



E.F. Schumacher  
Small is  
Beautiful  
Economics as if  
People Mattered

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*Chapter 7*

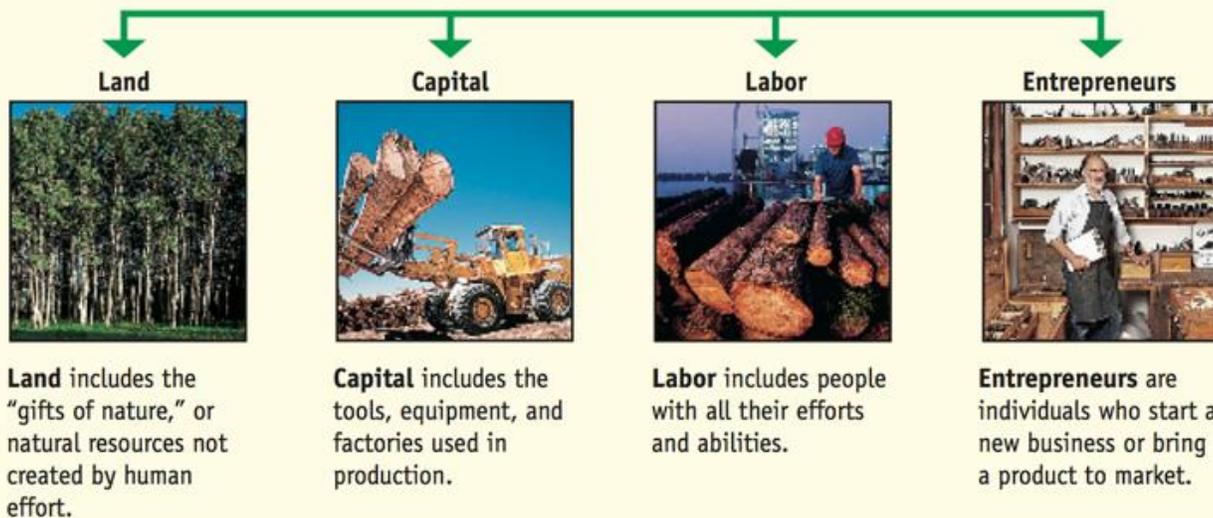
*The Proper Use of Land*

*A Lonergan Institute Seminar*

*St Anselm's Abbey*

# Factors of Production

## The Factors of Production



## The 4 Factors of Production

From *Microeconomics Made Simple: Basic Microeconomic Principles Explained in 100 Pages or Less*:

In economics, "factors of production" are the inputs used to create finished goods (i.e., the actual products we buy). In other words, these are the scarce resources that we, as a society, must choose how to allocate. Ideally, we would do so in a way that maximizes our wellbeing. Traditionally, the factors of production are:

Land (which includes land itself as well as other natural resources and phenomena – water, forests, fossil fuels, weather, etc.),

Labor (the human work necessary to produce and deliver goods), and

Capital (manmade goods used to produce other goods – factories, machinery, highways, electrical grid, etc.).

More recently, human capital – the knowledge and skills that make workers productive – has been considered a fourth factor of production.

How should a society allocate its factors of production? One desirable criterion is to use all resources to their fullest capacity or, to put it another way, to use the fewest possible resources for any given level of output (e.g., if a set of kitchen cabinets only requires 100 nails, a carpenter shouldn't pound in more). "Productive efficiency" is the term used to describe a situation in which this is achieved.

# Chapter 7: The Proper Use of Land



## **From Topsoil and Civilization:**

"Civilized man was nearly always able to become master of his environment temporarily. His chief troubles came from his delusions that his temporary master ship was permanent. He thought of himself as "master of the world", while failing to understand fully the laws of nature.

'Man, whether civilized or savage, is a child of nature - he is not the master of nature. He must conform his actions to certain natural laws if he is to maintain his dominance over his environment. When he tries to circumvent the laws of nature, he usually destroys the natural environment that sustains him. And when his environment deteriorates rapidly, his civilization declines.

'One man has given a brief outline of history by saying that "civilized man has marched across the face of the earth and left a desert in his footprints". This statement may be somewhat of an exaggeration, but it is not without foundation. Civilized man has despoiled most of the lands on which he has lived for long. This is the main reason why his progressive civilizations have moved from place to place. It has been the chief cause for the decline of his civilizations in older settled regions. It has been the dominant factor in determining all trends of history. "

# Chapter 7: The Proper Use of Land



## **From Topsoil and Civilization, continued...**

"The writers of history have seldom noted the importance of land use. They seem not to have recognized that the destinies of most of man's empires and civilizations were determined largely by the way the land was used. While recognizing the influence of environment on history, they fail to note that man usually changed or despoiled his environment.

'How did civilized man despoil this favorable environment? He did it mainly by depleting or destroying the natural resources. He cut down or burned most of the usable timber from forested hillsides and valleys. He overgrazed and denuded the grasslands that fed his livestock. He killed most of the wildlife and much of the fish and other water life. He permitted erosion to rob his farmland of its productive topsoil. He allowed eroded soil to clog the streams and fill his reservoirs, irrigation canals, and harbors with silt. In many cases, he used and wasted most of the easily mined metals or other needed minerals. Then his civilization declined amidst the despoliation of his own creation or he moved to new land. There have been from ten to thirty different civilizations that have followed, this road to ruin (the number depending on who classifies the civilizations)."

# Chapter 7: The Proper Use of Land



## **From Bulletin of Atomic Scientists, Eugene Rabinowitch:**

"The only animals,' he says (in The Times of 29 April 1972), 'whose disappearance may threaten the biological viability of man on earth are the bacteria normally inhabiting our bodies. For the rest there is no convincing proof that mankind could not survive even as the only animal species on earth! If economical ways could be developed for synthesizing food from inorganic raw materials - which is likely to happen sooner or later - man may even be able to become independent of plants, on which he now depends as sources of his food..., 'I personally - and, I suspect, a vast majority of mankind - would shudder at the idea (of a habitat without animals and plants). But millions of inhabitants of "city jungles" of New York, Chicago, London or Tokyo have grown up and spent their whole lives in a practically "azoic" habitat (leaving out rats, mice, cockroaches and other such obnoxious species) and have survived.' "

# Chapter 7: The Proper Use of Land



**Synthetic Food**

"Eugene Rabinowitch obviously considers the above a 'rationally justifiable' statement. He deplores that 'many rationally unjustifiable' things have been written in recent years - some by very reputable scientists - about the sacredness of natural ecological systems, their inherent stability and the danger of human interference with them'. What is 'rational' and what is 'sacred'? Is man the master of nature or its child? If it becomes 'economical' to synthesize food from inorganic materials - 'which is likely to happen sooner or later' - if we become independent of plants, the connection between topsoil and civilization will be broken. Or will it? These questions suggest that 'The Proper Use of Land' poses, not a technical nor an economic, but primarily a metaphysical problem. The problem obviously belongs to a higher level of rational thinking than that represented by the last two quotations."

# What is a Metaphysical Problem?



**Peter Breugel, Tower of Babel**

## **The Problems of Metaphysics**

<http://metaphysicist.com/problems/>

Many of the problems facing today's metaphysicians concern the fundamental structure of reality, the underlying material substance and the creative process that gives individual objects their shape and form, their qualities or properties.

Apart from appearances and the sense data of experiences, what is the underlying reality, what is there "really?" What "constitutes" a material object? What is its "principle of individuation?" Does a concrete object maintain its identity as it moves in space and time?

Metaphysics is the branch of philosophy that deals with the first principles of things, including abstract concepts such as being, knowing, substance, cause, identity, time, and space.

Discussion: What is the metaphysical question, or theme, exactly, that we are trying to address in Schumacher's work so far?

# Chapter 7: The Proper Use of Land



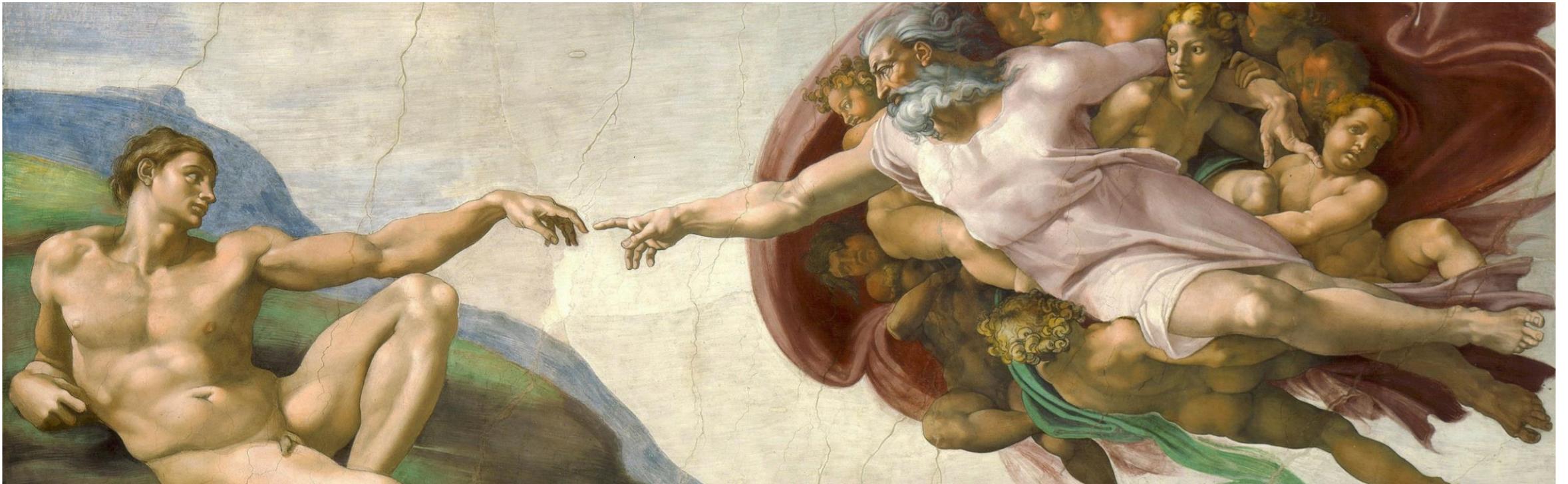
“In other words, everything depends on whether it is done by man-as-producer or by man-as-consumer.

What man-as-producer can afford is one thing; what man-as-consumer can afford is quite another thing. But since the two are the same man, the question of what man - or society - can really afford gives rise to endless confusion.”

***A virus of consumerism?***

# Chapter 7: The Proper Use of Land

"There is no escape from this confusion as long as the land and the creatures upon it are looked upon as nothing but 'factors of production'. They are, of course, factors of production, that is to say, means-to-ends, but this is their secondary, not their primary, nature. Before everything else, they are ends-in-themselves; they are meta-economic, and it is therefore rationally justifiable to say, as a statement of fact, that they are in a certain sense sacred. Man has not made them, and it is irrational for him to treat things that he has not made and cannot make and cannot recreate once he has spoilt them, in the same manner and spirit as he is entitled to treat things of his own making."



**Creation of Adam**

# Chapter 7: The Proper Use of Land



“It is no use trying to answer such questions scientifically. They are metaphysical, not scientific, questions. It is a metaphysical error, likely to produce the gravest practical consequences, to equate 'car' and 'animal' on account of their utility, while failing to recognize the most fundamental difference between them, that of 'level of being'.”

# Chapter 7: The Proper Use of Land



**St Thomas Aquinas**

“In Proverbs we read that the just man takes care of his beast, but the heart of the wicked is merciless, and St Thomas Aquinas wrote: 'It is evident that if a man practices a compassionate affection for animals, he is all the more disposed to feel compassion for his fellowmen.' No one ever raised the question of whether they could be asked to live in accordance with, these convictions. At the level of values, of ends-in-themselves, there is no question of 'affording'.”

# Christianity and 'Dominion over Creation'



**Chicken processing plant**

“The environment is God’s gift to everyone, and in our use of it we have a responsibility towards the poor, towards future generations and towards humanity as a whole. Our duties towards the environment are linked to our duties towards the human person, considered in himself and in relation to others. It would be wrong to uphold one set of duties while trampling on the other.”

--- Pope Benedict XVI, *Charity in Truth* (Caritas in Veritate)

# Christianity and 'Dominion over Creation'



***The Garden of Earthly Delights,  
Hieronymus Bosch***

"The vocation of being a 'protector,' however, is not just something involving us Christians alone; it also has a prior dimension which is simply human, involving everyone. It means protecting all creation, the beauty of the created world, as the Book of Genesis tells us and as Saint Francis of Assisi showed us. It means respecting each of God's creatures and respecting the environment in which we live....Please, I would like to ask all those who have positions of responsibility in economic, political and social life, and all men and women of goodwill: let us be 'protectors' of creation, protectors of God's plan inscribed in nature, protectors of one another and of the environment."

--- Pope Francis, Homily at Inaugural Mass, 2013

# Christianity and 'Dominion over Creation'



***Impacts of an Oil Spill***

"Respect for creation is of immense consequence, not least because "creation is the beginning and the foundation of all God's works", and its preservation has now become essential for the pacific coexistence of mankind. Man's inhumanity to man has given rise to numerous threats to peace and to authentic and integral human development - wars, international and regional conflicts, acts of terrorism, and violations of human rights. Yet no less troubling are the threats arising from the neglect - if not downright misuse - of the earth and the natural goods that God has given us. For this reason, it is imperative that mankind renew and strengthen "that covenant between human beings and the environment, which should mirror the creative love of God, from whom we come and towards whom we are journeying"."

---- Pope Benedict XVI, 2010 World Day of Peace message

# Chapter 7: The Proper Use of Land



**Van Gogh, *Factories at Clichy***

"Now, the fundamental 'principle' of agriculture is that it deals with life, that is to say, with living substances. Its products are the results of processes of life and its means of production is the living soil. A cubic centimeter of fertile soil contains millions of living organisms, the full exploration of which is far beyond the capacities of man. The fundamental 'principle' of modern industry, on the other hand, is that it deals with man-devised processes which work reliably only when applied to man-devised, non-living materials. The ideal of industry is the elimination of living substances. Manmade materials are preferable to natural materials, because we can make them to measure and apply perfect quality control. Man-made machines work more reliably and more predictably than do such living substances as men. The ideal of industry is to eliminate the living factor, even including the human factor, and to turn the productive process over to machines. At Alfred North Whitehead defined life as 'an offensive directed against the repetitious mechanism of the universe', so we may define modern industry as 'an offensive against the unpredictability, unpunctuality, general waywardness and cussedness of living nature, including man'."

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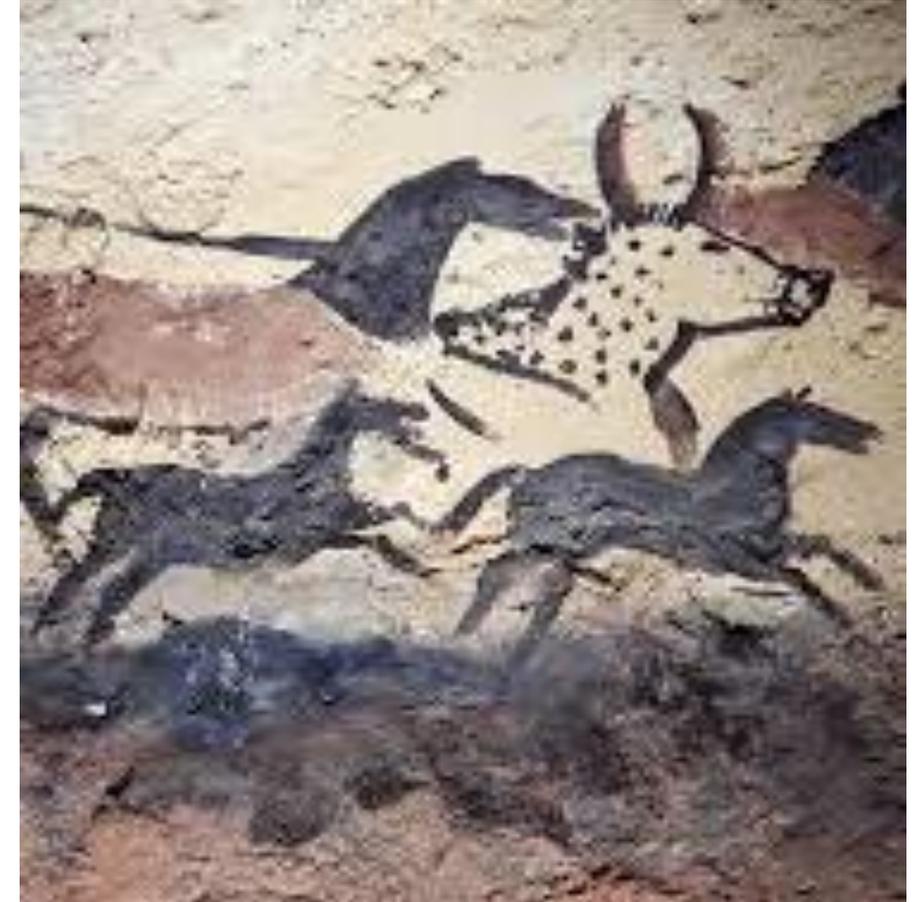
# Chapter 7: The Proper Use of Land

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“On a wider view, however, the land is seen as a priceless asset which it is man's task and happiness 'to dress and to keep'. We can say that man's management of the land must be primarily orientated towards three goals - health, beauty, and permanence. The fourth goal - the only one accepted by the experts - productivity, will then be attained almost as a by-product. The crude materialist view sees agriculture as 'essentially directed towards food production', A wider view sees agriculture as having to fulfil at least three tasks:

- to keep man in touch with living nature, of which he is and remains a highly vulnerable part;
- to humanize and ennoble man's wider habitat; and
- to bring forth the foodstuffs and other materials which are needed for a becoming life.

I do not believe that a civilization which recognizes only the third of these tasks, and which pursues it with such ruthlessness and violence that the other two tasks are not merely neglected but systematically counteracted, has any chance of long-term survival.”



***Ancient Cave Paintings***

# Chapter 7: The Proper Use of Land



***Alone in a Crowd?***

"Metropolitan life is breaking down, psychologically, economically and biologically. Millions of people have acknowledged this breakdown by voting with their feet, they have picked up their belongings and left, If they have not been able to sever their connections with the metropolis, at least they have tried. As a social symptom the effort is significant.' In the vast modern towns, says Mr. Herber, the urban dweller is more isolated than his ancestors were in the countryside: 'The city man in a modern metropolis has reached a degree of anonymity, social atomization and spiritual isolation that is virtually unprecedented in human history.'" So what does he do? He tries to get into the suburbs and becomes a commuter. Because rural culture has broken down, the rural people are fleeing from the land~ and because metropolitan life is breaking down, urban people are fleeing from the cities. 'Nobody, according to Dr Mansholt, 'can afford the luxury of not acting economically','" with the result that everywhere life tends to become intolerable for anyone except the very rich."

# Chapter 7: The Proper Use of Land

“Instead of searching for means to accelerate the drift out of agriculture, we should be searching for policies to reconstruct rural culture, to open the land for the gainful occupation to larger numbers of people, whether it be on a full-time or a part-time basis, and to orientate all our actions on the land towards the threefold ideal of health, beauty, and permanence.”



*The Agricultural Life as an Ideal?*

# Chapter 7: The Proper Use of Land



***A Rust Belt Neighborhood***

"If 'beauty is the splendor of truth', agriculture cannot fulfil its second task, which is to humanize and ennoble man's wider habitat, unless it clings faithfully and assiduously to the truths revealed by nature's living processes. One of them is the law of return; another is diversification - as against any kind of monoculture; another is decentralization, so that some use can be found for even quite inferior resources which it would never be rational to transport over long distances. Here again, both the trend of things and the advice of the experts is in the exactly opposite direction - towards the industrialization and depersonalization of agriculture, towards concentration, specialization, and any kind of material waste that promises to save labor. As a result, the wider human habitat, far from being humanized and ennobled by man's agricultural activities, becomes standardized to dreariness or even degraded to ugliness."

# Chapter 7: The Proper Use of Land



***Historical Fascination with New Gadgets***

“I have no doubt that a callous attitude to the land and to the animals thereon is connected with, and symptomatic of, a great many other attitudes, such as those producing a fanaticism of rapid change and a fascination with novelties- technical, organizational, chemical, biological, and so forth - which insists on their application long before their long-term consequences are even remotely understood.”



THE END



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