and removed by the same unique access.

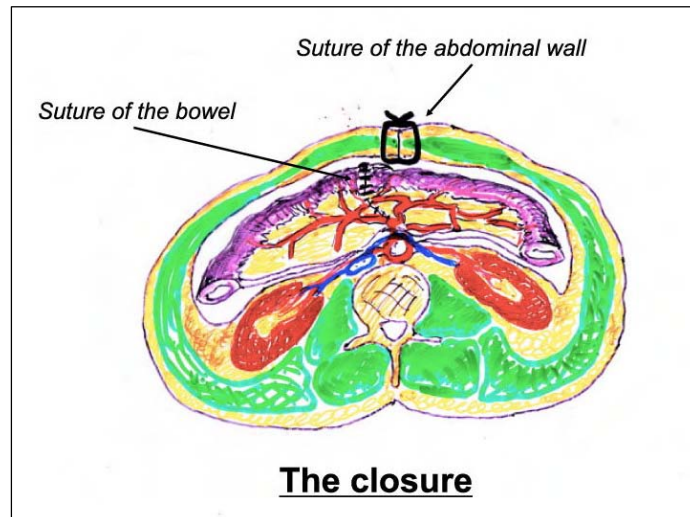


Fig 23

Fig 23 The bowel is sutured and the abdominal wall closed. The operation is finished, but the works of nature starts, because **it is the nature which makes the healing definitive, not the surgeon.**

Surgeon is convinced more or less that he achieved the operation. Wrong! He only prepares the operation of the Nature! His first duty is to not hinder its works.

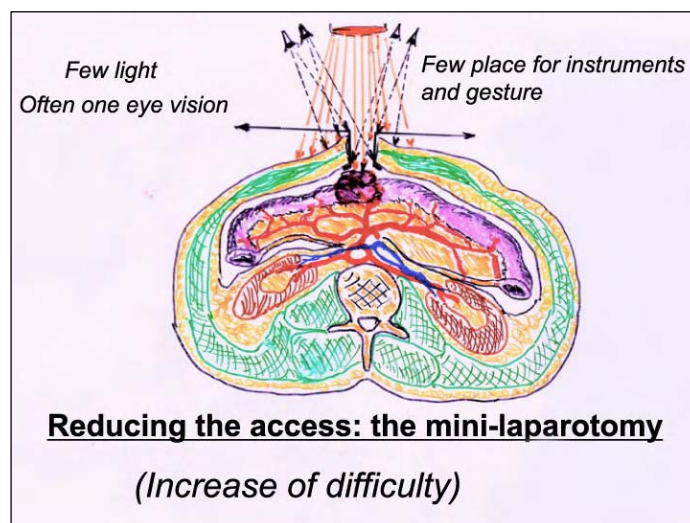


Fig 24

Fig 24 The idea to respect the works of nature has appeared step by step; and the first idea to reduce the aggressiveness of surgery was the reduction of the size of laparotomy. It was the phase of "minilaparotomy" which reached its peak at the end of the 1980's.

My friend François Dubois was perhaps the world champion in this field. I must say that I was challenging in the same direction, but I thought that the possible limits were reached, and that it would be dangerous to go forwards.

In fact, in the minilaparotomic approach, it becomes difficult to have a correct vision because the operative field becomes narrow. And as you go deeper, the difficulty increases so much

that it's impossible to see with the two eyes. You actually operate in a funnel-shaped field. And if the surgeon keeps a little bit of vision, the assistant doesn't see anything more. The head of surgeon hides the light; and his operation of one or more instruments becomes acrobatic with parallel vision which makes difficult the control of the instrumental action.

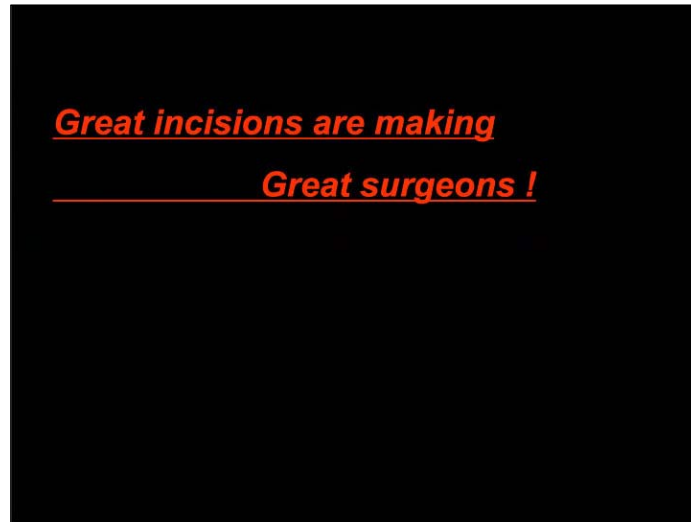


Fig 25

Fig 25 It's the reason why it has been said in the surgical world that "Great incisions are making great surgeons," meaning that it is necessary to be comfortable to operate well, not that the great surgeons are making great incisions, which would be the summit of the authorized aggression!

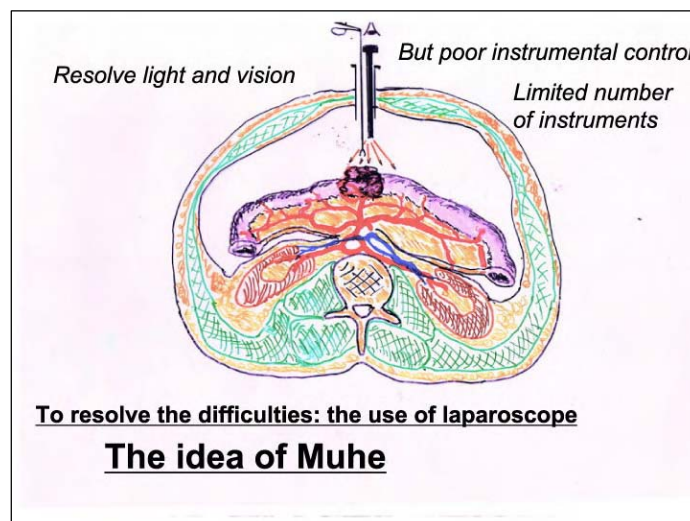


Fig 26

Fig 26 This diagram shows the idea of Erich Mühe who in 1985 hit on a technical idea to increase the minimalization of the minilaparotomy for gallbladder removal. He introduced a special tube in a 'record' minilaparotomy. Inside that tube, a laparoscopic device was embedded to provide light and vision; and he operated by the laparoscopic



instruments in the same tube.

The idea to use a laparoscope to provide vision and light was a stroke of genius and I consider that he did the half part of the invention. Unfortunately, he remained disabled by the “one-way access” concept of surgery (the same one which was limiting the minimalization of laparotomy).

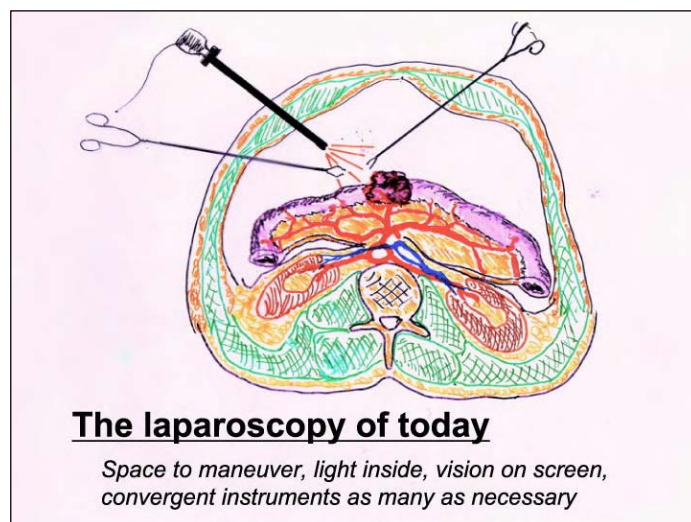


Fig 27

Fig 27 This shows the laparoscopy of today. The multiple accesses by trocars have resolved the problem of simultaneous vision and surgical manipulations. Of course the gestuality, the indirect vision on screen, and the appraisal of space and relief are all amazingly disturbing. It necessitates a complete and long training.

It is the reason why the majority of surgeons have been destabilized by that novelty and consider that laparoscopy is a **new surgery**.

Having lived the phenomenon from its beginning, and witnessing its progressive shift, I consider, on the contrary, laparoscopic surgery as a **different means to perform surgery** but absolutely not as a new surgery. This is the reason I prefer to talk about “surgery by laparoscopic approach” rather than use the term of laparoscopic surgery. But the common use prevails over all.

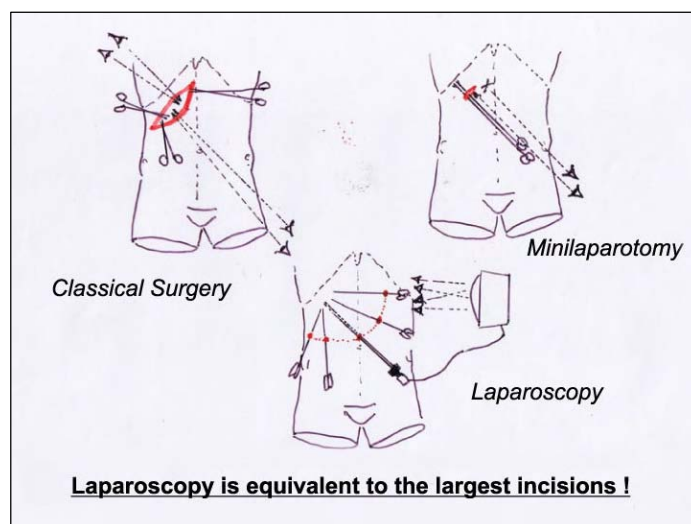


Fig 28

Fig 28 To resume the problem of gestuality in surgery, here is the diagram of classic surgery with a great liberty of way of access, surgery by minilaparotomy where all the access becomes straight, and surgery by laparoscopy which open widely the fan shape of accesses. In term of gesture and visual control, **laparoscopy is equivalent to the largest laparotomy.** Moreover, when the operating site is very deep, even in classic surgery, the operating field becomes narrow and uncomfortable irrespective of the size of the laparotomy. Laparoscopic approach has not this limit and the space appears much wider, in return of some tricks, than the open access. This phase was obvious for the surgery of the posterior organs of the abdomen (those we call retroperitoneal organs such as kidneys or adrenal glands).

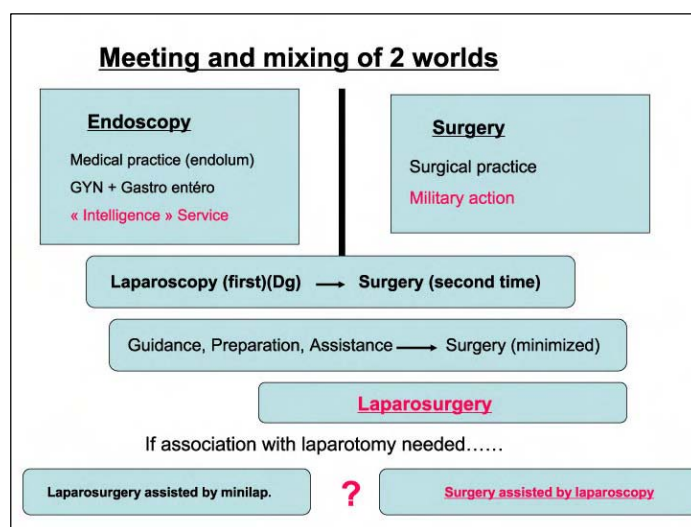


Fig 29

Fig 29 The meeting of laparoscopy and surgery has been neither easy to do nor easy to accept. It was not a ‘love story’! Far from it! It was really a cultural shock. It was the meeting of two separate worlds which were unaware of each other. On one hand the laparoscopy itself is a branch of endoscopy; and on the other the surgery is

traditionally jealous of its independence from medicine. This fact may seem superficial, but I am convinced that it was a reason for the long reluctance of surgery with laparoscopy.

Yes, endoscopy has been always in the field of medicine. The concept to look inside the body without overstepping the limits of the body (that is to say, non-invasive technique) is essentially a medical concept. I have always thought that it is clearly a concept of spying! Surgery on the opposite side is an invasion, a violent action, which constrains the body by power to give its access and secrets.

This way, it's easy to understand why I feel medicine as a peaceful relation with the patient, medical treatment as a kind of negotiation, and endoscopy as an act of "intelligence", while surgery as something comparable to a military action. Even if diplomacy and army are necessarily complementary, as much as medicine and surgery are, both sides do not work the same way.

We may push very much forward the comparison. I'll let you do by yourself the analogy with the international relations which is not my field; I am convinced that you can do it by yourself, since you agree with the analogies; and I'll talk mainly about the progressive mixing of the two spheres.

Medicine and surgery, although conceptually and technically very different, have always encroached one on the field of the other.

At the beginning, the strictly non-invasive endoscopy, limited to the exploration of superficial cavities, wanted to go deeper inside. Its first target was the bladder. But, the gestures being somewhat risky required some skillfulness were mainly performed by surgeons and not by practitioners. All the more, it was giving access to the stones of the bladder which were a very frequent disease a century ago.

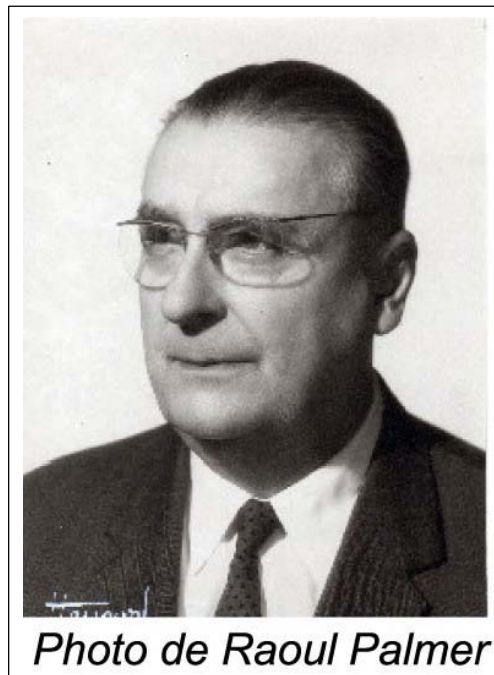


Fig 30

Fig 30 Using the same instruments as those for urinary exploration, some surgeons hit on the idea to insert them in the peritoneal cavity through the wall of the abdomen (by a minimal

invasion). The only difference was the injection of gas and not of water.

From that period, and following the cultural tradition of endoscopy, surgeons and manufacturers remained with an idea that everything might be done by a unique access as if there was a fictitious channel of urethra around the port of insertion. At the origin of the endoscopic practice were the two mixed specialties, urology and gynaecology, where medicine and surgery overlap each other.



*Photo de Raoul Palmer*

Fig 31

Fig 31 The main role in the development at the beginning was taken by gynaecologists, and more precisely by an exceptional humanist, lover and admirer of the women, **Raoul Palmer**.

All has started from his revolt against the **explorative laparotomy** which was the only way to explore the tubar women infertility. It was at the end of the war, where the problem was acute with the ravages of tuberculosis and septic abortions. In the majority of cases, the answer to the patients after that surgical exploration was: ‘nothing to do’! Palmer considered that it was an excessive aggression for such a result!

He got the same results without opening the abdomen: the laparoscopy in its clinical use was born.

In few years a lot of students came from the whole world, and laparoscopy became a routine exam in gynaecology. Instead of that, some ones remained reluctant for a long time. It was at this step of routine gynaecologic exam that I learned the method from colleagues, students of Palmer. I have not personally met Raoul Palmer, so I understood only many years later the philosophy which has driven Palmer in his research. However, there was sufficient technical

heritage to get started, and his surgical philosophy was still living in the technique.

I learned there was the interest of extending the exam to the digestive field. My first step was to use it in place of explorative laparotomy in emergencies. I followed in the digestive field the same reasoning that Palmer followed 20 years before in the gynaecologic one.

But my own merit was poor because the laparoscopy was yet employed for the diagnosis of a very acute gynaecologic emergency that general surgeons (like me) had to treat the ectopic pregnancy.

My first target was to confirm or invalidate the diagnosis of appendicitis in the event of abdominal pain. I was convinced that a lot of appendectomies were not useful (I say “a lot of”, but in my humble opinion “the majority of”). And the perversion was really a French evil. My reasoning was simple: More than 300,000 appendectomies were performed in France, and a French person had 50% chances to keep his appendix all lifelong. If all those patients have had a so heavy affection than appendicitis in the remote past before the surgical era, the humankind would have disappeared! The result of the “laparoscopic attitude” in my personal activity was absolutely incredible, reducing to 20% the number of cases operated by a year! So, first, the mixing of laparoscopy and surgery must be strategic where laparoscopy comes first, and laparotomy follows only if it is positive. I have had the opportunity to make those observations because appendectomy under laparoscopy was not yet available. That experience will remain unique.

It appeared the mixing of the two worlds could go forward step by step: The laparoscopy part provides a tactical assistance for the surgical part as manipulations under laparoscopic control, such as liberation of adhesions and beginning of dissection and liberation, becomes routine. The most conceptually simple operation, consisting only of liberation of adhesions and cutting of the band and the treatment of acute occlusion of the bowel (which is however far from easy!), became very soon possible to perform, and it was, to my sense, the first therapeutic action performed by laparoscopic approach. It was in March 1972.



Fig 32

At the same period, my friend Hubert Manhès Fig 32 in Vichy and Maurice-Antoine Bruhat in Clermont-Ferrand (in the center of France) were active in their gynaecologic discipline.

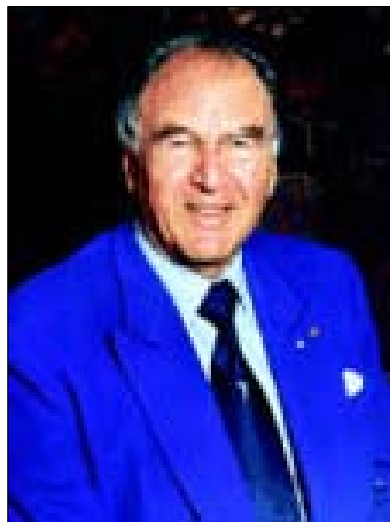


Fig 33

Fig 33 And Kurt Semm in Kiel in Germany started to operate ectopic pregnancy ovarian cyst and resection of adnexas. In 1980 Kurt Semm performed for the first time in the world an appendectomy by a completely laparoscopic way. When he attempted to publish it, he was asked to be suspended for surgical activity as he had walked over the limits of his specialty. He has not yet published its technique when I performed my first appendectomy in 1983 by my personal concept of mixed technique that I recommend still with insistence for developing countries for its safety, cheapness and easiness to learn.

Hubert Manhès who is my friend and Kurt Semm with whom I had friendly relations have had a conceptual idea of the performance of laparoscopy which is somewhat different of mine.

For some reasons, they, though different somehow from each other, consider that a laparoscopic procedure must be performed as completely as possible by laparoscopic access. To the contrary, I consider that the research of less aggressiveness is not exclusively the privilege of laparoscopy, and the association with minimal access does not seem to me detrimental to this aim. My activity in the third world reinforced this view because it is less dependent on instruments, and by that way much more cheap. I think sincerely that the two ways are to follow and one must not exclude the other. The two ways do not concern the same field, and the same countries. The majority of surgeons follow this ‘Manhès and Semm thinking.’ I do not worry. For a long time I have been so familiarized with being the opposite of the consensus!

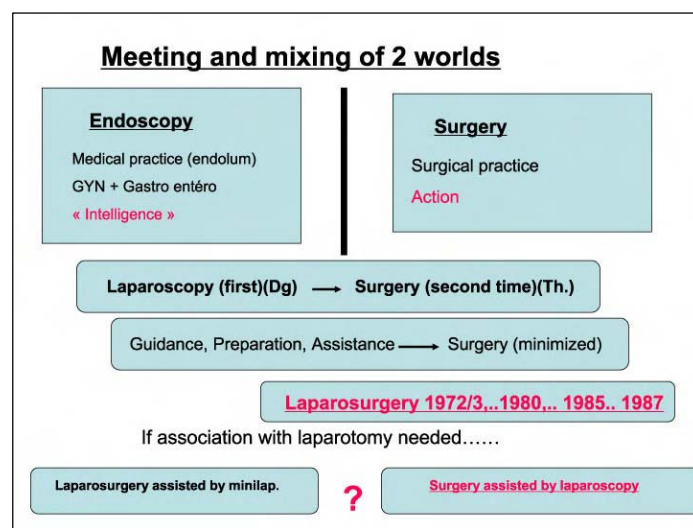


Fig 34

Fig 34 Moreover, a lot of complex procedures necessitate (mainly for the extraction of the specimen) the involvement of laparotomy (usually called minilaparotomy). Many surgeons are then talking about “a laparoscopic technique assisted by minilaparotomy.” And I continue to think that laparoscopic surgery is not a different surgery, and it is the laparoscopy which gives assistance to surgery, not the inverse.



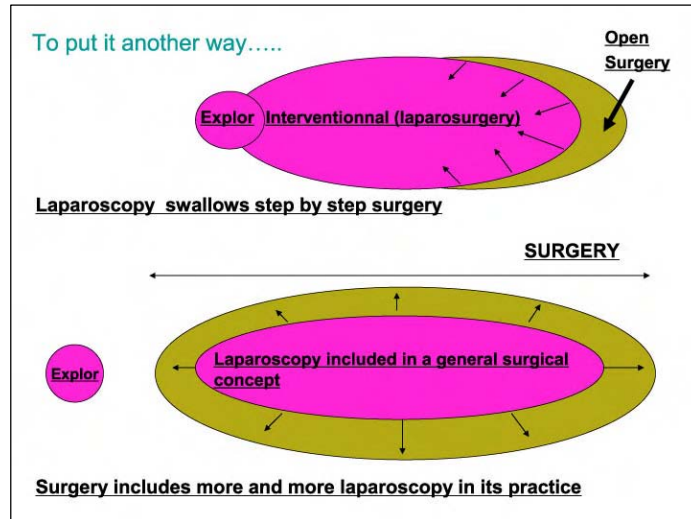


Fig 35

Fig 35 To put it another way, there are two possible conceptual diagrams of the relation between laparoscopy and surgery:

- In the first case, laparoscopy swallows the surgery. But it's necessary to think that classic surgery cannot be entirely abandoned whatever the improvements and progress there may be. Without classic surgery, transplantations and treatments of large open wounds, for example, would be impossible.
- In the other case, surgery as it evolves will give more and more place to laparoscopy to perform the same gestures by similar operating principles. This is clearly the conceptual opinion of which I'm in favor for today and for the future.

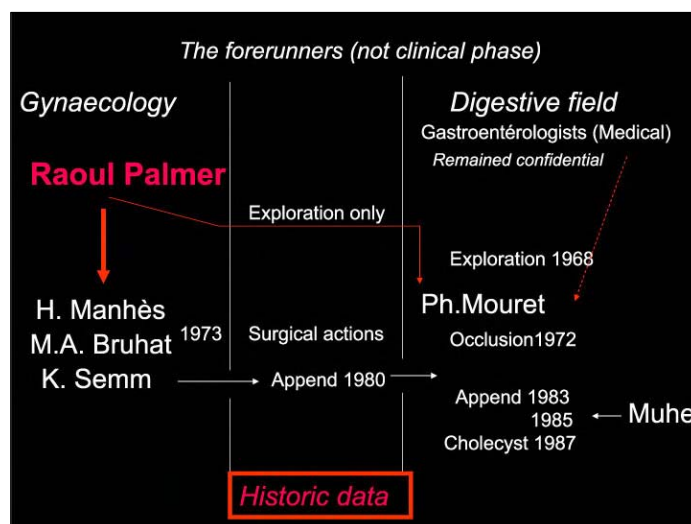


Fig 36

Fig 36 To resume the beginning of laparoscopic story, I'll give you some historic data. It's necessary to correct some worldwide inaccuracies and pay homage to some courageous pioneers who did not receive the gratitude they deserve, or who received it when it's too late.



- First... No!.. Laparoscopic surgery was not born in 1987 by my first operation of the gallbladder. It has been revealed and discovered by surgical community at that time; it's different!
- No!.. Laparoscopic digestive surgery was not created from the gynaecologic surgical technique. These two fields were contemporary, and laparoscopic digestive surgery was born completely independent of gynaecology. There was **no affiliation between the two fields.**
- In any way, the birth of laparoscopic therapeutic procedures was in the years between 1972 and 73, and not the end of the 80's.
- Yes!.. Kurt Semm performed before me a laparoscopic appendectomy, but he was reduced to silence by his Scientific Society, which asked for his suspension. Kurt was familiarized with that kind of 'scientific' reactions because some years before, his co-workers wanted him to undergo a scanner examination being suspected, in their view, of brain disorder! The Inquisition in the 15th century had sentenced Galileo Galilei who insisted the earth rotates. Nothing new under the sun!

Due to that reluctance of surgical corporation, I never heard about the Semm's performance, and my technique is essentially different.

- Yes!.. Erich Mühe performed cholecystectomy with the help of a laparoscope before me, and the persecutions he underwent are absolutely unbearable. I have had the objective to meet him last year and pay homage publically to him; unfortunately I can do it only today... . posthumously.

I would have done it so much gladly that, if I'm proud of something, it is to have done the first therapeutic gesture under laparoscopy 15 years before, not for my first laparoscopic cholecystectomy.

- Yes!... The origin of all is the laparoscopic exploration in gynaecology due to Palmer genius. But Palmer was a gynaecologist, and more a Parisian gynaecologist. The poor consideration that general surgeons had at that time for gynaecology, and the rivalry between the capital and Lyon, the second-largest city in France, need to be taken in consideration.

For me, working in Lyon had me plunged in complete loneliness for almost 20 years. It was really terrible, and instead of the fact I was convinced to be right considering the state of the patients and the results, I had some doubts, of which main concern was that the technique would be impossible to teach. Until the first cholecystectomy there was no camera, so no direct vision, and a very poor capacity of communication. (Only the second cholecystectomy was recorded.) Most of friendly colleagues who heard about my technique were all saying that the technique was impossible to reproduce.

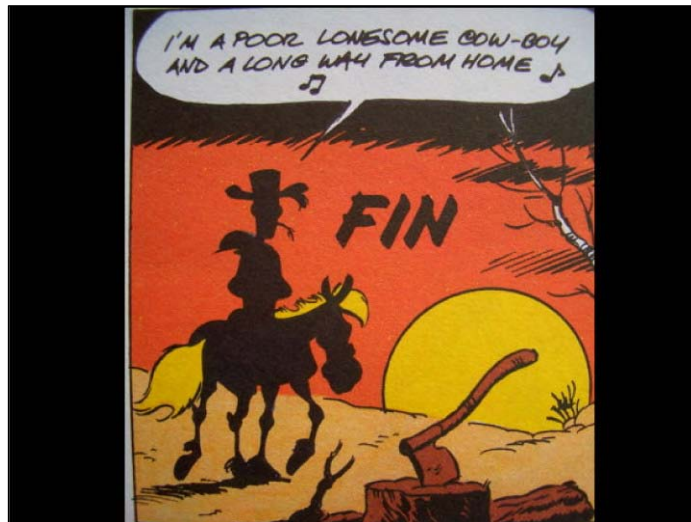


Fig 37

Fig 37 Yes, I travelled through a desert; and often I said it, delighted with the drawing of a famous French comics trip Lucky Luck which ends all the volume of the series. But as in a desert, one sand hill behind, there is always someone who is travelling as you do in a parallel trail. I met those travelers only when I reached an 'basis,' that is to say, when laparoscopy was emerging in general knowledge at the end of the 80's.



Fig 38

Fig 38 I want to introduce these "travelers" I met. A majority of them is here on the photography:

- François Dubois, to whom I shown some videos and who was able to perform his first human cases four month later after a brief experimental training. But he was trained in laparoscopic exploration many years before.

François Dubois was the first surgeon to publish about laparoscopic cholecystectomy in professional press, but he never put himself forwards and has had always the scientific honesty to recognize my priority.

- Jacques Périssat who has made me the favor of coming here in Japan. He deserves the friendship I have for him and the tribute I pay to him for several reasons:

- Our first meeting was in the first Congress in Paris, where I was speaking about laparoscopic surgery (April 1988). After my video projection, I was almost reproached by the representatives from a great Parisian institution, shouting that it was disgraceful to show such horrors. (Nobody asked for me a scanner examination, but I think that is only because they did not have such an idea!)

Two persons stood up for me, a young friend university surgeon from Lyon, Jacques Baulieux as whiteness of morality, and Jacques Périssat, whom I did not know and who did not knew me. He said that in his hospital they were working for some months about approach to the gallbladder by laparoscopy. His university position was a serious help for me.

His approach to the gallbladder was original about which I should mention a few words:

The tendency in this time, for gallbladder stones management was the ultrasonic breaking of stones, a non-invasive technique which was not so well working than for kidney 's stones. So Jacques adopted an idea to use laparoscopy to introduce directly in the gallbladder the device for stone breaking, and let in place the gallbladder as the medical custom wanted.

He was a little bit like a pickpocket who wants to rob the money and leave the purse inside. I was a better pickpocket than him. I rob the purse itself just because it was easier to do! And only for that I arrived first!

- And the third reason which is more directly related to this Honda Prize is the following:

Reading the reasons for being awarded, one of the most determinant reasons was a lecture done in Singapore in 1993. I was a guest of honor of that Congress. But at the last moment, I was not able to come by myself and it was Jacques who made me the favor of reading my lecture!

There are many more reasons to share with you the honor which I receive today.

Thank you Jacques!

- The others participants on that slide are Jean Mouiel, a friend from our first hours, and a pioneer in gastric ulcer treatment.
- You see also the two gynaecologic pioneers Manhès and Bruhat, and my friend Edmond Estour who leads for almost 20 years the "Journal de coelio-chirurgie" and his English editing which are to my mind, the most invaluable publications for practitioner surgeons in laparoscopy.

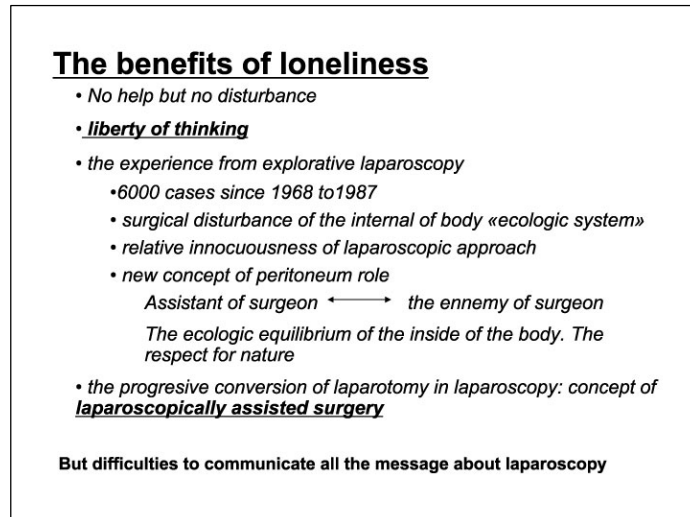


Fig 39

Fig 39 As I said, the meeting came later; and I worked in a **complete isolation**, reinforced by the refusal of press to publish such stupid mistakes. But loneliness has had some very important advantages:

- In return for no assistance I received, I was not disturbed by external pressures, or suggestions, or academic scientific committees which would have limited my liberty of thinking.
- From 1968 to 87, about 6,000 of laparoscopic procedures were performed, mainly for explorations. It has concerned mainly gynaecology and emergencies. But soon, the laparoscopic examination was applied to some difficult problems of abdominal diagnosis in a time where complementary means of exploration were not so developed as today. This experience has been unique and will remain unique in the future because laparoscopy, having become a main surgical access, is almost no longer used today only for an explorative aim.
- It is from this period that I draw some precious lesson from that practice that I have called an “autopsy on living being”:  
 ➤ First, I conceived the notion that previous surgery strongly disturbs the beautiful anatomic organization of the abdominal cavity, even if it is not perceived by the patient. I had the feeling there is an aggression against ecologic harmony: the impression that **nature has been desecrated by surgery**. Gradually I became increasingly suspicious about innocuousness of surgery and unfond of inutile surgery. Even the most common and supposedly light surgery, such as appendectomy in cold surgery, was sometimes responsible for great disorders. The performance of laparoscopy itself was reinforcing the idea which has had directed its use at the beginning.

- Second, I conceived the notion (in cases where I was driven to perform iterative coelioscopic examination) that laparoscopy (without gesture) was almost innocuous. And even that the limited gestures of liberation of adhesions were less aggressive than the open surgery.

Saying that does not signify that laparoscopy is perfect, but only that it is less imperfect than the classic approach. (‘Mini-invasive’ does not signify ‘non-invasive’.)

- Third, I really learned the fundamental role of peritoneum in all the pathologic process of the abdominal cavity. Surgery itself may be considered as a pathologic process. The peritoneum answers to all pathologic processes (including surgery) by gluing and making adhesions whatever aggression it may receive. That phenomenon, limiting the diffusion of infectious contamination has been really (and is still today) the essential auxiliary of surgeon.

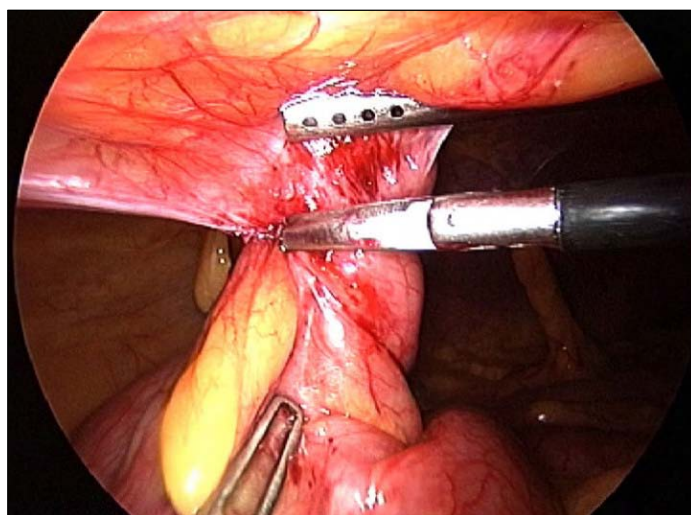


Fig 40

Fig 40 The same adhesion process can threaten the life of the patient in long time follow up of surgery by acute occlusions.

It was during that period that I followed the strategy of progressive conversion of laparotomic gestures into laparoscopic gestures; and I did this without expensive devices and without accidents. (If I would have any, in the context of that time, I am sure that I would have finished my life in prison!) The cheap access to laparoscopy that I followed may be followed in developing countries. But my isolation in that period (which has been occulted by the worldwide surgical community) makes it difficult even today to communicate the complete message.

My experience was and will remain unique. It is not considered scientifically correct because today only multicentric experiences are considered serious. It's the result of the introduction

of scientific rules in surgery which, however, is not a science.



Fig 41

Fig 41 Of course the worldwide diffusion of laparoscopy gave me great satisfaction, and particularly having the honor to be here today. But I have regrets in exchange of my satisfaction:

- The fact that surgeons everywhere (and even in the countries where they cannot do it) are more interested in the “advanced” surgery than in the basic one.
- The fact that the “all laparoscopic” performances prevail more than more adaptable mixed techniques.
- The unavoidable tendency to favor technologic improvements more than technical improvements in gestuality and skillfulness.

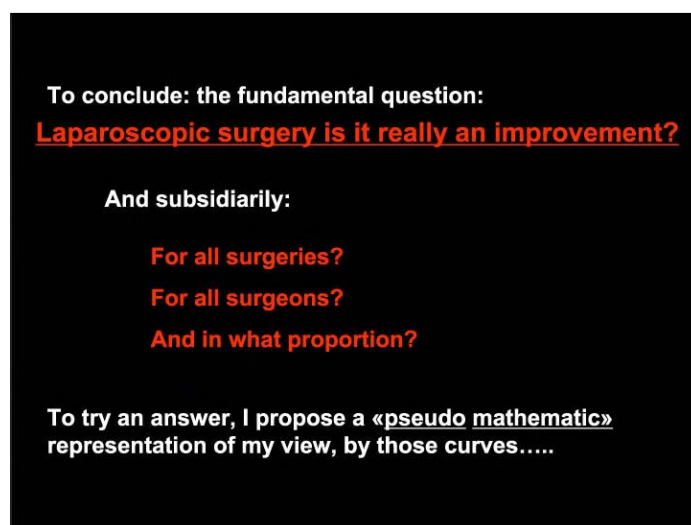


Fig 42

Fig 42 To conclude, I ll ask the question which preys on my mind since the diffusion of the laparoscopy: Is laparoscopy really an improvement of surgery or not? Or you can

subsidiarily ask: Is it for all surgeries? For all surgeons? And, if laparoscopy is really an improvement, in what proportion is it so? Without any pretention of mathematic rigor, I'll give you my view in the form of curves:

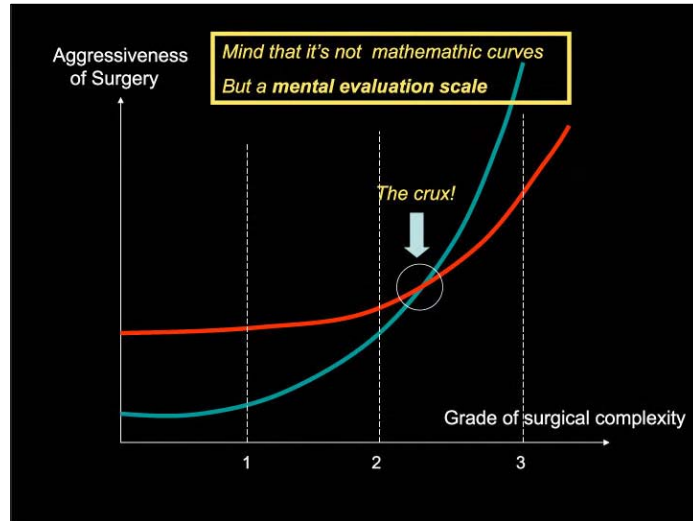


Fig 43

Fig 43 I suppose the estimated aggressiveness of surgery by traditional access (red curve) and that of laparoscopy (in blue) correspond to the level of complexity of operation performed. At the level 0 (only the access), it's obvious that laparoscopy is a reduced aggression. As the level of complexity increases, due to the difficulties and unavoidable risk of imperfections involved, it's probable that aggressiveness increases faster in laparoscopy than in laparotomy. The curves are crossing at a level whose position is the crux of the problem. I represented it here on the middle section.

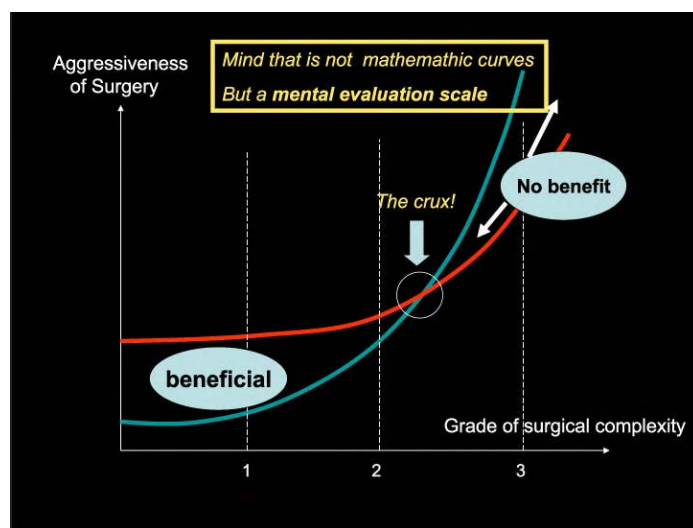


Fig 44

Fig 44 Left there is some benefit, and right no benefit. It's the level of complexity which can be excessive at this moment for the surgeon to whom this curve is dedicated, because... .

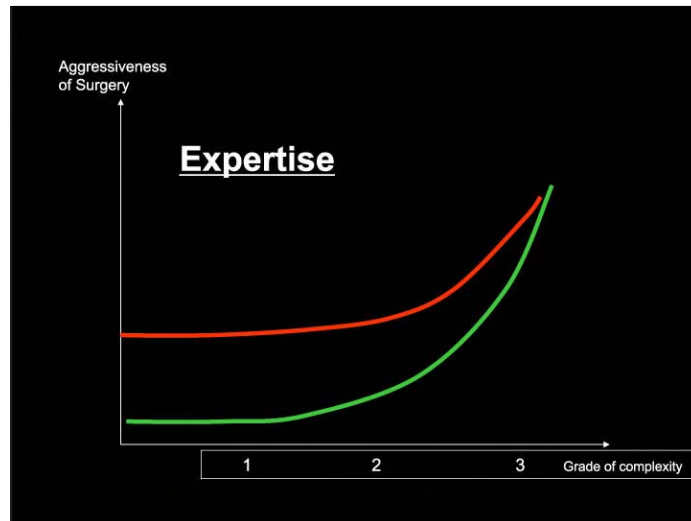


Fig 45

Fig 45 ... it's obvious that for an expert in laparoscopic surgery, the curve is lower, and at least the two curves do not cross each other.

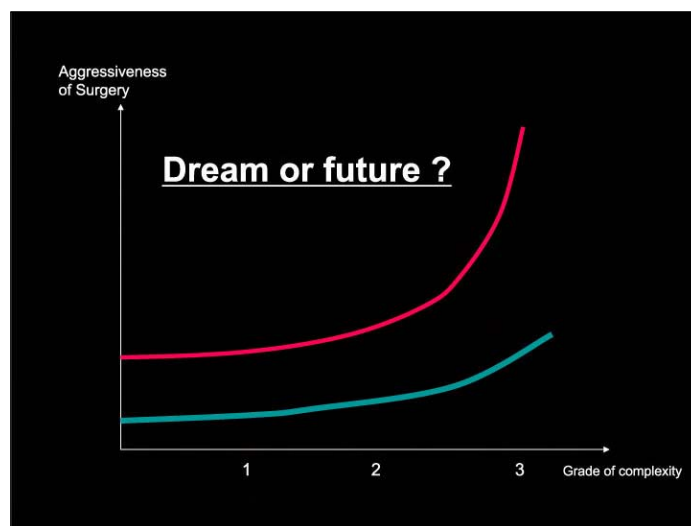


Fig 46

Fig 46 More, we may dream! Is it the future? But... .



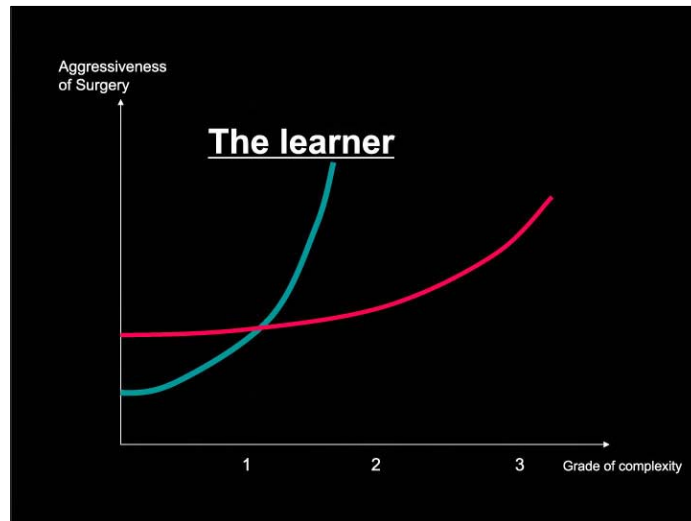


Fig 47

Fig 47 ... for a nonexpert learner, the crossing of curves comes earlier and worse...

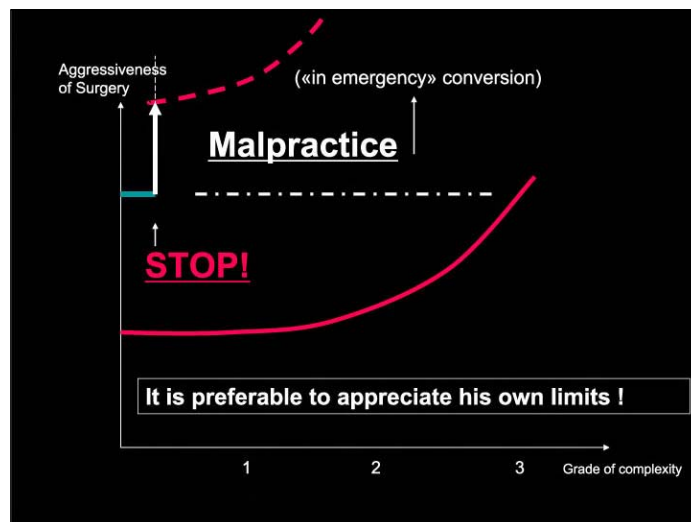


Fig 48

Fig 48 In the case of malpractice due to a mistake in the laparoscopic settings, its aggressiveness can be greater than the simple laparotomy (for a vascular or visceral injury, for example). And even if the surgeon returns by the so called “conversion,” the aggressiveness of the two attempts is cumulative! It is preferable to know his limits than to convert in forced conditions!

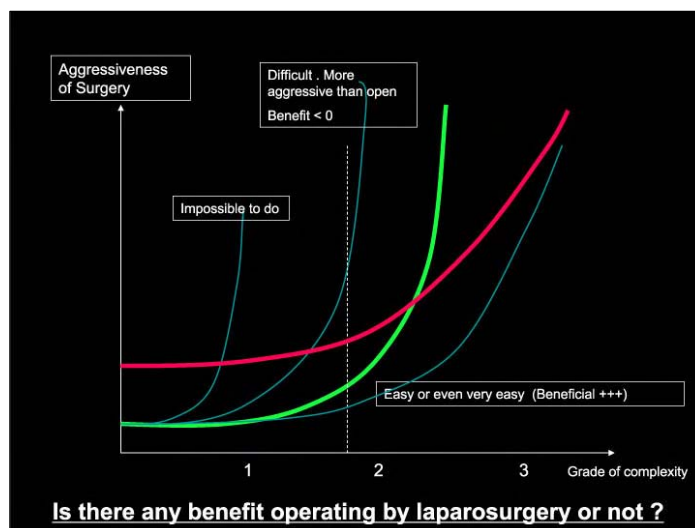


Fig 49

Fig 49 Whether or not laparosurgery is more useful at the middle level of complexity and difficulty represented by the dotted line completely varies according to the level of expertise of the surgeon: While laparosurgery may be easier for an expert, and beneficial for a trained surgeon, it could be more aggressive than laparotomy for a learner, and it cannot be performed at all in the extreme situation. **Laparoscopic technique, like any other novelty, is quite operator dependent.**

You may consider my vision of laparoscopy too pessimistic, but I am sure that the future will improve the situation, if surgeons and industry manage with prudence their ambition and stop to consider only the vertical development of more and more complex, more and more difficult procedures. The research of feasibility must not be the unique aim of development.

And in sympathy with the direction of the dream of Mr. Soichiro Honda, let me take motorbike for example to illustrate my message about the usefulness and necessity of horizontally spread development.



Fig 50 REPSOL HONDA RC212V MotoGP2007

Fig 50 It's fantastic to win in a "grand prix" motorbike racing. It demonstrates the

maximal capacity of that which is feasible. I think such sophistication is necessary to be present in this field and I am enthusiastic about that... .



Fig 51 HONDA SUPER CUB C100 1958

Fig 51 ... but without the basic devices it would be a sterile purpose.  
Basic devices are not so glorious but how much useful they are!  
I think it may be the same in surgery!

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