UNFRIENDLY TAKEOVER

# Xavier Le Roy: “Product of Circumstances”

## Lecture Performance

## Atelierfrankfurt, 5. 5. 2005

*This performance was originally presented in a theatre [Podewil Berlin] and can be presented in any situation allowing an audience in front of a stage and a screen for slide projection [theatres, conference rooms, and so on]. The light should be, to the degree possible, the same on stage and in the audience space. The intensity should go down for slide projection but never be black. The light is there at the beginning and at the end of the performance and never goes off. Depending on the space, you might use a microphone, a conference desk, a slide projector, a chair, a pillow, or any other props you want to transform the performance. The text is written in English correspondent to my ability in this language; it is part of the presentation and should be read as clearly as possible. The performance should, as much as possible, present each element as a matter of fact, trying not to emphasize any of the aspects. Try to perform without irony, sarcasm, romanticism, or any affect that could transform the facts. The performance of each element should stay as close as possible to fact. Every text that is not italicized should be said or read. The texts in italic are instructions.*

Good evening, ladies and gentlemen. I will do this performance in English; if you have questions afterwards I will be glad to answer them.

The title of this performance is "Product of Circumstances"

In 1987 I started work on my thesis for my PhD in molecular and cellular biology, and at the same time I began to take two dance classes a week.

I finished my master's degree and received a scholarship from the French government to write my thesis. The same year, I was admitted to work in a laboratory specializing in research on breast cancer and hormones. Also, I started to see a lot of dance performances during the summer festivals in the south of France where I lived. The same year was the painful ending of a 3 years long love relationship.

I was still playing a lot of basketball and my body was trying to get some stretch.

***1. I leave paper and microphone, go three steps on the side. I do a stretching exercise, bending my torso over and trying to reach the floor with my hands in 20 light bounces. My hands don't get closer than 20 cm from the floor, like it was in 1987. Then I go back to the microphone.***

Can you please turn on the slide projector and change the lights. Thank you.

The title of the thesis I presented in October 1990 was

**SLIDE #** 1: title thesis
STUDY OF ONCOGENES EXPRESSION AND HORMONAL REGULATION IN BREAST CANCER USING QUANTITATIVE IN SITU HYBRIDIZATION (h.i.s)

When I was in the laboratory, my task was to study in vivo the expression of oncogenes in breast cancer.
Oncogenes are genes that, after alteration at a structural or expressive level, have the ability of transformation and are then part of some cancer mechanisms.
Oncogenes can be altered by the punctual mutation, genetic re-arrangement, amplification, or over-expression of the oncogenes.
The usual techniques used to study the RNA or protein expression are not well-adapted to detect gene expression in human biopsies,
So we chose to develop the technique of in situ hybridization (h.i.s), because with this technique it is possible to detect very low quantities of RNA expression and to localize it in the studied tissue.
H.i.s reveals the presence of messenger RNA (mRNA) on tissue sections by using a probe of the tested gene marked with radioactivity. After hybridization we observe the tissue section under a microscope and the presence of mRNA is visible as black dots, or grains on the tissue sections.

**SLIDE # 2** is a photograph of tissue section under the microscope after in situ hybridization with the oncogene *c-myc*. On this slide you can see a section from a biopsy of ductal breast carcinoma, and the black grains reveal the expression of the oncogene *c-myc* in cancer cells.

**SLIDE # 3** is a photograph of tissue section under the microscope after in situ hybridization with the oncogene *c-erbB2*. On this slide you can see the expression of the oncogene *c-erbB2* at the RNA level in an invasive ductal breast carcinoma. The different genes always appear in black; there are no colour differences.

It's easy to see a difference in the number of grains in the two previous examples and also in the next one.

**SLIDE # 4** is a photograph of tissue section under the microscope after in situ hybridization with the oncogene *c-myc*. In this example, it is also clear to see that the grains are visible in some zones but not in others. It shows how this technique allows the localization of the expression of the tested gene. You can see here the expression in the epithelial tissue but not in the stromal tissue.

Can you please turn off the slide projector and change the lights. Thank you.

As you can see, the technique allows the localization of the expression of the tested gene, and the different examples show a clear difference in the quantity of grains.
But to get usable results from these experiments, we had to be able to translate them into numbers for making comparative and quantitative studies of the RNA expression for statistic studies.
Of course it was possible to count the grains visually one by one, but it takes about two hours to count the grains in each chosen field under the microscope. So my first task was to develop, in collaboration with computer scientists from the corporation IMSTAR, a method for mechanically counting the level of RNA detected by h.i.s on tissue sections.

***2. I go to a chair which is almost in the middle of the stage. Staying at one third on the left side, I take the pillow off the chair put it down on the side of the stage and stand up on top of the chair to perform the first five minutes from a piece I did in 1994 called Things I Hate To Admit. The dance is made up of movements in which my arms are stuck (without artifice, only physically and mentally) against my torso from the armpit to the elbows, which I imagine to be my shoulders. Then I go back to the microphone.***

To count the black dots mechanically, we use a microscope connected to a camera and a computer with software developed specifically for this task.
First, we select a field from the studied tissue section under the microscope. Then we take a picture from this field with the video camera that is on top of the microscope. This picture then goes into a computer, where it is digitized, and the digitized pictures appear on a video monitor where the processing of the counting can be followed.
Using this technique it takes us ten minutes with the help of the computer to count one field observed under the microscope. This is already much better than the two hours needed for a visual counting.
These results were published, and it was the first time that I participated in a scientific publication.

At that time, I was taking two or three dance classes a week and trying to learn how to do the following kind of exercises.

***3. I leave my papers and the microphone, do several steps to the side and do the exercise in 6 (or another) from Merce Cunningham. After that, I do a diagonal with a combination of triplets with port de bras and curves from the torsos, which have to be changed according to the space where I perform. Then I go back to the microphone.***

During this period I spent a lot of time looking at sections of human tissue under the microscope, trying to learn how to recognize the histological differences between normal and cancer cells and also between the different types of cancer. I remember that, even for the very experienced researcher, it was difficult to make a clear and objective decision to put the observed tissue in one of the numerous existing categories. But the decisions had to be as objective as possible. Looking into the microscope I very often had the feeling that I was both observing and transforming what I was observing.
I had the feeling that my decisions were made under influence. I thought every decision challenged my "objectivity" and that I could not be objective.
I asked myself at this time, how objective do I have to be able to continue to practice science, or more specifically, biomedical research?
But I quickly forgot these thoughts, so as to be able to continue my work of research in the laboratory.

After we developed this mechanical method of quantification, we first studied the expression of oncogenes from the group of the fibroblast growth factor like genes.
We tested six different genes and oncogenes in twenty breast cancer biopsies.
The level of expression of these oncogenes was very low and at the limit of detection.
This work became the first subject of discord with Henry Rochefort my laboratory director.
We argued a lot, and I quickly found out that his experience and social position was much more important than any scientific argument. The discussions were rarely about scientific problems or questions; it was all about career, power and hierarchy.
He wanted to publish these results and I thought that they were not relevant enough to be published.
I was learning the importance of publication and that publishing articles is the scientist's best way to create and protect his position in society. Like researcher use to say “publish or perish”. I was learning that research has to follow and use the methods of capitalism (Or every other name that you like to give to the process that dominate the actual word history).

I was asked to produce science, and not to search.
At that time I took at least one dance class a day. I did some yoga and I began to visit an osteopath regularly. These corporeal experiences laid the foundation for the necessity of a new corporeality or new theories about the human body.

***4. I leave my papers and microphone and walk to the center of the stage. I lie down on my back with the soles of my feet on the floor and my knees toward the ceiling. I stay there for one minute. Then I go back to the microphone.***

The next step of my work in the laboratory was to study the regulation in vivo of oncogenes with Tamoxifen.
Tamoxifen is a chemical used for breast cancer therapy because it has the ability to inhibit the effect of steroid hormones, which probably play a role in the development of breast cancer.
We studied the effect of Tamoxifen on the RNA levels of four different oncogenes, *c-myc*, *c-erbB-2*, *hst*, and *int-2*, in nineteen breast cancer biopsies from patients treated by tamoxifen three weeks prior surgery. We then compared the results with twenty-two control patients who were not treated with Tamoxifen prior to surgery. The RNA levels were measured by in situ hybridization and with computer-aided quantification, as described before.
We found that all four oncogenes were expressed in breast epithelial cells and that the expression in the stromal tissue was negligible. I will show some examples of this.

Can you please turn on the slide projector and change the lights. Thank you.

**SLIDE # 5**: an example of *c-myc* (can be the same as slide #3).

You can see here an example of a clear difference of the gene *c-myc* expression in stromal and epithelial cells in an invasive ductal breast carcinoma.

**SLIDE # 6**: an example of *c-erbB-2* (can be the same as slide #4).

This is the same area from the same cancer tested with the gene *c-erbB-2*, which is clearly more expressed than *c-myc*.

**SLIDE # 7**: a graphic with differences of expression in *c-myc* and *c-erbB-2* in two populations.

In this figure are represented the expression of *c-myc* and *c-erbB-2* in the two different populations (one treated with Tamoxifen and the control group). For both genes, expression is high in the

control population (with a mean value of 23.4 for *c-myc* and 29.1 grains/cell for the gene *c-erbB-2*), and significantly decreased in the Tamoxifen-treated population (mean value 14.6 and 7.4 grains/cell).
The results for the genes *hst* and *int-2* were much less spectacular.

**SLIDE # 8** is a photograph of tissue section under the microscope after in situ hybridization with the oncogenes *int-2* and *hst*.

**SLIDE # 9**: As you can see in this example, *int-2* and *hst* RNA show very low levels of expression, with an average of 2 to 3 grains/cell.

This is a graphic with difference of expression of *int-2* and *hst* between two populations. The *int-2* and *hst* RNA levels were not found to be significantly altered by the treatment with Tamoxifen.
All these results were used for statistical analysis, to look for possible correlation.

**SLIDE # 10** is a table of correlation between oncogene, RNA expression, and their DNA amplification in control and treated populations of ductal breast carcinomas.

The statistical analysis showed a correlation between gene amplification and expression for *c-erbB-2* (with a p. value of 0.0005) and for *hst* (with a p. value of 0.02) in the control population. No correlation was detected for the oncogenes *int-2* and *c-myc* in either population.

**SLIDE # 11**, table 3, is a statistical analysis, correlation with estrogen receptor status.

The effect of Tamoxifen on the RNA expression in ductal breast carcinoma with or without estrogen receptor showed that Tamoxifen significantly decreased *c-myc* gene expression in the estrogen-receptor-positive population (p=0.04), while, surprisingly, the elevated *c-erbB2* RNA expression was more significantly diminished in the estrogen-receptor-negative population (p = 0.02).

Can you please turn off the slide projector and change the lights. Thank you.

So as I conclude at the end of my thesis for my doctorate:
The results suggest that Tamoxifen in vivo decreases *c-myc* and *c-erbB2* RNA levels in breast cancer cells and has no effect on the expression of *hst* and *int-2*. And it seems that the mechanisms of regulation of these two oncogenes by anti-estrogens are different.

Tamoxifen seems to be able to interfere at both the DNA and the RNA levels, with or without an interaction with the estrogen's receptors.
To study these different mechanisms, the approach would be to develop an experimental protocol using, for example, different lineages of breast cancer cells with different estrogen receptor status.

I had from these three years of work some other conclusions and questions, such as, why do we try to give a homogenous picture of the results when they look so heterogeneous? Can we trust statistics? What is the meaning of statistical results?
In regard to statistics, I would like to quote some material about the risks of breast cancer pointed out by Yvonne Rainer in her film "MURDER and murder". She says that lesbian have a 2 to 3 time higher risk of developing breast cancer than heterosexual women. Which means, between other conclusions that you can make about these statistics, that when a woman comes out as a lesbian, she is more exposed to breast cancer from one day to the other by changing her relationship towards women.

During my practice of science, I also asked myself, what is the aim in getting more and more specific? Is it a way to understand the human body?
It seems very strange to study it by isolating micro-systems out of their context for an analysis in a laboratory environment.
This experimental system, like any other technical-scientific disposition, is responsible for its results. It imposes the answers to problems, which are no longer about the original questions but about their transformation.
I thought that trying to understand the cell as a microcosm of our body could be a very interesting model if it were not described and studied only by using mechanistic systems that make a myth out of it.
The human body is not organized only in the way that biology tries to organize it.
All these remarks may sound pretty naïve, but I had the feeling that science was about understanding problems made up to give us the impression and satisfaction of total control of questions on, for example the human body. I had another idealistic idea of science, and slowly I lost my belief in it. I lost this very distinguished belief specific to science, which is presented as the right of access to truth and to a different world.

***5. I leave the microphone, go to the chair, sit almost in the center of the stage with my back to the audience, and perform a part [the beginning] of Burke [a piece created in 1997]. This part plays with movement that gives the illusion, when I fold my lower arms behind the rest of my arms, that my arms are cut off at the elbow. I perform this simultaneously thinking***

***and imagining that my arms stop at the elbow. When I am finished I go back to the microphone.***

These three years of work in the laboratory taught me that doing research is, for 50 percent of the time, making reports, writing articles for publications, or proving that you're actually working on a productive subject. 30 percent of the time is used to think about how you could be productive. The rest of the time is for experiments, observations, and analysis.
I realized that research in biology was a lot about power and "politics" and rarely about an understanding of the human body which was actually my interest.
As Guy Debord wrote in Commentaire sur la société du spectacle (Comments on the Society of Spectacle), published in 1988, "We notice very quickly that today's medicine is not allowed to defend the population's health against the pathogen environment because it would mean being opposed to the state or to the chemical industry. [?] We don't ask anymore that science understands or improves the world. We ask it to instantly justify everything that is done. In order to obey this final request it's better not to know how to think and to have a very good practice in the discourse of the spectacle."
Maybe my experience is very specific to biomedical research?
Maybe it would have been different if I had done fundamental research in physics, for example?

In 1990, after I presented my thesis, I quit my career as a molecular biologist. I escaped. I decided to do more dance.
Thinking became a corporeal experience.
My body became simultaneously active and productive, object and subject, analyzer and analyzed, product and producer.
I went to Paris, where I took more dance classes. And I did some of these.

***6. I leave the microphone and repeat the second part of 3(the triplets). Then, I go back to the microphone and say:***

During this year in Paris I went to auditions. I remember that one time I was refused because I was too skinny, but most of the time I was not accepted because of my lack of technique. So I tried to practice more of this.

***7. I leave the microphone, step aside, and do some exercises like Cunningham's développés front, side back on each leg; then I go back to the microphone and continue.***

It didn't really help. My enthusiasm for dance was mixed with disappointment and a feeling of exclusion. Somehow my body was resisting the norms of dance.
Maybe I was too old?
Maybe there was something wrong with my body?
Maybe it was this?

***8. I leave the microphone, go to a wall [or screen] backstage and I extend my arms against it from the floor to the highest point I can reach. I keep this point with my finger, stand against the wall under the point, still marked by my finger, marking with my hands the distance between the top of my head and the highest point. Then I show this distance to the audience and go back to the microphone.***

After a year of dance classes and auditions, I got a job as a dancer in a company called *la compagnie de l'Alambic*. I was fitting in. I remember we were working on or using the body to produce metaphors. We were improvising under the direction of Christian Bourigault, the choreographer, to produce movements. We were trying to express something by creating movement sequences supposed to answer to his questions and desires. I also had to learn movements comosed by the choreograph or other dancers in order to be part of groups dances. Most of the time this was very difficult for me and I will now show you and excerpt of one of these dances:

***9. I leave the microphone, go to front stage left and dance a part of a dance called "la caresse"from a piece tittled "Matériau-Désir"created by Christian Bourigault in 1993.Then I go back to the microphone.***

In 1992, I moved to Berlin for reasons of love.
Except for one or two groups, I found the dance scene not very exciting, but I began to practice a little bit of contact improvisation and I also took some Alexander technique classes. These experiences changed a lot of my perceptions about the human body.
After a year in Berlin, I began to work with a group called *Detektor*. This multidisciplinary group was using video, theater, and dance, and mixing them all for performances. Working with them I began to ask myself questions about the definition of dance. At the same time I was more and more disappointed by most of the performances that I saw. Watching a lot of them from a lot of different groups from all over, I could less and less imagine working with one of these groups companies and choreographers.

So in 1993, I began to work alone. My body became the practice of a critical necessity.
I began to use my body for questions about body images, identity, differences?
I worked on creating functions and dis-functions of the body with a quite analytical method, if not to say a scientific one.
The first choreographies were constructed by creating links between fragments of bodies voluntarily taken apart, as a biologist might do to analyze them.
Performing these movements was about inscribing something that could be described as a go-between for mind and body, as a moving entity.
It was a way to redefine the mind/body opposition and to work on the idea that, just as the mind organizes the rest of the body's tissues into a life process, sensations and perceptions, to a large degree, organize the mind. Sensations and perceptions do not simply give the mind material to organize; they are themselves a major organizing principle.
But this doesn't mean that dance should only be about sensations and perceptions. I don't think that choreography is reduced to handle these questions. On the opposite I think that choreography has a much wider field of action.

Since 1995 these reflections have been enrich by collaboration with Laurent Goldring who questions the status of body pictures or human figures within the history of photography and produce video works as well as texts.
This collaboration helped me to continue my research which at that time, was centred on deconstructing and reconstructing my body to produce movement sequences.
I have already showed two different examples of this, extracts from a triptych called Narcisse Flip.
I will now show another one from Burke, the third part of the triptych.

***10. Parts from Burke: I go from side to side, arms leading around and changing the direction three times. Then I move my body parts in all directions until my arms accelerate, all performed as if my arms were not mine. This brings me back to the chair were I seat down before a last movement sequence where my body tries to get rid of my arms as if they were not mine. Then I go back to microphone.***

The first choreographies I worked on were presented during private events called Pressure Presents. The first one was at the end of 1993.
It was the proposition of Alexander Birntraum, a musician and musicologist friend, who suggested that we could offer each other music or dance, to force ourselves to find a form to present them.
It was a way to take the works out of an exclusively personal experience and find a direct exchange without engaging all the dynamics of theater's organization of presentation.

The decision on the presentation of a piece of dance, music, or anything else, could be quick, and the exchange was rich.
After that, we have been invited to present some works which emerged out of these “Pressure Presents”, in a couple of venues.
In 1996 I got some support from institutions from the city of Berlin, I was invited to be artist in residence at the Podewil and I started to be invited to present different works, in different places in Europe.
But this small success, recognition, and attention were slightly changing my way of thinking.
I lost a certain kind of independence.
I slowly noticed that the systems for dance production had created a format that influenced and, sometimes to a large degree, determined how a dance piece should be. I think that to a large extend Dance producers and programmers essentially follow the rules of the global economy.
I had integrated the economical dynamics of dance production because I wanted to be able to make a living with what I had decided to do.
But, even though I was very careful not to bow to that particular logic, and tried to resist, I was not always completely convinced by my decisions.
It reminded me of some earlier experiences and made me think about the utopic and idealistic reasons that made me give up the work of research in medical biology.
My point of view and my status in society changed, and I found myself in a blurred field of similarities between the social and political organizations of science and dance. I felt like a fugitive who actually never escaped what he thought he was.
I had a need to change the way of changing.
had a need for more critical work and, at the same time, I realized that the content of a piece was not enough for a critical position.

During the same period, around 1996, I had the luck to be invited to join the *Quatuor Albrecht Knust,* a French dance company working on the re-creation of dance pieces that have played an important role in our modernity.
The project was to work on the re-creation of *Satisfyin’Lovers* a piece by Steve Paxton, and *Continuous Project - Altered Daily*, a piece by Yvonne Rainer created in 1970.
This project was very important for me, and it still has a very big influence on my work.

It was more than a way to access the history of dance through the practice of it, which was already a great experience. It proposed a lot of answers to my questions, because the project was very aware of all the aspects implied in the production of a dance piece.

For example, the practice of dance questions the body and the process of work, as well as the composition methods, and everything is related to social or political questions and criticisms. Like, for example, individual responsibility and group conscience take over power and hierarchy during the work process as well as during the performance.
It was a lot of fun to do. I will now demonstrate two parts of it, the first called *Running*. The second part is called *Chair and Pillow Dance*.

***11. I leave the microphone, run around the stage [for a time that changes with each performance]. Then I take a pillow and a chair go at the position of the chair were it was at the beginning of the performance and do the Chair and Pillow Dance from Continuous Project - Altered Daily.***

(These experiences had for example, a lot of influence on a project realized in 1997 in collaboration with Alexander Birntraum (composer-musicologist). The project was called *Das To.Be. Projekt* and was about exploring different types of relationships between dance and music or sound and movement. The whole project was presented as a series of speculative experiments trying to give different ways of perception to the audience, where listening was as important as watching.)
After this experience, it became more difficult than ever to think in terms of the production of a dance piece. Sometimes I even thought that it's impossible to do anything else.
But I still had the feeling that it’s a field where the questions about bodies and their representations could be explored.

Since then, I have tried to work on questions such as the following.
Can the production of a dance piece become the process and the production in itself, without becoming a product in terms of performance and representation? What kind of organization for which body? For which process of work? For which performance? Is it possible to work on all these parameters at the same time?
What is performance? What is representation?
Is the human body an extension of the environment or/and the environment an extension of the body?
As Elizabeth Grosz suggests in her book Volatile Bodies, the human body is not a stable system or a centered organization neither at the biological level nor at the historical, psychological or cultural levels. She also suggests that any body-image is a continuous process of production and transformation.

Considering this, a perspective of work in the choreography field could be to look for ways to change the predetermined organization of the body in order to transform the form of performance and representation.
I am looking for ways to explore the performance of human and non-human bodies in a process of transformation and mediation. This research is based on ideas about the body as multi-centered and able to be every-body and no-body within the diversity of its affectations.

***12. I do sound and movement from the beginning of Self-Unfinished, going a few steps away from the microphone and then breaking off and coming back.***

That was the beginning of a piece called Self-Unfinished that I was working on in 1998 when I was invited by Marten Spangberg, Christophe Wavelet and Hortensia Völckers to participate in an event about performance and theory called *body Curency*. I was invited because as a dancer or choreographer, my currency in the "society of the spectacle" is to be an atypical dancer or a dancer-biologist.
For this event I was asked to think about possible theoretical pathways between biology and performance.
It was a very interesting challenge to try to make something out of this.
But it was impossible for me to get to an abstract and theoretical level. I could not generalize or conceptualize. I could not write a "real" paper, lecture or discussion.
So I decided to stay at a personal level and give some information about possibilities of exchange I experienced as a support for different thoughts. I was afraid, but I took the risk of being maybe too egocentric, hoping that I could provoke some questions.
This is how I came to produce what I just presented to you this evening.

Now, to end this lecture, I would like to suggest that this performance was about a contaminated body in its weavings of historical, social, cultural, and biological levels, being the place and time for a pathway of different thoughts unable to transform themselves into abstraction and theory.
And maybe theory is biography, presenting it is a lecture, and doing a lecture is performing.
Thank you for your attention. I'd be glad to answer any questions you might have.

***13. I go to the audience to answer their questions and try to change my position as relative to the audience, so that I am not in front of them but within them.***

References:

Debord, Guy. Comments on the Society of the Spectacle. Transl. Malcolm Imrie. ??: Verso Books: 1991.

Grosz, Elizabeth. Volatile Bodies: Towards a Corporeal Feminism. Bloomington: Indiana Unversity Press: 1994.