Vilem Flusser.

About a House of the Color.
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These considerations will follow two lines: (a) they will think about a "house" in the context of the present reformulation of the processes of communication; (b) they will think about "color" in the context of the present recoding of cultural messages. Finally (c) they will try and have those two lines converge Such consideration can in no way be exhaustive, since the two perspectives suggested above are limited and since a paper as this one is itself limited. Still: they may throw some light on these problems and thus serve future dialogues.

(a) The problem "house" exceeds by far the competence of architecture and urbanism, and this is becoming painfully obvious at present. Architects and urbanists, far from being projectors of houses and sets of houses, are shown at present to be functions of an existential project which embraces all the parametres of living. To sum up brutally that project as it emerges: the establishment of a universal dialogical and intersubjective network the threads of which carry informations to be stored and processed within its knots. Which implies a new anthropology: Man as a knot within an intersubjective network, and as one who becomes such a knot (who becomes "man") by receiving, storing, processing and transmitting informations. In short: Man is one committed to the dialogical conspiration against entropy. In such a project architects and urbanists appear as those men who are committed to the establishment of knots within the network. And this must be done in function of the material and/or immaterial cables which constitute the network.

This does not fit the traditional notion of "house". For our tradition "man" is an individual and may be defined and identified as such. Either as an organism distinct from other organisms, or as a "mind/spirit" distincts from other "minds/spirits", or as a distincts "mind/spirit" within a distinct organism. Such a "hard" (reifying) anthropology implies that man is a thing in motion. Under analysis that motion is shown to be pendular: it oscillates between an advance toward the World (called "adventure"), and a return toward itself (called "self"). While advancing (during adventure) man loses himself within the world, while returning (during selfishness) man loses the World, and this is precisely the Hegelian "unhappy consciousness" which is human consciousness "tout court". Now it is this traditional anthropology which implies the traditional "house" notion. It is the point of departure toward adventure and of return toward selfishness. Thus it consists of four elements: walls to distinguish between the world and the self, a roof to distinguish between human motion and the immovable transcendent, a door to permit the passage, and windows to permit permeability between the realms defined by the house. The problem of traditional architecture is the ambiguity of such a house notion, (which is proper to any notion of delimitation). How is one to distinguish between the private, the public and the transcendent space, and at the same time permit circulation between those spaces?

This is no longer our own problem. The notion of an "individual" is no longer meaninful, after calculations had shown that anything may be divided.

Human organism (like any physical object) into quanta, the motions of that organism into actomes, mind/spirit into point-like elements like stimuli or decidemes, and calculations themselves into algorithms. The "hard" (reifying) anthropology gives away to a "soft" (relational) one. Man can no longer be defined, and may be identified only in relation to soemthing else. (In logical terms: "identity" implies "difference".) Under analysis "I" is shown to be a pole of a dialogical relation with "you", that relation is shown to be reversible, and thus "I" and "you" are shown to be abstract exptrapolations from that concrete reversible relation. The traditional notion "house" with its walls, its roof, its door and its windows does not fit in such an anthropology for a simple topological reason: in a relational network it is neither the knots nor the cables that are in motion, but it is the informations. Man as a knot of relations is standing still (he is always "here and now"), and he forms the center of the universal network inasmuch as he receives, stores, processes and transmits informations. The accent within such a formulation of the human central position lies on the term _inasmuch_. This is the problem of the house as it poses itself at present: it is to be a tool to permit reception, storing, processing and transmission ofcalculated informations, of "data".

To grasp that problem we must abandon geographical for the sake of topological thinking. Which is more difficult than it was to abandon plane geography for the sake of geography as a surface of a volume. In a relational field all the points are equivalent and central with regard to each other. The distance between the points is a function of their packing: the closer the relation are packed the nearer the points are to each other. Thus the house as a centralizing tool becomes a tool for a close packing of intersubjective relations. It is this condensing function of the house which is its location, and not its geographic position. The "house of the future" will be a sort of curb within the field of intersubjective relations, and those relations will precipitate into that curb (as if attracted by its gravity) to be condensed (made actual) there. The "house of the future" will be a tool for the actualisation of intersubjective virtualities. The technical problems involved here are not of the order "wall, roof, door and window" but rather of the order "cable, memory, computation and codification". They are "soft" rather than "hard" problems. Because the house will no longer be a shell to contain individuals but rather a field for the condensation and dissimination of intersubjective relations. The terms "architecture and urbanism" will acquire a new meaning.

(b) The problem "color" is emerging from the above mentioned context with surprising urgency. The context is one of calculating analysis and computing synthesis, one of transformation of individuals into fields of relations. A small model may illustrate such a cultural situation. Culture has emerged two millions of years ago when man stepped back from his four-dimensional context of things that condition him to become a subject. The result was a context of manipulated still-standing objects: material threedimensional culture. Man stepped back from this forty thousand years ago togain an overview, and the

result was the twodimensional universe of images. Four thousand years ago man stepped back from the imaginary world into a critical distance, and the result was the one-dimensional univerer of linear writing. Five hundred years ago man stepped back from this into analytical calculation, and the result was the zero-dimensional code of numbers, with science, technology, industrial revolutio in sum: the modern world. There is no further stepping back from zero-dimensionality into a higher abstraction. This is why man is turning around and begins t project out from the zero dimension of the quantic context toward his original context from which he had abstracted (alienated) himself. (This model is no "explanation of human history", just an auxiliary figure to localise the present problem of color.)

Thus: each step outlined above is one of codification of acquired information. The first step encodes the vital context into objects, the second step objects into images, the third step images into texts, the fourth step text into numbers, and the fifth step numbers into perceptible phenomena like colors. This poses the color problem in a surprisingly new way. Algorithms are being transcoded into sounds (synthetizers), colored surfaces (plotters), colored volumes (holography), soon into moving colored volumes. That is: numbers are being projected to become just as concrete as are the phenomena perceived by our senses This concreteness of computed phenomena merits a short excursion:

Physical sciences show by means of quantifying analysis that concrete natural objects are densely packed particles within fields of relations. That is: concreteness is a function of packing. Neurophysiology shows by means of quantifying analysis how concrete natural objects are perceived: nerves receive pointlike stimuli which are computed into perceptions of objects by the central nervous system. That is: concreteness is a function of data processing. When algorithms are transcoded into perceivable phenomena like sounds, shapes, volumes and colors alternative universes are being projected which are concrete to the extend to which the numbers (bits) are closely packed. We have not yet achieved the same degree of compactness as is achieved by our nervous system. This is why we may still distinguish between a given world and synthetized simulations. But the density ("definition") of our projections is improving, and soon a point will be reached where any distinction between the "given" and the "simulated" will no longer be useful. The alternative projected universes will become just as concret as is the world we perceive with our senses, or inversely: "nature" will be seen as just one of a number of synthetized universes.

Now synthetized universes are transcodifications of the number code, and this is decisive for us to grasp the emerging cultural situation. Synthetic images are not transcodifications from object into image (as are traditional images), but transcodifications of number into image. Thus a hand paintig of an air plane means the object "airplane", it is an abstraction, a fiction. But a synthetic image of an airplane means calculations which aim at airplane construction, it is an actualisation of a possible airplane, a project, a model. The two images are opposed to each other: the one means the perceived world, the other one models it, projects it. Both images are in color. But the colors of the first

image mean perceived colors, and those of the second image mean numbers. In sum: the surprising fact about the color problem as it now emerges is that colors are beginning to mean numbers.

To grasp the problem from a different angle let us consider a paralell situation: Five hundred years ago thinking was being transcoded from letters (word into numbers (algorithms). The purpose in this was to render thinking "clear and distinct" since a number is clear for being distinct from any other number by an interval. The problem then was to adequate a thinking so pierced by intervals to the things taken to be extended, and the solution was analytical geometry which is a method to fix a number to each point. Apparently the problem was a technical one (how to transcode geometry into arithmetics), xxxxx but it proved to involve a violent existential revolution. Man no longer submitted toDivine laws (which are codified in words) and he began instead to decipher natural laws (which are codified in numbers). In his efforts to emancipate himself from laws he no longer had to sin but couls use technology instead. At present we begin to transcode thinking from numbers into perceptible phenomena like colors. The purpose in this is to render thinking accessible to the senses. The problem now is how to adequate the number code to the code of colors. Apparently it is a technical one, but it will unavoidibly result in an as yet inimaginable existential revoluti

Thus colors are acquiring an entirely new cultural function: they are becoming symbols of clear and distinct concepts. Indeed one may observe even now the first examples for such a codification of colors. Traffic lights, labels on products, photos made by satillites, colored models of physical particles and biological molecules, and of course computed images ofequations like the "fractal Such examples show the difficulty involved here. Colors are being extracted from their previous codes to constitute the new one, but they keep some of the parametres they held in the previous codification. For instance: "red" in the traffi code means the clear and distinct concept "stop", but previous connotations like "danger, hell" still adhere to it. In fact: the choice of a specific color to be inserted in the new code is as yet dependent on empirical criteria which are suggested by the previous codification. The result is that the clear concept now symbolized by a color asquires unintended connotations that infiltrate it from previous codifications. Even a numerical concept may thus become connoting. The difficulty is this: by transcoding concepts into colors we are to be sure denotin colors but unintendly also connoting concepts.

To which must be added that the color universe to be thus made adequate to the number universe has a different structure. The number universe irradiates from zero toward undefined horizons, and it is pierced by intervals. While the color universe has no center but definite horizons, and it is a full on The Cartesian problem of adequation of a numerical thinking thing to a geometrica extended thing now becomes the problem of adequation of the color universe to thinking. The terms of the problem are of course inverted: thinking no longer attempts to adequate itself, but on the contrary to adequate the universe to itself. Still: we must elaborate a color theory which somehow is to be the equi-

valent of what analytical geometry was at the beginning of Modern age. If we consider that analythical geometry is the epistemological foundation of Modern science and technology we may see the enormity of the task before us.

Colors are at present emerging as a formidable challengg. We are in urgent need of a cultural color theory which might serve as a foundation for a future color code to sustain the concepts, acts, decisions and even feelings and experiences of a future culture. Which implies that we are called upon to free ourselves from such modern categories as are "knowledge" (science), "behavior" (politics) and "experience" (art), and to elaborate new categories instead which permit that a cultural color theory be established. An image appropriate to the actual context may serve here: we have to project a gray zone in which science, politics and the arts overlap to permit a new color universe-with an as yet in- imaginable wealth, brilliance and precision is to emerge therefrom.

(c) Put into the terms of the two preceding considerations the project to build a "House of the Color" acquires a meaning which may cut the breath of any one committed to it. The task put thus is one of curving the universal field of intersubjective relations in such a way that all the commitments toward an emergen ce of a color universe to sustain future culture precipitate there. Such a task exceeds by far the competence of the founders, which is severely limited by econ- omic, social, cultural, political factors and by the very vital energy and their life span. Thus the taks put in those terms appears to be folly. But if we apply analytical and synthetic reasoning to it, (the analysis and synthesis of systems), the climate of a wild dream may dissipate. The founders are then seen to be noth- ing but releasers of a self-generating process ("snow-ball"), and their competence can be limited to that task. This merits some consideration.

The formal problem here is to open a field where intersubjective re- lations may be closely packed and thus become actual, and to filter those relatior from the universal relational field which are concerned with color. The competenc of the founders should be strictly limited to this task. All the other aspects of the project "House of the Color", be they epistemological political or esthetic ones (or whatever) should be relegated to the competences attracted to the projec and previously filtered by it. Any attempt of the founders to extend their com- petence into those aspects must inevitably result in the whole project becoming an incompetent one. But to assume responsabilities in proportion to one's compe- tence is not only to be honest, but to be creative.

What does "releaser" mean in this case? It means to elaborate a tool (a "house") which attracts, stores, processes and transmits informations con- cerning colors. Put in such terms we run the opposite danger of the one involved in the earlier formulation. The task no longer appears to be a wild dream and no becomes prosaically modest. A short consideration will dissipate that danger.

In order to attract informations concerning color it is necessary to create a slope along which those informations are to slide. The intersubjecti relations which produce such informations must be "motivated". Such a motivation may be various: money, honor, adventure, but given the structure of the project,

the oberall motive must be the desire for close packing, for the oportunity to make exchanges, for the meeting of diversified competences. But it is difficult to establish a field common to diverse competences (for instance for a dialogue between a psychologist and a mathematician or between a plastic artist and an analyst of systems). The founders should be competent to do so.

In order to store assembled informations it is necessary to have memories adequate to this. To be sure: numerous memory supports like libraries, discs, records, videos or computers are available, but the problem is not one of filing away but one of recovery of the stored informations. I must confess that my imagination is not sufficient to see an easy universal access to the informations thus stored, but I know that if this were not achieved the whole project will be a failure. The founders must be competent to solve this.

In order to process such stored informations not only brains but artificial intelligences and tools are needed. As those informations increase in number and complexity laboratories will be required which might assume unforeseeable dimensions. There must be criteria which permit the control of such institutional monsters, but I must confess that I do not see them. I can imagine that universities, technical schools, industrial enterprises, artistic work shops and even governments all over the world be attracted by the project and be made to work as antennae, but I cannot imagine well how the danger of a dissipation of the relational tissue which is the "house" to be can then be avoided. The founders must be competent to face that danger.

In order to transmit the informations thus processed channels are needed. They are available: newspapers, magazines, radios, TVs, speecilized publications. I can imagine that such media be attracted by the "house" and that specific ones may be created. But I cannot imagine how the danger of vulgarisattion (which is synonimous to publication) can be avoided. How one may avoid that the informations processed by the "house" be ground into an amorphous redundant mass by those meat choppers. I believe that this is precisely the basic task of the founders: to be competent to avoid this.

A curious thing has happened in this last part of the considerations abou the "House of the Color". First the project seemed to exceed the competence of its founders, then (after that competence having been limited to the releaser function) it seemed tobecome a modest technical problem, and finally (after having analyzed that limited competence) it was shown to be an almost superhuman commitment. How such a vertiginous circle those considerations were drawn into is a symptom for the attraction the project is already exercing. The 'House of the Color" is already working.