Space, Together: An Odyssey
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Outer space has been a favourite theme of science fiction literature for a long time, with Stanley Kubrick's movie, *2001: A Space Odyssey* (1968) being a climax in this regard. People are also interested by inner space. In *Fantastic Voyage* (Richard Fleischer, 1966), miniature submarines allow a medical team to adventure into the familiar and mysterious universe of the human body. In a certain way however, the movie is about investigations in which the direct implication of people is not necessary. Automatic vehicles and endoscopes do the work well enough.

Human presence is, to the contrary, very necessary when the issue is about exploring a third space, that which we inhabit together, that into which we are "thrown" together simply because we form a society, not in an abstract dispersal but in an ecumene. We are dealing with nature and with ourselves in this inhabited space, since increasingly when we discover exterior landscapes, it is human achievements which we are admiring, criticising, using, destroying, or preserving...

Are we able then, in space and by space, to break the curse of the "unsociable sociability" which Kant judged to be inherent to all life in society? Attempting to answer this question constitutes one possible path for thought and action. This voyage is before us, with its islands, mermaids, and storms, and we must accept the idea that Ithaca is not a program but a project. It is the construction onto which everyone can be invited without exception. If we are ready to embark, in which vessel should we embark, with which cards, and with which compass?

"Space, From which Everything Flows."

That is the question which drives me.
It is important and it is starting to become well-known.
Thus Peter Sloterdijk wrote in the introduction to his trilogy, *Sphären* (first edition 1998):

"Could we not consider that life is a constant questioning, formulated afterwards, according to knowledge which we have on space from which everything flows? About the split in society between those who know something and those who know nothing: Is it not deeper today than ever?"
Progressing further is not very easy since there are not many written works on the philosophy of space. Classics (Newton, Descartes, Leibniz, Kant) and more recently Heidegger, Lefebvre, Foucault, Deleuze-Guattari and Sloterdijk are useful, but in general space has not been a very attractive theme by far. It is only today, and because ordinary inhabitants of the planet handle and manipulate a multitude of spatialities that certain actors, still rare however, think that they ought to try to see things more clearly.

In order to move forward on this theme, allow me first of all to make a little detour by way of a more inclusive procedure than that of space all by itself, before returning to our previous subject. "Science simplifies reality but complicates reasoning," said Gaston Bachelard. Let's get a little bit complicated.

A dozen colleagues and I are launching an unidentified knowing object: Dia-Logos. Dia-Logos is a project consisting of a hybrid forum and mobile research workshop, which will produce scientific work on the great issues of society by researchers working under the eye of society. We are going to take bids on themes which are not in the usual lines of questioning for researchers to take up, and yet which are fundamental for their object of study, society. We will move about several large metropolises of the "North" and "South", and we will use them as a resume of globalism while confronting researchers with the society of these cities. The motto for this project might be a little disturbing, but in a good sense: "The Future is Elsewhere: Here." It means that there are certainly resources to be found in the expectations and visions of our contemporaries which can be used to define which issues constitute the dashboard of our action today. Incontestably, this project consists of a tightly glued-together combination of science and ethics. Is it properly our role to launch ourselves into such an adventure?

I believe so, and to make myself understood, I would like to tell a story which I found in the last volume of Peter Sloterdijk's trilogy. Fritz Haber, a German researcher, won the 1918 Nobel Prize for Chemistry for having synthesised ammonia, discovered to have important consequences for fertiliser fabrication. He was also the principal designer of chemical warfare for the Germans, a feat for which he would declare himself proud to the end of his life. He was the inventor of the infamous "mustard gas", which was the precursor for the equally infamous Zyklon B, used in the gas chambers of Nazi death camps. Of Jewish origin, Fritz Haber had to seek exile in 1933. He died the following year without having known that part of his family was going to be massacred ten years later thanks to his inventions. Fritz Haber had been a man of principle, unerringly faithful morally, and totally devoted to science and to his country.

This story speaks about the difficult transition from morals to ethics, and it permits an understanding of how the ethical dimension of human action draws near another dimension, which is scientific work. Morality was there to construct switches, extinguishers for disturbing realities. Ethics, to the contrary, renounces guiltmongering beforehand, forever forbids the casting aside of the burden of responsibility, and does not allow for any negotiations with truth.
Gilles Deleuze summed it up in this way: "Ethics is being on top of everything which happens to us." When Paul Ricoeur summarised this transformation by the title of his book, "Treat Yourself as Another," ("Soi-même comme un autre.") he was saying something other than, "Treat Another as Yourself," a formulation which remained limited in an inter-individual approach to ethics. I put myself in the place of he who is not me, I make myself empathetic and in solidarity with another. In exploring my identity I encounter many others, other than myself ("meus"), for my ipse also includes my capacity to place myself within a certain logic, the character of which I can, if I am careful, discern with my baleful eyes. Treat Yourself as Another opens one's perspective to analyse one's own actions as if it was, in fact, the acts of another. However this other is not merely individual. It is also the social group, the community, and the society. Ethics thus conceived allow us to take up contact again with politics, not only in its constitutional principles, but also in its concrete representations, legitimacy, and civility.

Ethics and Environment

The ethical stance admits and even affirms that truth is plural, and that the choices of "ethical holders" proceeds from an arbitration in the way that different truth regimes are articulated. However it is exactly at that spot that approach the method used in the social sciences when, in a procedure of reconstruction, the truths of different actors are attempted to be organised into a unified discourse. Space is an environment, like nature, both belonging to an even more encompassing environment constituting society... Since certainly, as we know, nature is inevitably and exclusively a concept of the social sciences. In Biology there is the living world, in Physics there are material structures, and in the Social Sciences there is nature, that is to say the bio-physical world as it concerns humans. Space is an environment, space inhabits us, but we inhabit it.

You will tell me that this is nothing new, that people have always lived in environments. Well, I will answer you, 'No.' People have lived, either in the immanence of an animated natural world from which they did not dissociate themselves, or under the control of transcendent powers over which they had no control.

The concept of environment is not a banal term, and in practical terms designates that which surrounds us. It is a powerful concept, which has recently been dissociated from the term "medium" (milieu). It is inseparable from the fact that, even though it is poignant, it is also prominent simply because we are responsible for it.

More generally, ethics has to do with the invention of the environment, of every type of environment. An environment is a configuration which connects in an dramatic immediacy the local and the global, that over which I have control and that which eludes me. The concept of environment makes sense from the moment when each one of us can be found wearing both hats.
of individuals and citizens, because the future of that which surrounds us now strongly depends upon collective action. The environment is a reality which determines me but to which I also contribute and determine. This is why Fritz Haber, in keeping to a morality of science rather than adopting an ethics of the environment, had tragically retreated from truth.

Complexity without Complexes

I would therefore like to bring up this idea that in the social sciences, but also in one way or another in every activity having to do with knowledge production, ethics cannot be thought of as a layer of paint spread out on the solid oak dresser of science. The ethical dimension is foundational. In many ways, an ethical procedure and a scientific procedure are two expressions of the same thing.

There is a phrase attributed to many thinkers but which had been proposed in 1934 by an American theologian, Reinhold Niebuhr, which had lots of success with Alcoholics Anonymous and which, strangely, also seems to suit researchers well.

"Oh God, give me the serenity to accept what cannot be changed, courage to change what should be changed, and wisdom to know the difference."

As for themselves, social science researchers are interested by all sorts of realities produced in society, including philosophy, epistemology, science, technology, technique, art, and precisely ethics. With my sociologist, economist, and geographer colleagues, I affirm the presence of the human sciences in this School, not as a mere appendix or cultural varnish but as a contribution to the knowledge of the World with an equal legitimacy, since it is of an equal explanatory power as all of the other sciences. The complexity of their objects of study certainly render the social sciences less easily formalisable through the help of mathematics, but on the other hand, the fact that the principle causes are constituted in the social realm, by actors capable of telling us in advance what they are about and why, is an inestimable advantage for which physics and biology can only envy us. In this sense, and all else being equal, the social sciences' predictive capabilities are at least comparable to the those of the sciences of matter and life.

Furthermore, the social sciences enjoy a very significant advantage, notably in a school which seeks to link fundamental research to technology. Regarding society, the proximity between theory and practice is striking. Whence comes the idea of "involved science", which is a signature idea of the Faculty of the Natural, Architectural, and Built Environments (ENAC). It is a general truth, but particularly so in the social sciences. The great thinkers on urban action were also, and sometimes were firstly, urban planners. Also vice versa, contact with concrete urban and territorial transformations constitute a powerful tool to rethink major theoretical models. If there
exist brilliant practitioners in the field of genetics, it must be admitted that a systematic reconstruction of the human genome is a fairly different exercise from the implementation of genetic therapies. It must also be recognised that it is extremely rare to meet quantum physicists who are also civil engineers. For us, social scientists, and especially in the social sciences of space, both sides permanently interact, often within the same brains, stimulating our capacity to progress. This is where the apparent paradox comes from which never fails to delight: It is the humanities and social sciences which are best able to launch themselves across the bridge between theory and technology, and to permanently travel to and fro across it.

Here at the social science department of EPFL, we also feel very at ease in affirming this role. We feel at ease in busying ourselves at thinking about complexity without complexes. We like to say it out loud, as sort of a joke but a bit seriously at the same time: "Don't mess with the social S!" Do not come 'looking' for us, for we are indeed there. However, we are not there to be the pedagogues of others' knowledge, but to attempt to explain to ourselves and to others, including to those who would like to use us as instruments, that societies and their members have their own logics, certainly multiple and contradictory, but which serve as starting points and necessary supports for changing anything whatever of existing realities. Thinking about people together and separately is a great challenge, and it is not right to look down upon us just because we have not got every problem solved already.

Through our culture, we have also learned the importance of reflexion, and the weight of language which is also an elementary but a fundamental tool for formalisation. That is why, contrary to my usual practice, which is shared by many of you no doubt, of making words more accessible through the use of images such as maps, graphics, tables, and photos, I have chosen for once to propose to you the sole imagery of words.

With Babel.

Thus, we are ambitious. Yes, there is a certain hubris in this process, a challenge to the gods. He who destroyed Babel and his mortal accomplices shall not be excused, but we shall fight unabatedly they who wish, once again, to destroy Babel as soon as it has begun to be built again. That which belongs to the city is also that which gives to humanity the possibility of becoming autonomous.

"And the whole earth was of one language, and of one speech. And it came to pass, as they journeyed from the east, that they found a plain in the land of Shinar; and they dwelt there. And they said one to another, Go to, let us make brick, and burn them thoroughly. And they had brick for stone, and slime had they for mortar. And they said, Go to, let us build us a city and a tower,
whose top may reach unto heaven; and let us make us a name, lest we be scattered abroad upon the face of the whole earth. And the LORD came down to see the city and the tower, which the children of men builded. And the LORD said, Behold, the people is one, and they have all one language; and this they begin to do: and now nothing will be restrained from them, which they have imagined to do. Go to, let us go down, and there confound their language, that they may not understand one another's speech. So the LORD scattered them abroad from thence upon the face of all the earth: and they left off to build the city." Genesis 11: 1-8.

I will not hide it, in the titanic battle between God as being and humanity as becoming, I have made my choice. In practical terms, this translates into never being intimidated by the existing order of things, whether it be a social order or a scientific order, epistemological, theoretical, or academic order.

Taking up René Char's statement that, "whomever comes into the world intending to trouble no-one merits neither prestige nor patience," does not signify that one must be arrogant, and ignorant of the consequences of our actions upon others, upon generations to come, and upon our environments. If it has become so critical to acknowledge our limitations, it is because we have sufficient power to make great, indeed very great mistakes. However, from the moment when we acknowledge this, we ought to admit that Prometheus' message has in no way become obsolete. The finiteness of our material niche does not determine the finiteness of the intelligence we can develop and with which we can think, to manage this limitation, and to invent a future which has not yet been written. Caring about nature, respecting people, and having the strength to set ourselves limits should not then lead us to lessen our ambition, to play in the little league, and to set Hans Jonas' "responsibility principle" up against Ernst Bloch's "hope principle", but to the contrary we should combine them. Inspired by these ideas, we can be useful to the domain of knowledge production. Increasing our knowledge is also necessarily about permanently reorganising one's knowledge, and changing one's knowledge is inevitably about nothing less than changing the world. I do not say this so that we believe that anything is allowed, or so that we grow arrogant. I say this because our place in society commits us to taking up our responsibilities.

This is why I have given so much importance to the development of the social science journal EspaceTemps.net, which, thanks to support from ENAC as well as the important competition on the part of EPFL for its writing, aims to become multilingual, international, and open, in the spirit of EPFL, interacting with the other sciences, engineering, the arts, and philosophies.

Babel is also and firstly the city. The detour is finished, and now here we are back at the concrete business of the scientific and technological activity of Chôros laboratory, thinking about action
with and within complexity. Urban and regional planning’s specialty in contrast with the work of engineers and architects can be found there. The city is not a bigger house, and it is not a bunch of different-shaped pipes, either. It carries with it an immaterial and ideal dimension fixed within the very heart of its materiality. Within a society, and a city can be considered as a society par excellence, stones speak and words move walls. The placement of buildings interfere with the population's composition, which induces modes of life, which implies a system of transportation, which defines the place of public space, which establishes the placement of buildings ... Urban spaces are not thinkable in an Aristotelian or Cartesian universe, where each problem would be reducible and isolatable into smaller and smaller problems, easily fit into a framework of acquired routines. When building a city, it must be admitted, immediately and unreluctantly, that touching upon the very smallest reality changes the whole system. Furthermore, it must also be recognised that, starting with the first gesture, the system on which an intervention is being made is composed of actors and objects, that is to say present actions and sedimented actions. Space cannot be reduced to an ensemble of techniques, rather it is an immense machinery, but for which the sometimes formidable and often well-advised technicians are the inhabitants themselves.

This is also why we explain to architecture students who wish to become, and thankfully, who are also artists: do not hope to sign your name to a work of urban or regional planning. First of all because it will never be finished. Secondly because there is no author, other than the whole of urban society which gives importance to apparently little, secondary things (a bylaw amendment, a construction project, repaving a city square, changing transit supply), or simply an invitation to look at and use a space, which we thought we knew well, in a different way. “Taking care of pedestrians,” resumes Mary-José Wiedmer-Dozio, Head Urban Planner for the City of Geneva, “is about managing the everyday, therefore the banal. It is about being interested in what is happening in unperceived ways. It is neither glorious, nor spectacular. It is discreet, but fundamental!”

It Takes Citizens to Make a City

As citizens or as inhabitants, it is the citizens who make a city. It is they who decide at the end of the day to what purpose the new things will be put which have been proposed to them. In the same way, ordinary computer users one day decided that these machines are not really calculators, but desktops, writing tools, libraries, game arcades, or movie theatres. A city is not a big version of a house. Where architecture, with good reason, warns that proportion goes further than scale since it is interested in relationships, urban planning returns to scale but commensurate with its object, that is to say to subordinate a building to other buildings, as well as connecting it to that which, in a city, is not made up of buildings, nor even material objects, but itineraries and flows, geometries and nested topologies, complex images and interlaced practises. The city can resist the sometimes-radical destruction of its material component. It survives in its ruins because it is something other than a sum of buildings. What has survived of Dresden and
Hiroshima? The answer is two words which contain many others: Dresden, Hiroshima. Also the city (or any territory containing a society) cannot be designed, for this design would inevitably be superimposed; it can only be designed while caring for it. A good urban designer or planner is one who, above and beyond his actions, can discern the other actors accompanying him. It is the one who, beholding the most visible and sometimes the least pertinent of urban objects, identifies and constructs urbanity. This is what the urban researchers of Chôros, as architects or non-architects working at the intersection of several disciplinary cultures, patiently explain to our contacts whether they be professionals, students, or politicians.

Just as our discourse immediately implies others' thinking, we attach a great importance to giving back to all actors a more realistic vision of contemporary spaces, for example in working on a cartography which overcomes a point-of-view which had been useful for mariners and soldiers, but which is nothing but a big throwback today. Another way is by constructing a vision which gives to the actions, perceptions, reasonings, and expectations of ordinary individuals their full and rightful place in the city's construction. This is the idea behind the project Our Inhabited Space, as well as for the new Structural Atlas of Switzerland, in which Chôros is heavily involved.

If collaborative planning is becoming commonplace despite every reluctance, it is very simply because, otherwise, planning does not work. These days, gods are no longer welcome. However that said, we can in no way renounce having daring goals. Giving the Swiss something to look at, and convincing them that Switzerland is urban will perhaps one day have as a consequence, after they have worn themselves out constructing gargantuan tunnels connecting empty valleys, that they will look at its fullness, at its nearly-unified city where nearly all of its inhabitants live. Its metropolis is part of a European gigapolis and a network of world cities, and it has become the basic fabric of our ecoumene.

While explaining the concept of neutrality in the new context of the World of today, Micheline Calmy-Rey demonstrates that if we wish to remain true to ourselves, we must define ethical and political principles, engage in humanitarian action, and get involved everywhere where the values which count to us are involved. In short, she is telling us that, to be faithful to its identity, Switzerland must profoundly transform its identity by changing its geopolitical neutrality into political involvement. In a similar way in the domain of spatial planning, the principle of a strong identity anchored in concrete, local reality, and in a representation of the world founded upon lived experience, makes possible a significant shift in what being Swiss means to the world, while tranquilly taking up urban planning's pragmatism, Europeaness, and worldliness.

Planning Together, With Those Whom We Have Not Chosen.

Our primary material is thought, desire, and ... planning. Planning the city or territory together does not only mean (even if it is useful and agreeable) making up projects among EPFL urban
planning, design, and architecture colleagues; it means transforming projects from different parts of society into one common project.

This statement is not a new one but it takes on a new shine in a more precise and direct democracy, with a higher cultural level. As for the domains which interest me most, the empowerment of ordinary inhabitants as fully-practicing spatial actors is one. Participatory democracy, collaborative planning, and shared cartography are complicated. It would be easier in an intellectual autarchy, it is tempting to think. However, in the end it is better, more just, and more beautiful to work with others.

Planning, planning together ... Let us go farther. One of the great specialties of human action, compared to the most intelligent animals, is on the one hand the capability to progress within a world of ideas relatively detached from action, and on the other hand, the aptitude (which is sometimes designated by the term "philosophie de l'esprit") to empathise with someone who is acting, which allows for an understanding of why he is acting in this manner and to not only understand the act, but the action's logic as well. Planning together, truly planning together, with those whom a project concerns, is simply reuniting in one process and at one social scale both fundamental traits of human intent.

In order to plan together, there must be at least two people, you might say. Yet what if people shirk their responsibility? What if they have no desire to plan with us? Commenting on a clip in EspacesTemps.net showing the good will of uncultivated amateur cartographers in participating in, through the use of graphic images, unprovoked assaults against the rest of the World, André Ourednik and I concluded by these words:

"Where are we when we speak of the city? Indecisiveness in answering this question can open the door to certain horrors. "El sueño de la razón produce monstruos," ["Reason's slumber births monstrosities,"] as depicted by Goya Francisco de Goya. In 1992, in martyred Sarajevo, an anonymous hand had written, "Cartographers' projects are payed for in human lives." This theorem has often been repeated since. This little film reminds us that, in the midst of sinister cartographies, one must not be surprised to encounter people such as yourselves, such as myself, such as ourselves."

They are responsible, and we are responsible for treating them as responsible people and not as minors. If we do not like the people, we have neither the right, nor the possibility to change them. You may recall this poem by Brecht following the riots of June 1953 in East Berlin.

„Nach dem Aufstand des 17. Juni/Ließ der Sekretär des Schriftstellerverbands/In der Stalinallee Flugblätter verteilen/Auf denen zu lesen war, daß das Volk/Das Vertrauen der Regierung verscherzt habe/Und es nur durch verdoppelte Arbeit/Zurückerobern
"Is That Really What You Want?"

Studying space in order to make it more easily planned by its actors, is the first thing to which I wish to devote myself: It is the "Space, Together," of my title. On this subject, it is often said that we have deprived the State of tools and that now it has become possible to do anything, whence comes urban sprawl, landscape fragmentation, damage to the natural environment, social fragmentation, and the loss of substance in politics. I agree with the essence of this statement, but not with the explanation. If society has made choices which seem disastrous to us, it is because its members have wanted to do so. Today's space is largely the result of the actions of yesterday's fellow citizens. Tomorrow's space will be for the most part due to the action of our contemporaries, who build and maintain it today. However, if they have been able to decide on
one direction, this means that, systematically, they can inverse their choices and opt for the opposite direction – and that is where our responsibility arises. We ought to be ready to propose instruments for reflection and information which will permit them to always stay at the helm, to never be victims of decisions they could have made, but for the lack of knowing which options were available and their consequences. It is urgent to render accessible (and actor and strategy-centred modellisation can help) the logic of actions.

We are not there to protest their right to act, but along with other people, to show them the complex consequences of their actions and to ask them, "Is this really the space in which you want to live? In living in this way, do you really want to make it uninhabitable for others and yourselves?" This is our little note to ourselves to keep from becoming other Fritz Habers.

There is a place for less spectacular projects than missile launches or the construction of a microscopic submarine, but just as grandiose in the end. On the one hand because we, as inhabitants, have an influence over our space. To build or not to build, to densify or to disperse, to protect or to transform, to separate or to gather together, none of these are beyond our technological grasp, but are laden with consequences. On the other hand, each person's space is always, as it is now, everyone's space. As clever as we may be, we will never be clever enough to take into consideration every wish of every fellow citizen, however, in the best of cases we may dialogue with these wishes by transforming them into arguments. We need not fear that a computer will take over our vessel, but rather that all of the voices, which cannot now quieted, will turn the symphony into a cacophony. Space matters, "l'espace compte", as Mathis Stock likes to repeat, and he is right. He also means by these words, that if we ignore this warning, the chaotic and brutal arrangement which will result will be itself our reminder.

In the end, all of this is but an illustration of Immanuel Kant's saying, which has not tarnished a bit for ware.

„Aufklärung ist der Ausgang des Menschen aus seiner selbst verschuldeten Unmündigkeit.“

"The Enlightenment is humanity's exit from a state of tutelage for which it is itself responsible." It is this odyssey to which I am referring, to this interminable voyage from which we hope to emerge wiser and more knowledgeable. It is an odyssey which I modestly propose, which may be partial but transversal, which is an exploration of inhabited space, and which I propose to participate in with you.

(Translated from the original French by Annette Stomp, March 2012)