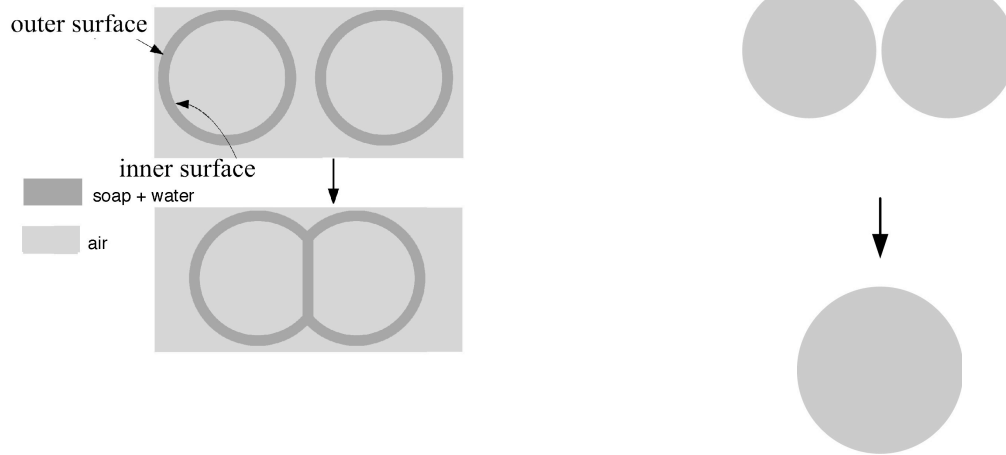


Introduction

This research proposal will attempt to bring together three spheres in which I move, as maker, interpreter and organizer of performance, arts from all disciplines and reflection: 1. Echo.Base/Foam; 2. Science as a controversial element of the human condition; 3. performance within the context of improvisation.

I describe them shortly.



1. Echo.Base is an alternative artistic workspace in Antwerp. Echo.Base assembles interchangeable collectives. We, - Anne Dekerk, Simon Williams and I- create our own work in Echo.Base and we also invite other artists, curators, thinkers,... to work there and find different ways of sharing their creative processes with an audience.

Echo.Base is a place on a threshold. It's a fluid space where people come and go, mix and meet. A space in transition which invites the passer-by to enter. Visitors are offered an inhabitable place that can become the body of or for a work. They're encouraged to contaminate Echo.Base, to open up creative processes towards an audience and to leave traces behind for future visitors.

Echo.Base is a space for creating and the creation of a place. The tension between what happens there and the outside world spans a liquid, living structure, which is simultaneously fragile and elastic. Space, mental space, architectural space, outer space, living space, typographic space, contextual space...

Echo.Base is an ongoing attempt at producing interpenetrable spaces. Echo.Base thinks and enacts dramaturgies of these meetings.

An overview of past Echo.Base activities can be found through the respective links on the homepage www.echobase.be

A practical objective of the research I want to propose, is to continue creating such spaces, without a permanent, proper, physical space of our own.

Foam is a research field of Echo.Base. In the spring of 2008, a first research proposal was presented in the shape of a performance. This proposal announced the story of foam as a rich and complex subject studied in physics labs and by engineers. But also foam as a gastronomical delicacy and foam as a metaphor for the (individualist) conditions and spaces we live in. Given foam -as metaphor and as raw material- we dig into concepts such as fragility, the living space in between people, atmospheres and ambiance. The research in this Foam.Lab is as well playful, as scientific or philosophic. It consists of creating foam-models, making foam in all kinds of ways, or working with foam as a metaphor and concept.

Foam.Lab was the main research project of 2009 in Echo.Base, bringing together artists through a call for participants. These artists were selected on their intention of finding out whether their individual projects could be made permeable for contamination by each other. Foam was proposed as a thought figure for giving sense to this contamination.

For more information on Echo.Base and Foam, I invite you to visit our website, at www.echobase.be or for the Foam.Lab at www.echobase.be/foamlab.php. In particular the video "Shaping the Meeting Space" gives an idea of what I want to go on from, with the research I propose. It is a recording of a first version of a lecture performance, in the middle between science and philosophy.

2. My affinity with science was nurtured while obtaining a master in Mathematics and a short stay at the department of Engineering, preparing a research proposal in Artificial Neural Networks. It is with a certain sense of humor that I will try to join together intimacy and science, as explained further on. If there is any model, theory, methodical praxis,... engaged in intimacy, its structure must include space for some jest. If there is any intimacy in the work of a scientist, it is probably a deep sense of irony towards what in their activity is seen as problem solving. But humor doesn't make things more simple. On the contrary it shakes things up, increasing the molecular movement of this frothy matter called knowledge. My exchange with the scientific is never without friction. Be it understood that this resistance is exactly what generates the necessary heat to start up the fire of friendship, each time after too long a separation. After all we share a basic desire for knowledge and dream about its role in society. So we fight side by side for a place around the Promethean fire. But where do those feelings come from? With what kind of desire am I engaging in this heated debate?
3. Improvisation is the name given to much of the dance training I took after my master in Mathematics. I consciously keep the term vague. It is practiced in as many different ways as there are practitioners. It is a term known to the broad public, but the common definition of the verb *to improvise* - *to perform without preparations*, is in contradiction with the idea that one trains improvisation. One might remark, in view of the

following research proposal, that improvisation is an institution of its own. A place for society to canalize certain energies, put conditions on a particular behavior, associated with its own rites... Both in society at large and in the arts.

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Pour peu pour peu que tu l'aies dit
Cela qui ne peut prendre forme
Cela qui t'habite et prend forme
Tout au moins qui est sur le point
Qu'écrase ton poing
Et les gens Que voulez-vous dire
Tu te sens comme tu te sens
Bête en face des gens Qu'étais-je
Qu'étais-je à dire Ah oui peut-être
Qu'il fait beau qu'il va pleuvoir qu'il faut qu'on aille
(Louis Aragon, Fou d'Elsa)

- i. How can one improvise the workings, the praxis of *Kunstenwerkplaatsen* and the field they span, so as to inspire the people who encounter them, to mould out their own space for creation? Could one extend some methods of improvisation in the performing arts, to the performative elaboration of the Echo.Base-mission statement and more particular our missions institutional clause: "Echo.Base is a *Kunsten Werkplaats* in becoming". Can Echo.Base create a visible **in-between space** in the field of *kunsten werkplaatsen*?



- ii. The intention of institutionalizing Echo.Base, which is implied in this mission, is not solely directed to official policy, not in the in the first place at least. I don't want to limit the question to that of obtaining recognition, for instance, for fitting the pigeonhole *kunstenwerkplaats*. An institution is an instrument. It is available for use, under its proper conditions, reacting to who addresses it. I will return to the notion of instrument in an appendix on instruments and instrumentalization, as function in the sciences. In short an instrument is invented in the research that one performs with it. The notion of instrument furthermore is closely related to that of method. Institution is not an opposite of personal, but it opens a threshold for this personal. Beyond this thezshold there is a space. At some mythological beginning point, this space is occupied by its founders. Institutionalizing it, allows the founders of that "place beyond the threshold" to step aside. In the case of Echo.Base it aims for us to not be seen as the sole creators. For now, to explain this mission of a mission of Echo.Base, I propose to deal with a more general question. How can one provide for the play, inherent in the institutional? There is a sense of the word *provide*, one can find it exactly like that in the dictionary: to establish as a necessary condition, as in "the contract provides that the work be well done...". And dictionaries are no joke! As I'll explain, language is one instrument I'll use to explore the deeper questions of institutionalization. A dictionary is an instrument of language, the contract so to say. And of play it states: space for movement, or absence of constraints.

- iii. So, what does that mean, "to provide for the play, inherent in the institutional?" To start to answer, I refer to Derrida's essay "*La structure, le signe et le jeu dans le discours des Sciences Humaines*", which crosses some terrain, to locate this play. The essay describes a history of the "concept of structure".¹ Derrida points out the contradiction in the idea of "the center of a structure". The center is in the center of the totality, but thus lays *outside* it. The center is what supposedly is necessary to provide coherence to the structure, but it can only be so, by adding a fixed point, hampering the circulation that constitutes the structure. According to Derrida, this coherence-in-contradiction, is the expression of a desire - one might say, desire for knowledge in particular, but this case is fundamental for the concept of desire in general-, or a measure to deal with the anxiety of being part of a play, of being the stakes of a game. There is a counter-mechanism to this centering reflex. It has been explicated by Structuralism. This mechanism is less a matter of control of the game, than the function of a center. Structuralism extended the structure to include everything into the game, into a universal discourse. Derrida gives the example of Eurocentrism revealed in ethnology. This extension, still, can't ever do away with the concrete concepts that, throughout the history of which Derrida speaks, took the role of center. What has changed is, that we are now obliged to take them up explicitly in our critical discourse. They are now part of the structure, but they also require *more play*, more mobility. This new structurality of structure, of course includes desire from within. Desire is now taken up into a universal discourse, but also vice versa, the structure of our desire must adapt to this new mobility.
- iv. With Echo.Base we want to construct thought figures for thinking the human condition. We have explored the growing need for mobility, physical and mental, in this world: the fundamental, conflictual mobility as described above by Derrida. Echo.Base proposes Foam as a thought-figure for thinking this de-centralized, "discursive" condition. Foam is a structure in constant movement, without a center. It is an image, a material under study in science, a philosophical creation...
- v. The label *kunstenwerkplaats*, in reality, is a container for many different kinds of practices. Moreover, they all have an experimental character. But it is not their diversity in itself that interests me here, nor their internal freedom to

1 I'm not a specialist in Structuralism, so I won't assume it of the reader either. Let it suffice to over-simplify and say that a structure can be a set of roles and relations between those roles, with elements that can take on those roles. For instance: the roles are "power" and "critique", the elements are different institutions and ideologies. Roles and elements can switch places, transform, substitute each other... These moves and the need for interpretation, constitute the play of structure.

search. My curiosity goes to the idea itself of institutionalizing that particular place in the arts, where it is part of the game to fundamentally question the how and why of institutionalizing. It is an idea which points to the play in *any* institution. So this intimacy of the *kunstenwerkplaatsen* has a universal character and it makes sense to give visibility to their fundamental research. But it is important to figure out, what kind of visibility? To answer this, I will start from certain methods of improvisation, that can inform our awareness of being seen, showing and of spectatorship and how to respond to it.

- vi. From all the context I have now opened for the matter of institution, I want to stress the importance of desire. The structure of desire will be essential in this approach to the *kunstenwerkplaats*. I will touch further on how improvisation is also a question of this structure. To let my own research undergo the force of desire, I choose to ask, if and how there can exist intimacy between institutions? Human beings can not do without intimacy. We always find ways to somehow share our deepest psychological experiences. It is part of the *structure of our desire*. The question is whether we can find a corresponding "structure of desire" common to *kunsten werkplaatsen* and whether an exchange of "warmth" according to this structure can be made productive and visible. With the same embrace of desire together with this context, I open another threshold on the edge with science. I'm speaking of course about psychoanalysis. There is a double reason for this. The obvious one being my interest in an interface with science. The other comes from experience: I think one can not avoid the therapeutic, when one takes serious the practice of improvisation. It is again Derrida whom I quote, saying "In speech, one is blind",² referring to a fundamental sense of speech, that he associates with improvisation. And is it not this blindness in front of a seer that is confronted in the analysts cabinet? The same blindness of the improviser in front of the audience or facing a director?

- vii. Experiment and research also play a role in my personal desire. It is the same desire that I let Derrida speak about in the above reference to "*Structure, jeu et signe...*" and

2 (Jacques Derrida, Unpublished Interview, 1982) It's not easy to improvise, it's the most difficult thing to do. Even when one improvises in front of a camera or microphone, one ventriloquizes or leaves another to speak in one's place the schemas and languages that are already there. There are already a great number of prescriptions that are prescribed in our memory and in our culture. All the names are already preprogrammed. It's already the names that inhibit our ability to ever really improvise. One can't say what ever one wants; one is obliged more or less to reproduce the stereotypical discourse. And so I believe in improvisation and I fight for improvisation. But always with the belief that it's impossible. And there where there is improvisation I am not able to see myself. I am blind to myself. And it's what I will see, no, I won't see it. It's for others to see. To speak is *not* to see. In speech one is blind.

the essay goes on to analyze the functioning of this desire in the human sciences. I have an individual attachment to science, so I don't want to miss the chance that lays in the characterization of the *kunsten werkplaats* as laboratory. In its most common, banal sense, a laboratory is a place for scientific experiment. Stretching the concept of laboratory to let it include artistic work, provides an excuse to take in the ongoing reevaluation of the place of science in society, and of scientific practice as the work of a community, as presented by Derrida's and many other authors, building on a whole tradition of philosophy. I do not pretend to be a scientist. My domain of experience lays and will lay in the general public's sensitivities towards science and, vice versa, those of the scientific community that show for instance in its effort to vulgarize its specialism. In the space APT is creating, for meetings between the academic and the arts, it seems important to me, to stage these relations as a model for investigating the triangular interaction between art, audience, and the institutions of the arts. The public shows both wonder and criticism towards the instrumentalization of truth and production of knowledge through science. Science offers itself as an instrument for taking up responsibility, by showing the potential and the limits of control we have on our material world. But it also undermines our ability to make sense of our condition, when it pushes at the borders of non-materialist spheres. So we ask for scientists to give us back the sense we made of our world. This same demand is often put to art, and the basis on which we expect the artistic answer to be constructed, is also one of knowledge. My own position is *in-between*, both in the triangle and with respect to the parallels I draw. Or in at least two places at the same time: between scientist and layman; between artist, interpreter, spectator, institution, ... between exact science, humanities and art.

viii. The idea of a method-language is also midfield in the play between layman and science or other specializations. I use the word method, because it definitely implies some logic. But what I want to reinvest here, are the many attempts at stirring up or repositioning the concept of language, and the critical potential generated in these attempts: the status assumed by the exact sciences, or by metaphysics as science, under critical examination by Wittgenstein; the undermining of an epistemology-based-on-Cartesian-positivism, by generalizing Saussure's idea of language as formal system of differences; the analysis by Lyotard of the status of knowledge still dominated by sciences and information theory in the 70's; the cards of algebraic elements and geometry and of psycho-analysis' scientific status, as dealt by Lacan.... All these approaches state a hybrid concept of language and game, or practice, or system. So already at its source the language I want to construct is

not merely a way of "expressing" a reality.

- ix. As a metaphor "language" should be taken not just as a way of expressing - as in "Nature speaks the language of God", but also as a method of creating reality and a model on which to base dialogue - "Science speaks the language of Nature" Of course I will not restrict myself to verbal expression, but take on all kinds of forms, media and material. But this easy artistic license, doesn't imply the typical sense of the word language, when it is used in the context of a creation; so not a vocabulary delimiting and defining a subject matter. This language game will be a way to communicate about improvisations, in order to pinpoint the deeper workings of the performative actions taken. The method-language is not a set of prescriptions for the perfect performance. It is a structure with permeable edges that let the performer be in contact with the outside. It is a surface in which one can let ones work inscribe itself, to be able to read it back in retrospect. It should create space for the desire of all the partners that participate in the performance, wether player, or spectator. As a method it provides a structure around this desire, with attachment points for each others desire. And it should also stimulate response to this performativity and allow the elaboration of this response. All together it will create an abstract director, that turns out tasks, guides improvisations, may lead to aesthetics, dramaturgical choices, a communicational style...
- x. I want to test the above ideas in APT. From the discourse about, inside and around science, I want to borrow a vocabulary, grammar, algebra, metaphor... I want to develop this language both within my work, inside its processes, and as an interface with an outside-of-the-arts. Inside the work it becomes a performative method for improvisation. I will gradually integrate into such improvisation, all the exchanges that constitute a participation in APT.
- xi. First I want to create or find an adapted context to further develop skills in the use and explication of the source material for this language. Dealing with this mass of philosophical background is a challenge of the research, moreover because I don't want to get stuck in the theory. There are projects I want to get in touch with specifically for this faze. These will be investigated already the months preceding the start of my possible participation in APT.

 Troubleyn/Laboratorium vzw en Charlotte Vandevyver, who are themselves setting up a project in which they want to engage scientists to investigate neurological processes specific to the acting-method that Jan Fabre

has developed over his career.

Jan Verpooten, a biologist, field researcher, looking for clues of the possible Darwinian evolutionary causes driving the development of arts. He was a resident in Lokaal01 Antwerpen in 2008, where he organized meetings between himself and a number of guests, coming from visual arts and sciences.

Lokaal01 itself, which is starting up a project, bringing in theoreticians and critics: each month one will be in residence in relation to the resident artists already programmed for the coming year. This *compagnon de route* will help find a way to communicate with the audience at the end of each residence. The interest of this project for my own research, is the possibility of exploring ways of seeing and making visible.

Wolff / Darwintrilogie, who brought popularized science to the Monty, in the form of a series of lectures and a final debate. These lectures were a preparatory faze in research on the aesthetics of science. Future stages will include an exhibition and a theater performance.

The work of Deep Blue and Heine Avdal, who plays with the image of technology and science in relation to the intangibility of experience in performance installations and on the border between stage and audience.

Of course APT itself will be a hotbed to nurture and prune these sources. As an in-between figure, I want to look for the right entry points, in response to the other projects are going on in APT, so as to figure out how to share what knowledge from philosophy and/or/of sciences. The questions APT asks about its own place in the academic institutions, as mentioned before, and also questions participants have to deal with, when they figure out their way with self-education, are in themselves a source and a drive to develop this language - and a perfect experimental setup for testing it.

- xii. With this method-language I want to further address potential and existing partners of Echo.Base, driven by the practical and urgent need of Echo.Base to create a network and find a place in the existing field of *kunstenwerkplaatsen* - a basic reason being, that the association may temporarily let go of the physical space it had at its disposal for the past two years.
- xiii. Parallel to this I will need to organize improvisation workshops. On the one hand there will be straight forward performance workshops, although they will be perfectly open for participants from other disciplines, who can use the information from these workshops and experiment in interaction with performers, on the basis of their own

medium - and I won't stop anyone from switching medium to become performer. On the other hand I want to propose basic methodical building blocs as tools for modulating creative processes and visibility on all possible levels.

- xiv. The language that will come out of this first phase, is intended as a research tool in itself. The relations in the network of Echo.Base and with artists and visitors, depend very much on the language we use to meet each other. Any given language serves to reflect on the relations resulting from it, and in the case of my research proposal, serves to ask if and how there can exist intimacy between institutions? Intimacy between institutions, should be clearly distinct from the idea "I work only with my friends". Actually it is rather the opposite. I want to ask how institutions can meet, and interact, creating an in-between space, without giving up the idea of their institutional atmospheres. I want to create foam, Institutional Foam. Intimacy in the banal sense is what lays deep below the surface. But to research it, I will need more refined metaphors. Foam is a material that depends on surface tension to shape the meeting-space between two atmospheres. Many processes and factors make it a viable place: the gaseous and the liquid, fragility, gravity, pressure, tension, permeability, evaporation, contamination... These are all the subject of study in many engineering and physics laboratories, looking for foam solutions and fundamentals. By broadening the base of my own interest in foam, through information from other arts-sciences-interfaces, I want to improve the immune system of the foam thought-figure, its permeability to contamination and its mobility through survival methods.

What methods in improvisation do I want to start from to explore the running of Echo.Base? What is the basis for mixing improvisation and creating of a network in a performative and visible way? An answer to all this, goes to demonstrate the problem of "desire on stage". It is quite a volatile element. What does it mean, to want to perform, to show.

But first, what can be the use of these methods and of performance as such? Why make things so complicated? If the practical need of Echo.Base is to network, why make a performance, out of what could simply be a meeting, a co-production, an invasion... ? Of course the answer to our needs lay in all these possible forms of relations, but we also want to leave space for the rest, the left over - a strategy of Echo.Base in in general - and in this particular context: the impossibility to make contact. That is what Foam also stands for: the in-between space, the walls of soap-liquid, that are at the same time shared, but separate the individual compartments. In these walls there is a world to explore. They are the condition of our intimacy. And it is of these walls that I desire to tell the story. A method for improvising might serve as a means to explicate these walls, to get inside them, and to take advantage of being in two places at the same time.

This is also one of its purposes in the basic setting of real-time composition. A method is a way of dealing with the question "Why do something rather than nothing", a question that might rise, when facing the empty space, before starting to "improvise with it". One aesthetic goal in dealing with this question could be: to imitate the realness of this empty space; and next I will explain an approach to such an aesthetic. When improvising, one has to be ones own director, or try to see what all possible audiences might be projecting, so as to clarify, make certain projections stronger and others fade; and at the same time one has to stay in the action. That is, one has to be in two places at the same time.

Let me describe a game for a group of performers. It was the start of a long laboratory process under the direction of Joao Fiadeiro. This laboratory brought together artists from very different backgrounds and diverse disciplines. For this game the group is divided into two parts equal in number. This is done by drawing lots, blindly. Thus nobody knows of each other which group, let's call them A and B, they are in at this point, the start of the actual game. This start is quite strange, because nothing really happens. The laboratory continues with a discussion of the results or mistakes from the previous exercise or attempt. At some point there is a signal given by Joao, let's call this signal *alpha*. Still nothing seems to happen. Group B at this point goes through a critical faze of awareness. They must quickly come up for themselves, with a formulation of what they are actually doing. For instance "I'm copying from my notes about the Real-Time Improvisation Lab directed by Joao Fiadeiro." (Which is what I'm doing right now.) As soon as a B-person has decided on a formula, they must continue to execute it like a task. Remember meanwhile reality just goes on. A-persons also just go on. Joao also just goes on. Someone might have a question, which might or might not involve a B-person; there might also be some distraction; a side plot;... reality as usual. But the limited possibilities B-persons have,

because of the finite formulation that defines their inner reality, will eventually get them into trouble. B-persons have several options available, already explored in previous games, so as to survive their reality crises, or they can die and leave the scene. Their meta-task is to stay unrecognized. When an A-person discovers a B-person, the A-person has to leave the situation and go to the place of the audience. This discovery is a subjective experience (that subjectivity has been shown in practice). But take for instance the interesting case, where we are left with a number of B-persons, performing tasks, which are until then undistinguished from the reality out of which they originated. The A-people believe they must be actually A-people, if they have gone out in response to discoveries of other B-persons. (Of course on the basis of a count one can conclude that they are in group B, as soon as all A-people have left the stage, because we know that there are an equal amount of A and B people.)

So from a real situation we have transited quite fluently and on an improvised basis into a scripted scenario, which produces fiction, that is driven non the less, by *survival*-strategies of the performers. The challenge for B-people is to look at themselves, just like we sometimes, in voyeuristic way, look at reality as if it were a performance. To go on doing the things in his own actions, which we might notice when we look at a stranger at the bus stop. Not the things which make this stranger a character, but rather the details which make them a good actor of themselves. The idea of formulating a simple task, is just the means to not have to focus on those little things and continue doing them spontaneously. To not have to "want to be someone", although that is in a fundamental way what the performer desires.

This "someone" exerts an even stronger attraction, when dealing with disruptions of this task. As disruptions, one can imagine there is an end to the task, that is the death of our place on stage. In that case, the question is how to leave the stage without breaking the "reality". Or if that seems impossible, how to transfer the action as seen from the outside, into a new task. The actions of an other performer can also make it impossible to continue ones task. In that case other survival mechanisms are applicable.

Termining it "survival mechanism" does not do justice to the more poetical or emotionally loaded vocabulary proposed by Fiadeiro, to designate strategies. The meaning the words death and life would receive during the research, in talks and in action, would make one reflect about ones own attitude in life and how it shows in ones way of improvising. In combination with more abstract, or right-out algebraic vocabulary, this made for a good play between distance and immersion, eventually making it possible to be in two places at the same time.

I want to extend this language and combine it with other practices, to obtain a foamy structure that is rich enough so that it can perhaps be extended to working levels that are not immediately suited to one single technique.

science through instrumentalization versus totalitarianism of utility

In Lyotard's "La condition post-moderne: rapport sur le savoir" I find a further source for evaluating the universal character of the question, what is the place of science? This essay explicates sciences' relation to places of knowledge in arts and other societal institutions. Lyotard admitted that he had a 'less than limited' knowledge of the science he was to write about, and to compensate for this knowledge, he 'made stories up' and referred to a number of books that he hadn't actually read. The skepticism that his admission may provoke, I put together with a close look at the notion of instrument, in the sense of an apparatus for measurement.

It is through this kind of thinking about science and arts, that I want to develop my own language. I give a very summery peek into the material.

Again, by Lyotard, science is put forward as a discourse. Thus it has become one member of a larger family of discourses and renews its struggle for (monopoly over) truth value. In this postmodern age we see that it has even become a discourse about discourse: in the relatively recent terrains for science, such as linguistics, information theory, anthropology; but also in the treating of history and philosophy of science to make these disciplines scientific in themselves, as for instance by Kuhn ... This self referentiality tempts science to gain a universal status.

Discourse on the other hand is transformed to information by the materialist endeavor of science. This measurable reduction of an infinite structure, is a more and more hegemonic force in the information scientific conception of the human condition. A conception constituting the ultimate form of an empirical striving for efficiency. As a result knowledge appears to escape the grasp of those who know, and is contained in machines.

For this reason Lyotard opposes a narrative knowledge to the scientific/information concept of knowledge. The picture he draws in his argument, concerns a utilitarian concept of science. Lyotard himself points out this bias, when he brings into the picture the concept of efficiency. Indeed the permeability of the scientific space is not reducible to heresy versus true science. The criteria for defining good science can not be laid down without reference to the outside space. Even the systematization of society described by Lyotard, does not result in a closed circle of science and governance, because a counter culture within science, that reacts against the given way in which science is being instrumentalized for an information economy, is essential for the critical role of science itself. And the freedom to criticize, is a necessary atmospheric component for the critical praxis - falsifiable discourse production - that constitutes science itself.

So Lyotard seems to say that knowledge is transformed by the context in which it is instrumentalized. His essay criticizes the case of a utilitarian context. I want to compare it with the relation theory-instrument within the praxis of exact sciences. We can consider tools such as telescopes and lenses. What makes them scientific instruments? Of course all telescopes are expected to show the same images. The first and basic functioning of lenses was tested by comparison with the most common visual apprehension, of how the world should look: things far away are made to look 'like they are close by'. This "likeness" is a complicated experience of course: how are things, when you can only see them, but not touch them. Many scientists opposed Gallileo because they believed that the telescope deceived their eyes. As experience accumulates in practical, utilitarian situations, where they would give the user an advantage, the truth and knowledge provided by such instruments have gradually become a *fact* taken for granted.

What happens when we develop these instruments into more and more complex constructions of such accumulated experience and we again get an instrument with a unique design? It has become a complex machinery that requires specialist reasoning to make sure it is in perfect operating condition. Unexpected measurements will not be taken as anomaly on first base. Some assumptions have to be made about the object that the instrument is pointed at. This object has a certain place in the theory, on different different levels of the theory it can inspire different levels of paradigmatic assurance. So the use of this instrument requires space for a criticism fundamental to science.

This account is an example of the ever ongoing fluctuation of science between, in Th.Kuhn's terms, paradigmatic and pre-paradigmatic. I choose to look at the concept of measuring instruments, because in the demand for a legitimization of the position of science in the human condition, as described by Lyotard's, measurability seems to be the soft spot. To be precise, we see that there is always a point at which in the Kuhnian philosophy of sciences, Cartesian identity has *not replaced* the Renaissance model of similarities (with their space for difference), but rather it is added. The theory of *identity* (exploited by totalitarian utilitarianism) - one thing equals an other, the

right hand of the equation is identical to the left hand - is added to the scientific practice of seeing *similarities* and puts a limit to associative chain of likeness. And together with this Cartesian impulse, the function of similarity is relegated to a place in *pre-paradigmatic* scientific practice, where it is an operator between different practical and heuristic experiences of individual scientists. It is these similarities, that allow a scientist to identify with one potential paradigm or an other.

If a theory (of sociology, in the case that Lyotard makes - but I want to generalize this to science in all its disciplines) is at risk of being taken up by the system itself and put at work as merely a function of the systems drive for efficiency and performativity, that is because of its concept of truth, which shows a unifying and totalizing tendency. *If* on the other hand one shuns consensus and synthesis, at the benefit of dualism, - identity and difference for instance - *then*, even though it doesn't overcome the paradox that appears when one asks "from what point of view" can a theory be compared to the practical functioning in society, it none the less seems to offer hope for a dynamic that is non-totalitarian.