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ECONOMIC THEORETICS

The economic has to do with life support. It doesn't have to do with anything else. It doesn't have to do with scoiology. It's got to do with the way society organizes itself, to maintain itself, to provide food, shelter and clothing for all its members. And the political has got to do with social organization. It doesn't have anything to do in one sense with seeing to it that people get better. It's got to do with the processes by which a community holds itself together as a social body. And then up here I'd like something like human consciousness. The cultural has got to do with creating, sustaining and maintaining human consciousness, which is a social phenomenon. It's not a mystical phenomenon, it's not an individual phenomenon--it's a social phenomenon. Save the cultural processes go on, human consciousness does not go on. And none of these ever goes on without the other two.

Save you have human consciousness, there is no such thing as human life support, there is no such thing as human organization. They are impossible without shared images and languages, etc., by which these processes go together. Save people have food, clothing and shelter, you have neither consciousness or social organization and save you have social organization, again neither of the other two would exist. Those are three poles of one single on-going-ness.

Keep reminding yourself of putting flesh on that down the first three or four levels over and over again so that you begin to see that any one structure that you bump up against has in its midst every one of the seven hundred and twenty nine sixth level social processes. Then you've got to step back and say for the purposes of our analyses that where these triangles fit or where the social processes go on is always in a perfect community, one that is self-sustaining. A family is no longer self-sustaining. Ford Motor Company is no longer self-sustaining. You could point in Ford Motor Company or in a family to all those processes going on at which this dynamic is clearly defined that is only in a perfect community, which at the very least is something like a nation-state and probably you'd want to say although it is formed, it is the globe. That's the lowest perfect community, the common form of the perfect human society or the self-sustaining human society. There is a relatively independent commerce or political arrangements with the moon so far, but when the time comes the perfect community for which the triangles will have to be built will have to be the Solar System and one day the universe.

This is important when you get over in the economic because the trap that you tend to fall into is to chase after the enormous mountain of expertise that every one of us, whether we know it or not, has had in the economic that, at the same time, isn't rationally ordered. We would list economic words like cost and price, supply and demand, depreciation and interest, investment, savings, stocks, bonds, markets...on and on, - a long list of economic words, yet you need to remind yourself that you are dealing with this and not a firm. These triangles are't built to explain Ford Motor Company, they're built to explain how a social body, how the social process of a community organizes itself to produce life support. We've been fighting through the whole work to keep production from being the processes by which a company runs. This is the process by which a society organizes itself to produce the necessary goods and services to maintain the physical existence of that society. Distribution is the process by which a society hands out its physical given according to whatever values originate in the political or the cultural, but this is the process by which <u>the community</u> does that job.

To say a word about resources, we struggled for a long time as to how it is that resources is a process, how it is that resources isn't just a thing. The problem has been an illusion in our own minds rather than a problem in the way we've operated. To give an example: there's iron ore out on the courtyard, probably quite a bit of it if you dug it all up, but it isn't a resource because it hasn't been named a resource or it hasn't been named as valuable relative to this social process. An economist would say the alternative sources of iron ore (our courtyard) while externally close to the stell mills, is not a very good place to go for iron ore, although in principle, it exists. The value we're righting over here is to maintain this within the economic realm. Basically this is a cataloging of the physical beginnings, the foundational of the foundational of the foundational basis of the material life of the community. At the same time you're not doing scientific analyses, you're not doing geographical analyses. You're out to maintain that the economic sphere is the struggle here and to keep distribution from becoming the political. That's mainly over against our own guilt about showing up as affluent people in a world where affluence is not.

Now I want to go back and say one other word in terms of these kinds of relationships of resources, production and distribution. We've talked quite a bit about Schreiber's insights that we no longer operate in an economy of scarcity but in an economy of abundance. We can no longer use that category of scarcity as a controlling factor. In terms of the model, what that said is that some of the foundational thinking in economics that was done 100 or 200 years ago saw clearly that the controlling factor was here in terms of resources which always show up as scarce or which are always the limits in the midst of the economic processes.

The revolution in technological resources and the whole revolution in production means that the resources that are resources are clearly created resources. The insight that we no longer have a scarce economy has to do with the shift from depending simply on natural and human to technological resources and the whole expansion of production. The way in which it's most easily seen is the difference between a developed and an underdeveloped society in terms of economics. The point at which this process develops is in terms of production, in terms of creation, the creation of that which is to be distributed, the material basis of goods and services that are necessary to the life-support of the community. That kind of flow, the distinctly human of the human in terms of production, in many ways is the key.

The revolution, what's made economic the giant has not been primarily here, it's been here in terms of the revolution in the productive process. This was what Marx showed up in the setting in which he began to rethink the economic processes. In our time, the rethinking has got to be done in terms of distribution, the realization that didn't come until Mill in the middle of the eighteenth centure that production is not the same as distribution. Adam Smith's image of the way things got distributed, was simply in terms of the way in which you participated in the productive process. So if you let somebody use your building you got returned of the output of society because you had your building used. If you let somebody use your labor, then you got something out of the society because they used your labor. But if you didn't contribute anything, you didn't get anything. The distribution of the goods and the services or the distribution of the material benefits of the society is the distinct element either from the political or from the rest of the economic. It's not subsumed in either place.

In terms of resources, the foundational in terms of the resources is the natural resources, the various elements of the environment in which human beings show up. It's the human resource which is just simply the people that society has on its hands. And then there's technological. By technological here we don't mean tools. That's over in production. This is just very simply the know-how. It's the body of wisdom that lets you know where to go to find roots and dig them up. It's been a resource from the earliest time. It's the body of wisdom that lets you know how to split an atom so you can have a nuclear reaction, but it's the know-how, the know-how. There's nothing material at all at the top of the triangle around resources. As you begin to move down to the next level your three categories in terms of the natural resources are your irreplaceable reserves or we call them the basic reserves in terms of the natural resources or these are your petroleum deposits or your iron ore deposits. They are those things that once they are used up, are gone, period. The category over here that we've used, the ecological flow, are those resources that need to be maintained, that replenish themselves or participate in a process of replenishing themselves. Here's where the whole scream of people about ecology comes. We have trouble at this level in not strictly going into scientific terminology but what you're talking about,...bauxite as well as gold and silver or your reserves of copper or whatever...the basic metals. In terms of the usable compounds, things like salt that are available for use. The refinable compounds are those things were you have a process for extracting something like salt from sea water...compounds are those basic chemicals which when put together create usable substances. And in terms of the primary fuels: solid combustibles, liquid combustibles, and gaseous combustibles; there primarily you're talking about fossil fuels, petroleum and coal and natural gas. The ecological flow in terms of the environmental cycles, fertile soil, available waters and given atmosphere that's obvious. Plant populations there: food plants, fibrous plants seed plants. Now there have been questions raised like "why don't you have a more inclusive breakdown there in terms of something like, deciduous trees. And for a while we had things there like bacteria in this area and began reflecting that if you're talking about economics the way you break down plant population isn't relative to the biological interactions of same, that comes someplace else under maybe fertile soils or available water, but here you're talking about the relationship of those givens to economics, in which plant population becomes a resource is what you're talking about. Algae either shows up as a food plant or else it's got something to do with maintaining the available water...for example. And then in terms of the animal population, the same kind of breakdown in terms of the edible meats, the saleable byproducts and the valuable offspring (eggs, that's right, that saleable byproducts). Saleable byproducts are things like wool, bones to be ground up into glue, things like that.

Then the accessory improvements in terms of access systems, transportation facilities, - that's just the given system of roads that's a fundamental resource. The commercial facilities are the given places to sell the corn liquor you made back in the hills. And then communication facilities: if somebody on the other side of the hill needs 12 horses and you've got 12 horses, but you've got no way of knowing that the guy on the other side of the hill needs 12 horses, then the 12 horses aren't available resources...that's communication facilities. Then the territorial development in terms of the already cultivated land...showing up having a 40 acre corn field without trees is a different resource than having a 40 acre corn field with trees. In terms of worked mines...having an iron ore deposit with

a tunnel leading to it is better than having an iron ore deposit without a tunnel leading to it...harnessed power if you'll notice is at the top of the top of natural resources in terms of the biological sources and that's like animal power, human power; the chemical sources, that's the ability to burn gas and produce power and not just heat; and the mechanical sources--rushing streams, tides, wind, gravity, whatever.

Then the human resources which is the next page: the resident populations, the labor divisions and the employable skills. In terms of the resident populations, first just the general profile in terms of the census levels just pointing to how many people you've got, the sociological composition...how many people do you have in the laboring class, how many women do you have, how many children do you have; and then the growth pattern...is your society getting younger or is your society getting older...Fred has a speech all prepared on an article by Peter Drucker that fits in here that for the past five years 17 year olds have been the biggest single segment in our society and that beginning this year they are not going to be the biggest segment again for 20 years...for 2 decades...that then has a lot to do with the labor market. For example the school teachers. The reason that so many people have gone into teaching beside the liberal mind-set has had to do with baby boom which is starting to collapse in terms of the 17 year olds no longer being the largest part of the population. This also means then that we're going to have too many teachers, including the 17 year olds that are already in teacher training colleges, which is going to necessitate some kind of reshuffling. Somebody suggested that's shy we've started pre-school, because we have so many extra teachers. I don't know, but that's what you're talking about there, the growth pattern and the relevance of that as a resource in terms of economics. And then the geographic distribution...the settlement design and that's got to do with having an urban population, having a rural population...or where are most of the people. Then the regional specialization: or more people who live in Nebraska tend to be farmers than in Massachusetts where there is a smaller percentage (of farmers). The geographic distribution that has to do with the kinds of economic activities that go on with that segment of the human population. And then the popular mobility or the ability of that human population to move to where the jobs are which has got to do with many, many things. If you discover oil at the North Pole and can't get anybody to move up there and get the oil out of the ground then you've got a problem. And then the engagement availability and there you're talking about the percentage of people who are in the working force or the percentage of people who are available to engage in productive activity in terms of the level of the common health. That is to say, the number of people who are too weak to participate or aren't strong enough to participate in the economic process. And the seasonal climate there having to do with farmers not having anything to do in the winter or carpenters, the whole construction industry which comes to a standstill at certain points during the year and then in the summer months picks up. Well, if you live on an island and the whales come past the island two times a year, once in the fall and in the spring to go and have a labor force that radically increases in the fall and in the spring to go and hunt whales, but that needs to decline and move into some other kind of activity in other times during the year. Traditional barriers are those kinds of cultural values that keep some people out of the labor force, whether that's child labor laws in this country or whatever. Labor Divisions is the dividing up of the kinds of jobs in terms of sex, age and the status, which maybe simply talks about as whether or not a person has a B.A. The occupational arenas as to do with seeing to it that you have enough coal miners in your society not necessarily seeing to it that they

are all mining coal, but seeing to it that you have enough coal miners, enough people who are willing to be farmers, enough people who are willing to be toilet cleaners to keep the thing going. It has to do with the division of labor, the commercial tradesmen, and the direction-givers. They're just the process by which a society sees to it that the human population is available in the divisions to do all the different types of jobs. And then the primary specializations in terms of those who specialize in physical labor are those who specialize in kinds of crafts: plumbers, electricians, carpenters, canoe-makers or whatever. The basic professions, maybe witch doctors, medical doctors...the employable skills are the essential abilities, the manual facilities. If you have four hundred people who trip over themselves all the time, that's unhelpful relative to many kinds of productive activity. Basic literacy or, accessibility to the common communicative symbols system of a society, or being able to speak the language or being able to write the language is a fundamental kind of criteria for participating in any kind of a developed economy. The skill of critical judgment or being able to make decisions and seeing to it that in any population provision is given to people who can make responsible kinds of decisions. The marketable prowess in terms of practical skills, practical training in community responsibility. Practical skills just has to do with seeing to it that people are equipped with the skill of carpentry or are equipped with the skill of riding horses or whatever. The technical training there points to having those who are trained in a particular skill of making tools. And then there is marketable prowess in terms of community responsibility...seeing to it there are those people (and this is an interesting category) who are equipped with the skills of gaining public support or community respect, or here's where you're talking about a business that has a good reputation. The maintenance of that kind of trust...I think of Mr. Duval over here at the gas station who you could trust to give you an honest estimate and give you the best possible deal on getting your car fixed...which has got to be radically redone in our time, obviously, and yet which is part of the resource of the economy. Continual development there points to the process by which the human resource is continually upgraded, in terms of various kinds of apprentice programs, retraining programs and normal advances there or promotions or providing the avenue which motivates people to upgrade themselves as a resource in terms of the economic process. The technological resources are the extractive procedures, cultivation technique, the know-how relative to farm management, the know-how relative to plant hybridization. In one island society you're not allowed to go and look at your neighbors yams because he has a right to develop a new species of yams in private and to increase his harvest. It was considered just terrible if you went and spied on your neighbor. You waited until he had thousands of yams that were bigger than anybody elses and more tender and then he'd show them all off at once. Soil conservation: the know-how that has to do with putting the fish in the little hole with your corn to maintain the soil or plowing across hills and not up hills to keep it all from washing away...that sort of know-how. Animal husbandry in terms of game-management, selective breeding and efficient feeding is the same kind of breakdown here...you're just talking about the know-how relative to using the animal resources. And then the mining procedures in terms of geological analyses, that is your know-how has to do with whether you take a forked stick to find things or setting off blasts and measuring them on seismometers or whatever. Refining processes, and there I'll go back to my $10 million in gold. The reason $10 million in gold is sitting there is because the forest service will not allow the company who owns it to use cyanide, which is the only refining process they could use to refine that amount of gold out of the amount of earth that is there and have it be useful. But refining processes...what you're pointing to is

the method or the know-how relative to taking reddish brown earth and turning it into iron. And then the earth-moving skills, there pointing to the know-how relative to getting at them...to the mineral deposits, knowing how to build catapillar tractors, or knowing how to dig holes in the ground, whatever. The industrial arts...the metal crafts, alloy invention, that's the know-how relative to the combination of carbon with iron to get steel. Forging processes...that's got to do there with knowing about anvils which I guess was a great invention when they discovered that you didn't have to just try to bend hot metal but you could lay it on something and hammer it into shape. And the machining techniques relative to knowing how to shape and utilize the various kinds of metals. The chemical applications in terms of the medical and the agricultural and the industrial is pretty obvious there. And then the third there, the industrial arts the construction expertise pointing there to the know-how in a society relative to thatching roofs, relative to making coconut mats, civil engineering or the now-how relative to laying out roads, constructing roads and dams and whatever. And the architectural art in terms of the know-how relative to designing those kinds of buildings and structures and whatever. The innovative means: instrument creation, design capabilities, and technique inventions is the know-how relative to creating expensive tools or those tools which extend the capability of human power in terms of increasing the delicateness by which that can be used. That is, discovering the know-how that a rock in a hand is better than a hand by itself relative to crushing stone or whatever. And then in terms of the basic machines, there being able to design and recombine levers, pullies, wheels and axles and all those kinds of things we learned about in physics in order to create and then you want to expand all those kinds of combinations so that you end up with things like automobiles, things like jet airplanes or whatever. And then the instrument creation relative to the regulatory instruments... that was the day in which somebody discovered he could take another stick and lay it along side his knife and make the line straighter than if he just tried to move it by himself, was a great technological advance in terms of cutting hides. Something like that is what you're talking about there. The know-how relative to design capabilities is the facility of reducing material or symbolically representing material is-ness on paper,that is, being able to draw plans or charts or whatever...there just in terms of technical drafting being able to just lay out whatever industrial patterning...your know-how relative to making refrigerators that take up the least amount of space and provide the most cold inside. And then in terms of the artful layout, also creating refrigerators that look good is kind of what you're talking about there. Technique invention in terms of production combinations. . .is your know-how relative to being able to create new processes of production. Henry Ford invented the assembly line, that would be an illustration of that. And administrative schemes. . .whoever it was that thought up bureaucracy or re-invented modular industries where each small unit in one sense is self-contained in operating on its own which increases the level of accountability and at the same time increases the productivity, not because you're doing something different with the material, but simply because of the organization of the human resources and entrepreneurial skills. I suppose an illustration would be the Whamo Corporation, that makes hula hoops. That's just got to do with your know-how relative to sensing out what it is that is needed and where there are resources that are not being used.

We began to run, and you.ll see that in a minute, into a contradiction as we worked in terms of what you hold here as productive instruments and what you hold over here and the way we decided to do that was to say that your given, your final given (and a lot of people say that what you've got in here is your natural resources, your human resources, and your capital resources or your produced

resources). What we've done is to pull virtually anything that makes like a real hammer over here and held here simply the know-how which is primarily your resources and there talk about Japan and began to see that that's what you're talking about -- the resources, not the thing itself.

Question: Is this a comprehensive sheet of know-how? This is know-how relative to the economic. It was exciting to begin to fiddle with how it is that communal living comes down here or relates here in terms of the technological resources, but didn't want to end up with all human knowing here either.

Question: Then typewriting would go down here and chart making would go up there? Probably abstract theoretical physics is probably up here and the practical know-how of the application of that know-how goes here.

Buss' question: The capacity to order a whole bunch of decisions very quickly would have the same relationship as that straight edge so that very likely the computer is related there? Yes.

Mathews: You might say that the computer made mankind aware that this was not only a resource, but the critical resource. Computer is behind that whole thing although it's located in a particular box there as Jim said.

Question: Onn the resources, labor division, occupational arenas, are you holding the service dimension under commercial tradesmen, e.g. automobile repairmen? those who perform the service function? Yes. . .well, I suppose I'd put them under goods producers there not talking about goods as things like a clean plane.

In terms of energy know-how also there in terms of instrument creation and again what you're talking about here is the practical dimension of that in terms of its application. Let me move just very quickly thorugh the other two points, the key areas of breakthroughs or difficult areas where you need to spend some time and come back to this another time. Over in terms of production instruments and what you're talking about there is foundational to production has to do with first the capital goods or that practically before you could take the know-how of making a fish net and have a lot of people make fish nets. . . Mathews: James, I don't think we ought to go into that kind of detail.

Mathews: One thing is critical in those human resources. You must not get that mixed up with training. You are clear about it. It means you've got to get a mass of people some of them are male and some of them are female, some are old, some are young, some have certain skills, some have other skills, some have levels of critical intelligence that others do not have. Don't get the training mixed up. This is just a profile of. . .oh, yes. . . and some live here and some live over there and some live across the river. That's what you're dealing with, not training. It just occurred to me that we might get mixed up.

McCleskey: What's the process of training taking place relative to change?

Buss: Right. I was going to say if training were someplace else. . .that was one of the lines I drew down at the bottom was critical judgement. If a man's not a scientific man he doesn't see a decision come by.

Mathews: It occurs to me too that we're learning about training them. You can only hold so much of this in your mind and to shift it is almost impossible. Now, we've got to do some thinking about this. But the other thing that occurred to me, if every one of us were going to train them this summer in this area and cannot do what Jim did we cannot do it. This is just hard work and any point that we don't go over here, we've got to go over by ourselves, you're lost without it. It wasn't until I was able to say every box on the sixth level that I really knew what was going on above. You see, it's very simple to see economic and political and cultural on that

first level and you think you know it. You do not know it until you get down to that sixth level. You are abstracting in a way that you are utterly helpless. Sometimes in some of these you wish you were down one more level.

Wiegel: The key in working off the triangles is to maintain the arena that you're in. You've got to remember that its economic, resources, natural resources.

Marshall: To me that's the main problem, how do you combine the focus of consicousness with the detial that you need. It's like you need to decide that you're going to do down this row as the main focus of your consciousness or down the next row over as the main focus of your consciousness and just sort of roll over all the data that's left you and then sort of go back to the big areas in concluding or something. For where the thing really beings to live is when you see the hwole reality of technological resources like that was a breakloose for me this morning, just to see the relationship suddenly of technological know-how to productive tools there and the cultural wisdom up there and once the image of that broke with all that detail under it, you had something. Before then you jsut sort of got lost.

Mathews: The same thing happened to me in terms of human resources. I've used that term again and again and again and then suddenly been forced to say what in the damn hell you mean by that. And one of the things you've got to get down there. You've got to discover how confoundedly ignorant you are. . .just period. When you start to write a proposal, can you just imagine this . . .some little smart alec ten year old kid like me in this area sitting down and saying what ought to happen in terms of human resources in this world relative to the economic processes. This gives you at least a chance to know where you are going to be stupid.

(Wiegel on Production)

Just move with a pencil very quickly thorugh and either mark the boxes that you've got no idea about or mark the boxes that are clear to you and then spend out time more in he sixth level more in questions than in actual talking through.

I find it extremely helpful to decide which of the two words in each one of those boxes is the most important, and it's easier to learn one word and the you can always pick up the other one. It's precisely to talk about the dynamic. It's that one word that nails down the point and sometimes you have to cheat a little bit and use a different word that you really couldn't use in thy model to nail that point down. When you get down to onw word then you've dot a way of holding very simply in your head that economic just has to do with nine things and don't get confused with which half of those it has to do with. As you are studying on the economic, probably the best source in terms of production and distribution for getting ahold failly quickly of what that process is is Heilbroner's The Making of Economic Society where he bridges the gap there between specificness in the sense of just dealing with isolated problems like the depression or the underdeveloped countries which is one type of economic literature and high theories by doing an historical presentation. His first introductory chapters he spends about a page and a half on production problems and another page and a half on the distribution problem, which is prose and not in our language and gives you a very quick feel after the whole of what's going on.

I talked yesterday over here in terms of the resources and probably spend a bit too long and I began to reflect on how it is you need to give these lectures. More and more I think what you've got is something more like a 20 or 30 minute thing. A very quick lecture where you get down to the fourth level and you get them clear on the chute the're in, that specialists are going that way and no other way, that supervisors are going that way and no other way, that labor is going that way and no other way, till they get clear at that level what you are pointing to and then you could almost back off and let people stew and go through their own work and raise questions in a kind of workshop or a question and answer period in terms of

the 5th and 6th levels which more and more I'm convinced are not helpful. The 6th level under specialists is not helpful relative to production. It's helpful relative to specialists in terms of forces, so almost by the time you get down there, you're doing a different lecture. For me, after the fourth level a shift happens so that what's going on there for example production forces specialist expertise. . .what's under that is relatively unhelpful for illuminating the production process. It illuminates what you mean by specialist, but in some way that's a different question. I wonder if in terms of this summer, it's not going to be wiser to move very quickly through to isolate the nine basic dynamics at any second level and then spend the time with the group pushing at the places that are unclear or dealing with people's questions in those areas. Although you ought to have a couple of favorite examples at the 6th level just to show them that you know what you're talking about.

In terms of production, Heilbroner said there are three elements to what he calls the productive problems in the social process and the first one is how is it you can utilize human effort for productive purposes and that's the question of the productive instruments. The second question is how is it that you call forth a sufficient amount of human effort to produce the goods society needs, and that's the process of the productive forces; and the third is how is it that you allocate that effort, or how is it that you direct that effort so that it produces precisely those goods which that society needs. Well, here begins the bridge of the distribution. The first question is how and here this on a communal pole and you're determining a category something like human effort and the first question is, how do you engage human effort in the productive processes. And that has to do with the instruments of production. The second is, how do you call forth a sufficient amount of human effort to produce the goods society needs or to produce a sufficient par of the goods. And then third, how do you direct the human effort or allocate that human effort so that it produces the goods society needs. Like how is it that you make sure you have enough coal, enough baking tins, enough red shirts whatever and that's got to do with the productive issue which is a different quesiton from up here in the question of distribution. But that kind of simplicity begins to give you a sense of what you're talking about. Now, we go over here and talk about the instruments that what is it is that's foundational or that's basic in terms of production processes is not the know-how which shows up over here in the technological resources, but the having available of the actual materials, the actual tools of whatever to produce things. For example, when I sit down to produce a bow, I've got to take advantage of the resource of knowing how to make a bow, but I also need a knife, I need some wood, and I need to have whatever kind of social process it is that lets me have the time to sit down and make a bow instead of weaving grass mats or go out with my bare hands and fish or kill something.

Now it was here in terms of tools quite obviously that Marx focused as the primary point at which this whole process was getting changed in the last 100 years or it was the revolution in the creation of new kinds of tools of production in terms of the industrial revolution machines, different forms of power, etc. that was revolutionizing it or was a change-creating dynamic in the midst of the productive instruments in society that having a hammer or having an automatic machine that has a lot to do with how effectively you can use any given element of human labor or any given element of the productive forces in producing the material goods. The day in which somebody discovered the wheel, the day in which somebody discovered that when you threw a stick you could throw it faster or propel it with a bow. All those have to do with the sotck Now my key word here to distinguish the instruments is that you are talking here primarily about the stock or about the available instruments of production. So keep that apart from the technological resources up here; that the instruments of production have to do with the available inventory in terms of capital; the inventory in terms of stored up raw materials; the inventory in terms

of equipment, facilities or whatever. And then on the top of that is the category like claims inventory and there you're pointing to the ability of the producer to command somebody else's goods. Now the form we use in our society is called money, but that process went on long before there was something such as money. But it's the going-on-ness in terms of process whereby not having 67 logs outside my cabin in order to make canoes, I can tell the guy next door to move his logs to my yard and he will. Now the symbol of that process in our society is thattI pay him for the logs, bu that process whether it was using beads, or wampum or paper or just mutual trust agreement has gone on from the past. You give me enough wood to make a canoe and I'll give you one of the canoes is the manifestation of the category of investment although finally investment shows up up here on the top of exchange. The capital here, just the accumulated surplus that's necessary to move beyond any kind of subsistence level of economy or when you decide to turn people into making fush nets full time or making bows and arrows or building roads, you have to have a way to keep them alive because they're not directly producing food or they're not directly producing clothes or whatever. Now you can do that, you can accumulate that with the category of time which means you have people work on the roads at night rather than sleep so they can in the daytime continue to hunt food. But that basic kind of accumulation is fundamental to the development of a productive society and the accumulation of tools.

The problem relative to production in India (let me give you an example) has relatively little to do with their not having access to the technological know-how so much as it does with their not having access to a sufficient amount of capital goods of access tools in their hands to begin that kind of production, can you see that? The problem isn't that they don't know how to make steel. The problem is that they don't have a way to get ahold of steel mills. They don't have a way to get shold of bulldozers to make steel mills in terms of their own development. And here in terms of the processes as the instruments of production there again what you are talking about is having available factories or whatever. Over here in terms of the forces of production, here you are talking about the process of calling forth sufficient amount of human effort, first just in terms of basic human labor and this isn't the same thing as over there naming that as the resources. Here you are talking mbout the processes by which you actually engage human beings in the production processes of society, in terms of the employment procedures. How you get people hired and you get. . . . . .

Calling forth the productive forces of and then up here allocating the effort relative to whatever kind of standards of value the society is operating out of. Now, on the levels below there where is it that you have questions? or unclairties? It is a much more difficult area, relative to getting down to the concretions. (Down on the right human contingency. That has to do with taking into account I suppose failures isn't a good word. But that is the process of say going out tomorrow and what if it rains, what if on the last day of August it hails?

The category of time shows up in many, many different kinds of ways -- that when you make a bow and arrow, you never make a bow and arrow, you don't htink you are making a nest egg because you are going to need it tomorrow. For awhile we had time as one of the fundamental resources. It wasn't too clear how it fit under the economic resources, so we took that out, but that kind of category relative to the questionableness or the amount of prediction that goes on in the economic process comes up over and over again. Well, maybe we just better move to in terms of the instruments of production, capital goods.

Under capital goods down here under material inventories which has to do with the current stock (how many sparkplugs you have in the next room -- the acquisition possibilities, and the available sources. You see that? Now where are you -- the second page of production. You don't have to have 80,000 spark plugs if you know where to get them when you need them.

What we are trying to hold there was the simplicity of being able to say what machines do.

the problem that you run into especially in these kinds of areas is how is it that you hold that what you are talking about is a process and anytime you name anything like bulldozers are helpful in pointing to what you are talking about but do not point to the process.

The process of being about to take a material reality and shape it and cut it and hold it and be able to apply human force to it is what you are talking about with the basic devices shaping holding harness tools. How is it that you operate on be able to take a tree and turn it into a bow, how is it that you are able to take a rock and turn it into an arrow head. Is what you are talking about there. And then here, in terms of your simple machines which is why simple came here, how is it or that is the process of multiplying the usefulness of energy primarily. I don't think there is any distinction between machines and tools but a machine, what you are talking about when you talk about a machine is something which changes force. It would beef it up, it would either multiply it or it changes its direction, so that you have a basic divice which was a rock by which you could use to cut things, then you discovered that if you put a stick on it you increased the speed of that rock while you were participating in the activity of crushing. That's the distinction there, between basic devices and simple machines.

Then up on top precision implements, and there was you are talking about is how is it what you are talking about here is the directing of your devices and your simple machines. Seeing to it that when you aim your bow it goes where you want it to go, just the invention of measurement, is up here, of the kind of decision, precision instruments, the kinds of things that were needed to make tools in our society. You know we can talk about things like welding machines in the sense of thier bieng able to weld precisely the spot that has to be put together. The three categories, I suppose, here are devices, machines and precision. Or the fundamental instruments by which you can apply human force finally to material reality in order to transform it. Here you are talking about the ways in which you can increase the effectiveness of that by increasing the apeed, by increasing the force, or by changing it around. And then here you are talking about the precision with which that human

effort can be aimed at shaping material reality.

In terms of production, you mean instruments, forces, and systems. Well, the way I answered that question, I start over here in terms of resources and in terms of China, where they are rich, and have been exceptionally rich is in terms of human resources. They've got more human resources than anyone else. Which means that they come over hare to production relative to that category of assembly schemes and management the process of making decisions about what resources you're going to use in production, they are clearly going to come down hard over here on the forces. The other thing, in terms of capital that's been pulled down another level. You see on here, so that you see it a fourth level down in terms of capital goods.

India

Yeah, well it isn't really a question. You gotta be clear, I suppose. You've gotta say when you are talking about production instruments, forces, and systems are the dynamic of production. There is no one place itself. The West is in a trap in terms of this things about economics. It's been saying, you have to start here, in terms of the instruments. You have to have the instruments before you can do anything else. Now that wouldn't be what you'd be talking about when you way that this is foundational, because your forces create. . . .

In terms of DISTRIBUTION the three process you talk about are: property, exchange, and consumption. Every society, the most primitive or the most advanced, has had a way of allocating ownership, or they had some kind of form of property. Whereas the state owns everything or its got something to do with individual ownership, or a form of locating the input in terms of property, location ownership as a means and this again is a point at which Marx glances. And then up here at the property -- this is an interesting thing. The surplus that in a primitive society you didn't want somebody being a king, or being a priest all day long until they had enough of a surplus, or some way to support him while he was outside.

And here you are talking about supporting and maintaining teachers, ministers, lawyers, and the king. Everybody has to give three yams every year to the king to the king doesn't have to work in the yam field and can spend all day being king. Is what you are talking about here under property.

Then in terms of exchange: goods exchange, services exchange, and credit exchange, and when you talk about here receiving wages, that's got to do with just an exchange. I'll give you my energy today if you will give me food goods, and here probably is the breakthrough that I think is made in later use of consumption. The struggle has been how do you get the category of planning into the area of the economic without superimposing. We have been clear that somewhere in the social process had become that society that decision of how it was it was going to distribute its items of production. And in this category of the consumption item we began to see how they came in. That in any kind of planned economy you've got to deal with the immediate demand. Just the ongoing day by day by day maintenance. You've got to then also deal with the anticipated needs. So that when the whales come by the island and you go out and harpoon the whale and bring it in -- Well you take into account the immediate demand, that is, all the children and how to do the chewing on whaleskin like candy and all kinds of things like that, as well as the anticipated needs, that is, the whales aren't coming back for six months, and you hold those two together in terms of the inclusive equilibrium and probably up here is the primary place to begin to dig into this whole economic process -- here in terms of the inclusive operative philosophies.

And what is it -- private consumption? Living standards. That it is in the midst of those three dynamics that the way a society is run, or the way an economy is run that you got to balance off here in terms probably the living standards or what is the minimum tha you are going to see to it gets allocated, to the individuals, and if you will, to the West, has come down hard in terms of our operating philosophy

on this pole, whereas in terms of demanding that as much of the produce of the society is allocated to the individual, we have a higher individual living standard than anybody else. Now, you've got someone like J. Miller who is coming over and saying, you've got to hold the value here in terms of your social use. Or that while we are all rich individuals our cities, are falling apart, etc. And then you get inside the philosophy box and you get in here essentially the hard leather books -- they are very, very helpful. There have been only three primary philosophies operating in the area of economy. The laissez faire of Adam Smith, that is, you just let the individual get into that economy and operate the best of all possible worlds would happen. Which is primarily an emphasis on the individual and then the operation of society by tradition, which is that is the way it always is. And then up here on top probably the most recent and highly self-conscious of the demand economy. Or here and I changed this slightly, an economy has no goal. Or he said at the end of his general theory that if you tell an economist what you want he can tell you how to make an economy produce them. So up here for me begins -- this is the triangle for me where the whole of the squeeze of economics, of the whole economic process begins to make sense as you being to filter down, in the light of the whole thing.