17 Beyond humanism toward man.

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This paper is on Abraham Moles. But though its subject is the wellknown Strasbourg scientist, this will not be a scientific paper in the sense of a critique or report on his teachings or writings. It will rather try to reveal the foundations from which those teachings and writings stem. Now such an aim requires justification. Why should anyone publish an aspect of a scientific, (and philosophical), work in progress, which the author himself leaves unpublished? The justification is this: Moles's work is the result of an attitude, a being-in-the-world which, in my opinion, is characteristic of a scientific and philosophical mentality of the immediate future, and therefore should be made known. But it is not Moles himself who can articulate it directly, not only because he lacks the distance from which to grasp it, but also because he is absorbed in the tackling of the problems that present themselves, and which cover a considerable range, as can be seen from the works published by Moles. In order, however, to limit my "interpretation" to a minimum, I have discussed the present paper with Moles, and have included his objections to it as a sort of feed-back. Those objections of his, however, which I did not consider justified, I did not take into consideration. It is therefore necessary to admit that what follows is a subjective account, if the term "subjective" be defined sufficiently widely.

Let me begin by suggesting that recent Western thought is torn by what may be called an "inner negative dialectics", in the sense that there seems to be no possibility for a synthesis of its contradictions. I shall give two examples: (1) There is a contradiction between processual and quantic explanations of the world. Any processual explanation can be shown to be an extrapolation of discrete, (quantic), data, in order to force them into pre-conceived, mostly geometrical, models. (The curves of economics are good examples.) And any quantic explanation can be shown to be a synchronisation of various processes that converge on a point, in order to force them into pre-conceived, mostly logical, models. (The concepts of psychology are good examples.) Now such a contradition cannot be synthetized, (the pseudo concept of a "wavicle" in optics can be considered a failure of a synthesis in this sense), because all quantic explanations establish themselves as meta-explanations of processual ones, and vice-versa. We are facing, in fact, the infinite reductability of all explanations, and such an abyss makes all explanatory efforts doubtful. (2) There is a contradiction between genetic and formal explanations of the world. Any genetic explanation, (be it causal or teleological), can be formalized, (and this is what for instance the structuralists and neo-positivists are doing). And any formal explanation can itself be explained from its historical context, (which means explained genetically), (and this is what for instance the marxists are doing). Thus, though formal explanations do "transcend" history, all of them can be always re-inserted into history through genetic explanations of them. (For exam-

ple: structuralist explanations of primitive cultures transcend those cultures but can be explained as results of a historical moment in Western culture. And this explanation can be explained structurally, and thus Western culture can be transcended, but this explanation itself can be explained again as a result of a historical moment in Western culture.) We are facing, in fact, the same abyss of infinite reductability of explanations mentioned under the first example. And other examples for this inner negative dialectics in recent thought can be easily offered. Now though this dialectics goes on in what might be considered "abstract thought", its climate of lack of foundations, ("Bodenlosigkeit"), is spreading and threatens to take possession of the whole of our civilisation. It is the climate of Kafka.

Various attitudes are possible in the face of such a situation. One is not to take it into consideration and go on explaining. It is the most common one, because it demands the least effort. Its result is the continued, inert, and fundamentally meaningless rapid progress of science. Another attitude is the conscious acceptance of infinite reductability of all explanations, and the consequent limitation of any future explanation to specific problems. It results in a science that no longer "searches for knowledge", but that is a problem-solving department of an apparatus. A third attitude is capitulation in the face of the situation, and the abandon of all further explanation. Its result are the various anti-intellectual movements, (for instance the hippie movement), which recall the Franciscan movement, but are different in the sense that Franciscans sacrificed reason because they thought it dangerous, (therefore efficient), but the modern ones give up reason because they think it meaningless, (therefore inefficient). Other attituded are possible, however, and they may lead out of the present situation.

When the first shock at the descovery of infinite reductability of all explanations was over, when people began to assimilate the fact that science can explain nothing "at bottom", a search for the roots of this situation began, with the hope to reveal some fundamental error in Western science. This radical search, of which Husserl is the representative, should not be confused with previous radicalisms. Not, for instance, with Cartesian doubt, which does not doubt science, but the world, in order to establish a scientific method. Nor with Kantian critique, which did not criticize science, but reason, in order to justify scientific method within certain limits. The present search is radical in the sense that it questions scientific method itself, (any method), because it starts from the assumption that any method interferes in the phenomenon to be explained, and therefore falsifies it. This implies a radical revolution in the relationship "knower - known". Western tradition is based on an anthropolgy in which man occupies a position among the things that surround him, from which he can possess them through knowledge and subsequent praxis. This may be called "humanistic anthropology" in

wide sense of the term. The new radicalism implies an anthropology that inverts the terms "man - thing", and in which man is conceived as a place of coincidence of the things that surround him. Knowledge thus becomes a process in which man is being possessed by a thing, and praxis a process in which man modifies himself and the thing on the basis of the union "man - thing" achieved through knowledge. Therefore knowledge is no longer "adaequatio intellectus ad rem", but penetration of the intellect by the thing that makes itself known to the knower. (Because every adaequation implies a method which falsifies and violates the thing to be known, but penetration allows the thing to impose its essence upon the knower).

Now Husserl and his followers, (including the German and French existentialists), try to put all previous knowledge into brackets, (because they believe that such knowledge is falsified through methods imposed on things), and they try to start anew all efforts toward knowledge. (Of course, they hope, tacitly, that the knowledge thus bracketed can come in handy at a later stage of that effort.) Such an attitude, which is in fact a search for a universal "mathesis" that structures the world in which man occupies the place of coincidence of things, therefore a "mathesis" that might allow the establishment of a new sort of science of the future, is, of course, a powerful answer to the present critical situation. And it has revealed itself fruitful in many fields of endeavor. But it involves the danger of resulting in purely empirical, namely "phenomenological" descriptions of the world, which, of course, is no science. (This explaines, by the way, why Heidegger for instance exerts such an attraction for anti-scientific thinkers.) But in Moles the same attitude results in a truly scientific resaerch.

He assumes fully consciously the new anthropolgy elaborated by this radicalism. He assumes himself the place of incidence of the world. Not as a passive hole however, into which the things precipitate themselves, but as a place in which the things organize themselves in the form of "general theories" of each thing of the world. This is phenomenological in the sense that it allows the thing to be itself, and it is scientific in the sense that it generalizes the thing and inserts it ina context. It is important to stress the fact that there is nothing methodical in such an attitude, because any thing is accepted as it comes without any discrimination. This is not what is called a "heuristic" method, because it does not experiment around to discover something. It is just full living. Any thing, be it the egg at breakfast, the island one spends one's holliday on, the Chinese agro-town one reads about in the newspaper, anything is experienced as fully as possible, in the fullness of its impact. But then this experience is itself experienced from an ironical and ludical distance, analyzed from that distance, and is allowed to unfold into a theory in two senses of that term: an explanation of the experience, and an indication of a possible praxis to modify it. For instance:

the breakfast egg is analyzed as the experience of the penetration of a shell, a slightly ironical general theory of penetration of shells is offered, (with all the implications this holds), and several new forms for future egg spoons are suggested. Egg spoons, that is, which are informed by the "essence of the shell" as it reveals itself in the experience of eating eggs at breakfast.

The existential basis for such a scientific attitude is full living. It is the exact opposite of specialisation. In order to know and to change the world on the basis of knowledge, man must live fully. This is the abandon of all academism. A climate of constant surprise and admiration in the face of the world is the result of this attitude, as if the world would reveal itself for the first time. This would remind one of the climate of the Renaissance and of the pre-Socratic thinkers, were it not for its ironic flavor. In fact, ironically speaking, man is really facing a world which he ignores totally, having bracketed all previous knowledge. Every experience becomes original, and every work done is pioneer work. In short: it is a life full of ironical adventure.

In such a situation man is disoriented. He has no map of the world at his disposal, having filed all maps in existence. He can follow no authority, since he distrusts all authority of tradition. He finds himself outside all tradition, especially scientific tradition. He must try the apparently superhuman effort to draw his own maps.

The first step, of course, is to establish an inventory of the things that surround him. The second step is to discover whether there is, in such an inventory, some hidden system. But the problem is that there is no criterium with which to start the inventory-making, since every criterium whuld falsify the things, and therefore the effort. Without a criterium, however, there is no hierarchy of things, (one is just as important as any other), and the multitude of things that surround man is inaccessible to inventory-making. But in stating the problem, one has found the solution. One should not try to find an access, one should allow the world to come to one. And the world reveals a hierarchy that imposes a criterium for inventory-making: the most important things are those here and now that impress themselves upon me. They must be inventored in the first place. How this will result in an inventory entirely different from the one of scientific tradition. Most things that I will have to consider of first importance, like my typewriter, the subway, the supermarket, the most will appear marginally in scientific maps of the world. And most of the important things of tradition, like space curvature, or genetic information, or the structure of my psyche, will appear very late in my inventory, if ever.

The first surprise I will have in making my inventory is the fact that it is in some sense complete wherevere I stop it. It will always contain the most important things, and what I have left out is, because I have left it out of secondary importance. The existential completeness of my inventory is im-

posed on me by the world itself, and there lies the beauty of inventory-making. It is only theoretically a superhuman effort, but in concrete reality it is a typically human, and perfectly possible, effort. Constant extension of a relatively complete inventory of the world, (relatively to my situation in it), is an aspect of human living.

The second surprise I will have in making my inventory is the fact that the vast majority of important things are man-made. That context tradition calls "nature" looms at best on the horizon of my situation. I know that the things that surround me are man-made, ("cultural"), because they impose themselves as imperatives emmitted by somebody, (for instance the tooth-brush says: "use me!"). Therefore my science must begin with theories about man-made things, it must be, to begin with, a "cultural science". The second surprise is therefore the descovery that I am conditioned not by something "given", but by something that was established by others. I find myself conditioned by an establishment, and what there is of nature, is disappearing on the horizon. Progress of science must therefore follow a path which is the contrary of tradition. Traditional science has started with astronomy and physics, partly of course because the Greeks were much more determined by nature than we are, but partly also because the founders of Western science had many pre-conceptions concerning "the fundamental structure of nature". And traditional science has evolved sociology and theory of communication only lately. But I must start from sociology and theory of information, because this is what my world imposes on me, and thus ivert the dynamics of scientific progress.

The third surprise in making my inventory will be the discovery of the fact that time does not flow at all the way traditional science would have it. Things do not happen to me in reversible cycles, (as the mechanistic 18th century explanations believed), nor do they happen to me coming from the past, passing through an imaginary present and aimingat the future, (as the dynamic 19th century explanations would have it). Things impose themselves on me coming from the future, and they aim at my memory or at being forgotten. This fact will have to structure all of my explanations of the world. Mechanical explanations are useless, because they ignore the fact that it is me who is at the center of the world. And I can no longer explain the present from the past and extrapolate the explanation toward the future, but I must explain the present from the tendencies that incide on it from the future, and the past I must explain from the present. For instance: this typewriter must be explained as an embryonic computer, and the Renaissance as an embryo of the French Revolution. And this provides me with a time scale. It will be logarithmical, its center will be occupied by the present, and its extremes will point to the limit of no-time. For instance: yesterday will occupy a far larger space on it than the millions of years of the Tertiary. And to-morrow a far larger space than the periods the futurologists talk of.

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The fourth surprise in making my inventory will be the discovery that space is not a problem to be dealt with by specialized sciences, (like physics and psychology), but a structure which the things impose on me, and intimately linked with time in the sense mentioned. The categories of space are "near to me" and "far from me", and their limits are "too far to make an impact", and "too near to permit the distinction between the thing and myself", which means "outside the future" and "present". These categories permit the establishment of a space scale, along which the things slide in my direction, with the limits "too far", (which is approximately what traditional science calls "physical"), and "too near", (which is approximately what it calls "psychical" "Physical" and "psychical" are thus found to be pre-conceived extrapolations of the space scale. My science must ignore this dichotomy, if it wants to know the world I live in. Of course, in an effort to link myself to tradition, I might say that my world is "objective" in the sense that it imposes itself on me, and that it is subjective, in the sense that imposes itself on me, but very little is gained by such a sort of statement.

Let me repeat the categories the world imposes on me in my effort to make an inventory of it and to discover an underlying system: (1) the degree of impact things have on me, (2) the conditioning effect they have on me, (3)their absence or presence in time relative to me, and closely linked with this, (4) their nearness or farness in space from me. These categories are imposed on me by my world, and I must allow them to unfold within me, if what I am doing is to be called "science". I must not cover them up with pre-conceived models or laboratory experimentation. These categories will reveal the inner structure of the things, and also the structure that relates the things to each other, exactly because they reveal the structure which relates the things to myself as center of the world. They are fundamental categories, in the sense that they structure my world. It is in this sense that all rules I shall discover concerning the world will be my rules, and I shall be their author and responsible for them. But of course there will be always somebody to contest my rules, or to want to complete them with others. Obviously, because these rules will not necessarily coincide with the rules that structure the world of some other researcher. I shall always be have to be open to such type of objections, because they themselves will become part of my world, to be included in my inventory and if possible systematized within it. My world is an open world, open including for objections. This does not change the fact that I am the sole responsible for my rules, since they are discoveries of the relations things establish with myself and thus impose on me. But it implies that scientific research is neither "objective", (as tradition would have it), nor "subjective", (as the detractors of tradition would have it), but intersubjective. In fact, science is a disciplined dialogue between various lived-in worlds, or it is nothing, and the present

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Now the analysis of the experiences of things I have will have one aim only: to be consistent. Consistency will be my truth criterium for the following reason: knowledge is true if, and only if, there is a fusion between the knowing subject, (myself), and the known object, (the thing I am analysing). Therefore knowledge, if articulated, can be shown to be true by the inner consistency of the articulation, which is the result of the fusion. Negatively speaking: every inconsistency is a proof of error, and there is no other proof than this. Of course, consistency is a limit situation which can only be aimed at. Some inconsistencies stick to every articulation about things, because there is always something pre-conceived in them. The best way to articulate knowledge is therefore a quantifying one, because quantified statements can be formalized and thus show their inconsistencies easier than others. I shall therefore tend to articulate my analyses quantitatively. But this imposes a problem: quantitative descriptions tend to hide the qualitative aspects of the experiences I am analysing. Therefore the jump from quantity to quality, (which I can observe to happen while I am experiencing, and also while I am experiencing the analysis of my experiences), will be a central problem . I shall have to handle all questions involving quality, (for instance: what is now called "the quality of life"), as questions that impose a not quite quantifying mode of articulation, and the answers to them will not show easily how and where they are inconsistent, (untrue).

In my efforts at quantification I shall not follow the various methods of traditional science, which stem from the pre-conceived idea that there is some mathematical structure hidden behind the things themselves, some general and mathematically stateable "laws" of nature and culture. I shall try to quantify the relations which the things establish with myself, and this will provoke quite different sets of questions. I shall have to ask what amount of effort an experience costs me, and what amount of satisfaction it gives me, and similar questions. I shall have to establish what will amount to budgets interms of space, time, impact and so forth, for each experience I am analysing. I shall thus be able to articulate in numbers what relation any thing has established with me. (For instance: this typewriter can thus be shown to have established with me a calculable number of calculable relations, and this will be the essence of the typewriter for me.) By having done so, I shall have articulated the mathematical structure of my world. This is a new aspect of the Husserlian "mathesis universalis", on which any future science is to be established. It is new in the sense that the analysis of no matter what experience of a thing will lead, almost automatically, to a "general theory of my world". For the following reason:

My world is structured by a unique and consistent set of relations, because I occupy a central position within it. I am the place of converge of all relations within it. This consistency of the structure of my world

(which I can state mathematically, as in any other sort of code), is therefore not something which I project into the world, or which I discover in it, but is the obvious result of my living in my world. Therefore if I analyse correctly a can opener in terms of cost and satisfaction, interms of time and space input and output, and so forth, I shall have penetrated the mathematical structure of my entire world. Now this is a "general theory" in a quite new sense of the term. It does not amount to a map of a supposedly "objective" world. It is a map of a concretely lived in world. Which means that it can be verified immediately and applied to immediately in praxis. A "general theory" based on the analysis of a can opener does not only reveal the essence of the opener, (its "being-for-me"), but by extension and generalisation the essence of all the things in the world. And it allows me to manipulate the can opener, (and by extension and generalisation all the things), in accordance with this essence, and thus change myself with it in accordance with the essence of my world.

Now herein lies the central point of the new scientific attitude under discussion. For traditional science knowledge is, among other things, a way to dominate the world, to change it according to some pre-conceived models. For this attitude knowledge is a way to dominate my own life, namely to change my world and myself with it. And to do so not according some model, but according to its own essence. And I find that, predominantly, the world I live in is an established apparatus. Therefore, for me here and now, knowledge is a way, (not to change the apparatus, and even less to change nature), but to lead a dignified life within the apparatus. It is the problem Kafka states pre-scientifically, but I can now state it in terms of exact science. The result is, of course, the abandon of every ideology and every political commitment, because those can be shown to follow pre-conceived models. Its aim is to know the apparatus scientifically, i.e. know it in terms of its relations to myself, and thus be able to manipulate these terms, (and not the apparatus "in itself", or any other metaphysical conception of it). This explains why such an attitude is felt to be an abject capitulation in the face of a reified if not deified, apparatus by those who are politically committed. But this is a totally mistaken feeling, for the following reasons:

Every experience I have is the experience of a thing, in the sense that to experience is to "reify" the experienced. Therefore, in fact, the apparatus as the dominant part of my world, is experienced as a thing, and I am mistaken if I love it or hate it: I should try to know it. Political commitment is the result of pre-scientific mythical thinking. But there are very rare instances in which the thing experienced imposes a relation on myself, a relation which may be called "love" or "friendship", and through which the thing changes into what I might call "my other". As a scientist must obediently accept this relationship which imposes itself on me. I ca

not "make love", or plan a friendship. I must fall into it, as it imposes itself on me. Now the apparatus is not one of those rare instances, it is a set of things, and this is all there is to it. If I love it or hate it I falsify it, because I "make" it. On the other hand, those rare instances that do impose love or friendship on me I cannot try to reify, as tradition al science does with its pre-conceived "objectifying" methods, because in so doing I would falsify them. I must accept those rare instances as my others.

The moment I accept this there are a few others with me in my world. The whole world becomes a mediation between myself and my others. Every thin becomes a channel of communication between myself and my others. In the last analysis this is the purpose of my making an inventory and systematising the world: to discover it as mediation between myself and my others. Therefore the theory of communication is the science that should encompass all the othe and must start from it and come back to it in all my scientific endeavors. This is the reason why the feeling that such an attitude is capitulation is totally mistaken. It is, on the contrary, an attitude which always aims at the other. It tries to know and change my world for my other. (I try to know and change the can opener not primarily for me, but for my other, because the can opener stands between myself and my other, and also because I can communicate through it with my other.) Now of course such an attitude is not "humanistic", and in this sense the objections to it by those politically committed are not mistaken. The commandment "love mankind!", (for instance: love 800 millions of Chinese), is, for those who assume such an atti tude, an ideological statement and devoid of all meaning. But the commandment "love thy neighbor" assumes, for this attitude, an exact, scientific, meaning, because the term "neighbor" can be quantified, and the term "love" can be translated into scientific action. In this sense the new scientific attitude is very close to the Judeo-Christian tradition, (much closer than traditional science), because it accepts religious dimensions, (and ethical dimensions), as aspects of the mathematical structure that orders my world. This is therefore no surrender in the face of the omnipresent and omnipotent apparatus. It is, on the contrary, a scientific approach to it, having for an aim the others.

This paper is just a sketch of the fundamental attitude which inspires the work of Moles. It wants to show its post-Kafkian climate, its phenomenological basis, its scientific rigor, and its religious background. My thesis is that such an attitude is not isolated. That there are many attempts in the same direction, and that Moles's is just one attempt, thoug it is specially revealing. And my thesis is that if we are not to be devoured by an ever more powerful apparatus, (in which the traditional scien tists are important instruments), efforts like these can save us. They mi prove themselves to be more revolutionary than are those commited to poli cal revolutions.

that it preaches love of mankind, (of 800 millions of Chinese), but it is deeply committed to man in the sense that it preaches the understanding of the world for the sake of a few beloved others. In this it is much nearer to the judeu-christian commandment "love they neighbour", than are most of present political commitments.

Now all this is nothing but a superficial sketch of Moles's endeavors. It is meant to show the post- Kafkean atmosphere in which they go on, the phenomenological basisi from which they start, the scientific disciplin in whoch they develop, and the ethical and religious background against which they are silhuetted. The important thing about them however is the fact that here we are in the presence of the rise of a new science. I do not say that Moles is the only representative of this tendency toward a superation of our crisis. But I do say this: if we are not to be devoured by the ever more powerful apparatus, of which traditional scientists are important instruments then it is efforts like Moles's that may in the end save us. In this sense, after all, Moles is more revolutionary than most of those who call themselves politically committed to revolution.