Organization Theory/Structure and Design
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Lecture - 20
Environment - III

Welcome to this course on Organization Theory/Structure and Design. Now, it is time for module 20; with this module 20 we will end the discussion on the Environment which we have started in module 18 and continued in module 19. Now, let us see what we will be talking about in module 20. So, we will be discussing the case for and against the environmental imperative.

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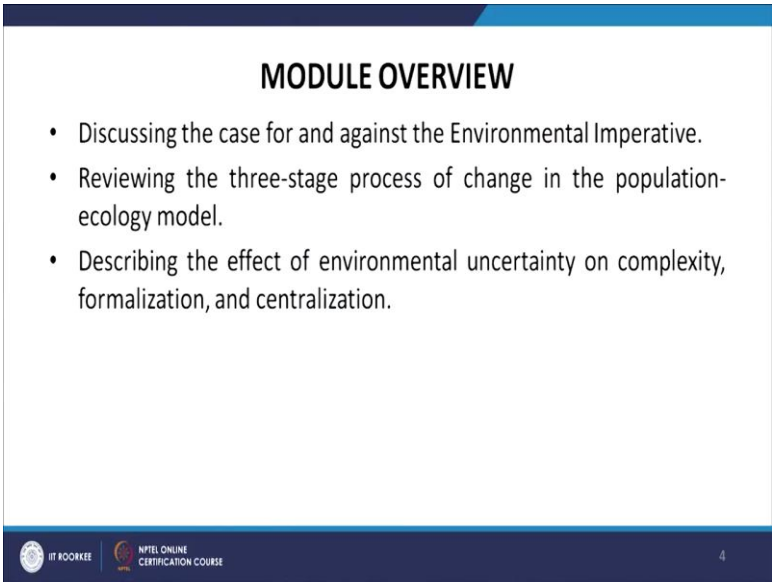

Review the three-stage process of change in the population ecology model and describe the effect of environmental uncertainty on complexity formalization and centralization.

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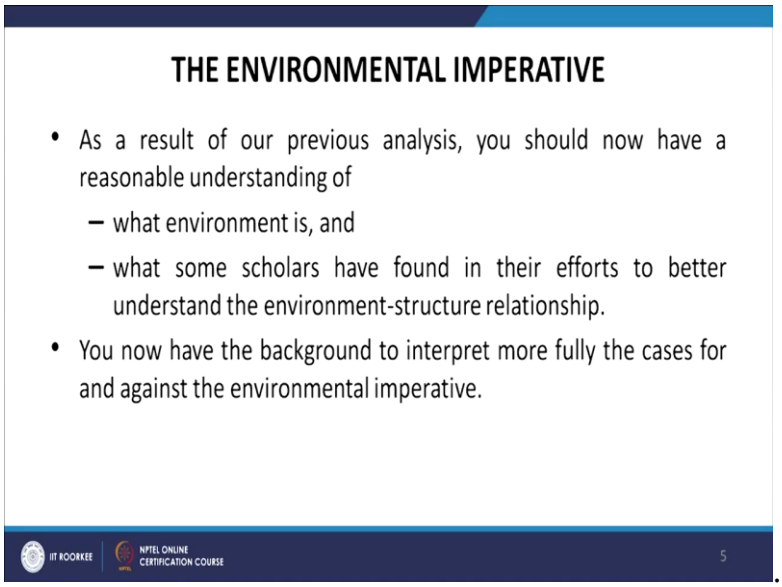

So, to start with this environmental imperative, as a result of our previous analysis you should now have a reasonable understanding of what environment is and what some scholars have found in their efforts to better understand the environment structure relationships. You now, have the background to interpret more fully the cases for and against the environmental imperative.

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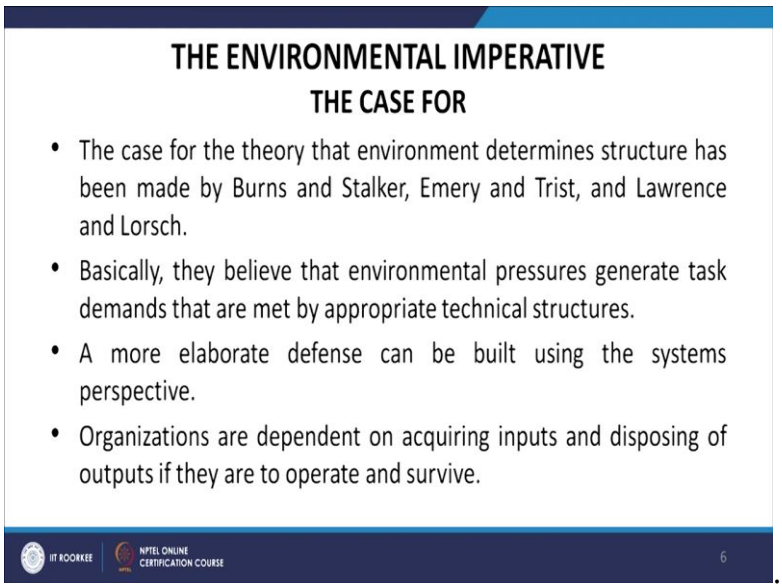

The case for the theory that environment determines structure has been made by Burns and stalker, Emery and Trist and Lawrence and Lorsch. Basically, they believe that

environmental pressures generate task demands that are made by appropriate technical structures. A more elaborative defence can be built using the systems perspective.

Organizations are dependent on acquiring inputs and disposing of outputs, if they are to operate and survive; these flow from and to the environment. In a closed system the most effective organization would be one that was technologically efficient. Since you assume no interactions or problems with the environment in a closed system success depends on internal efficiencies.

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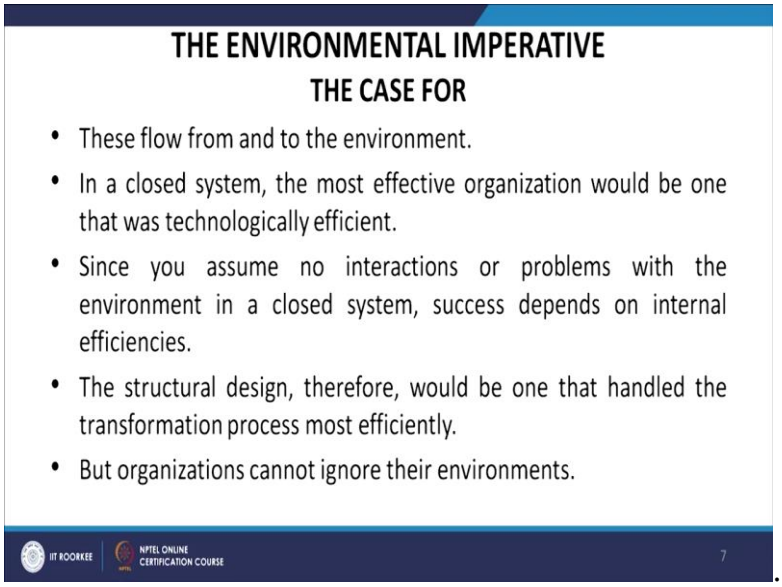

The structural design therefore would be one that handled the transformation process more efficiently. But organizations cannot ignore their environments.

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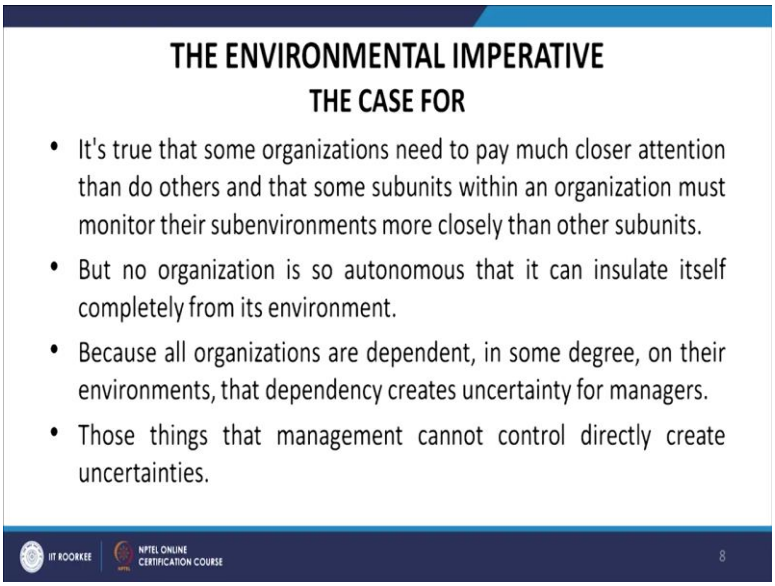

It is true that some organizations need to pay much closer attention than do others and that some subunits within an organization must monitor their sub environments more closely than the other sub units.

But no organization is so autonomous that it can insulate itself completely from its environment. Because all organizations are dependent, in some degree, on their environments, that dependency creates uncertainty for managers; those things that management cannot control directly create uncertainties.

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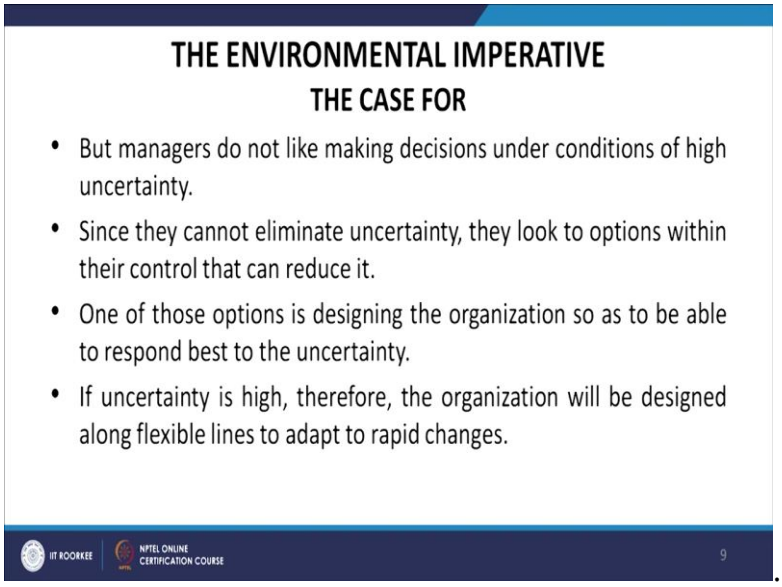

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But managers do not like making decisions under conditions of high uncertainty. Since they cannot eliminate uncertainty, they look to options within their control that can reduce it. One of those options is designing the organization so as to be able to respond best to the uncertainty. If uncertainty is high, therefore the organization will be designed along flexible lines to adapt to rapid changes.

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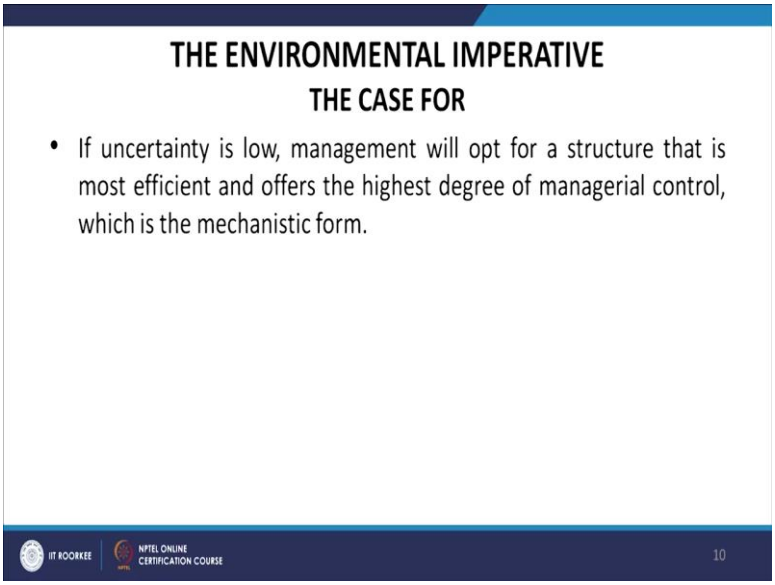

If uncertainty is low, management will opt for a structure that is more efficient and offer the highest degree of management of managerial control, which is the mechanistic form. If there is an environmental imperative, it may be limited only to those subunits at the boundary of the organization, those that interact directly with the environment.

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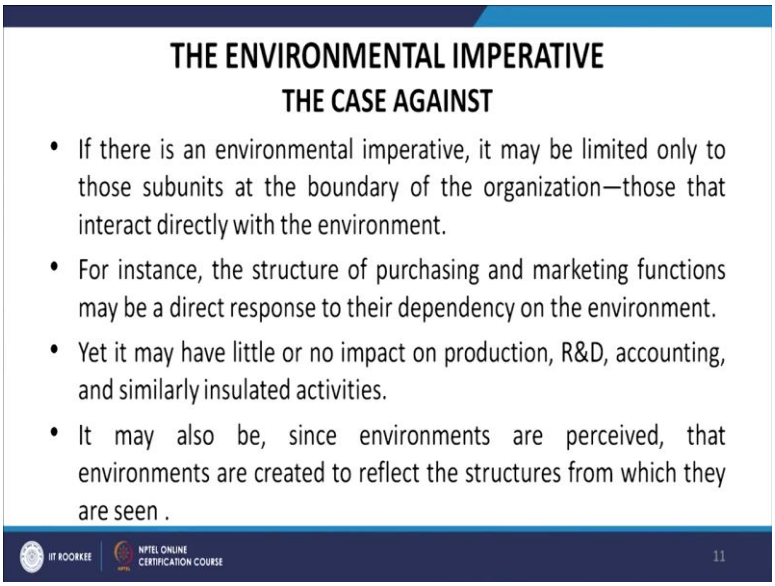

For instance, the structure of purchasing and marketing functions may be a direct response to their dependency on the environment. Yet, it may have little or no impact on production, R and D, accounting and similarly insulated activities. It may also be, since environments are perceived, that environments are created to reflect the structure from which they are seen.

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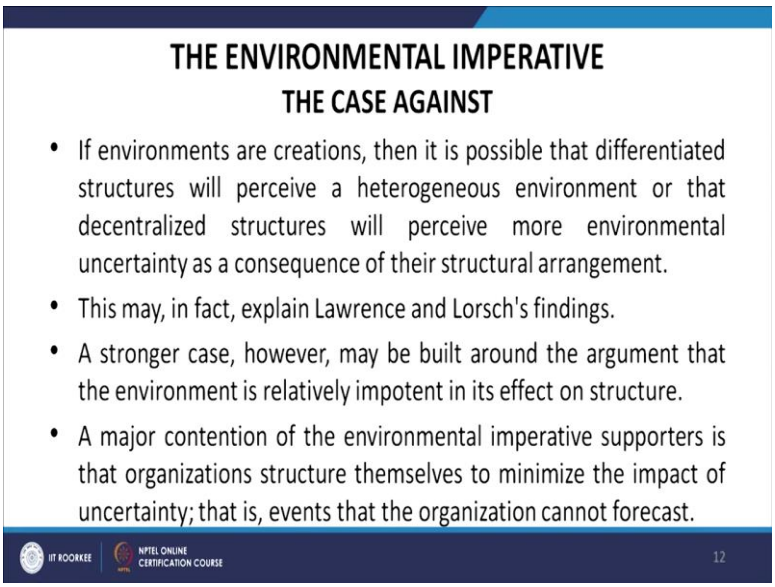

If environments are creations, then it is possible that differentiated structure will perceive a heterogeneous environment or that decentralized structures will perceive more

environmental uncertainty as a consequence of their structural arrangement. This may, in fact, explain Lawrence and Lorsch's findings.

A stronger case, however may be built around the argument that the environment is relatively important in its effect on structure. A major contention of environmental imperative supporters is that organizations structure themselves to minimize the impact of uncertainty, that is, the events that the organization cannot forecast.

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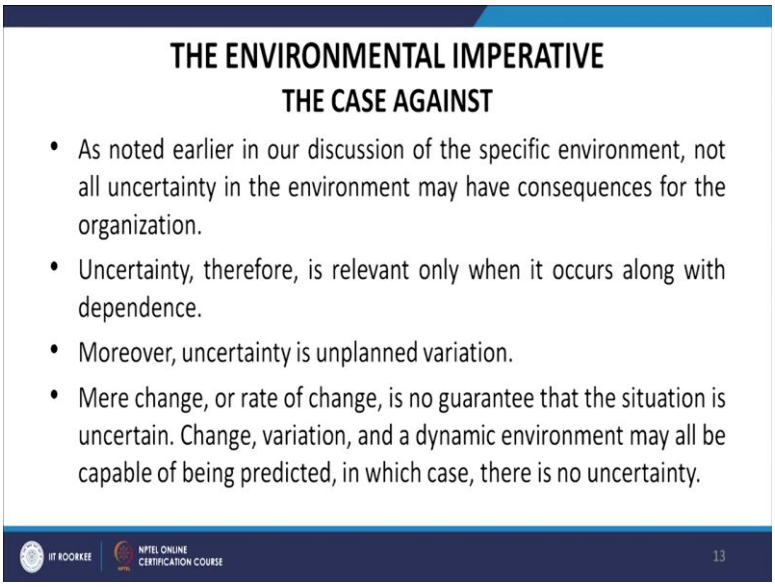

As noted earlier, in our discussion of the specific environment, not all uncertainty in the environment may have consequences for the organizations. Uncertainty therefore, is relevant only when it occurs along with dependence. Moreover, uncertainty is unplanned variation. Mere changes or rate of change is no guarantee that the situation is uncertain. Change variation and the dynamic environment may all be capable of being predicted, in which case, there is no uncertainty.

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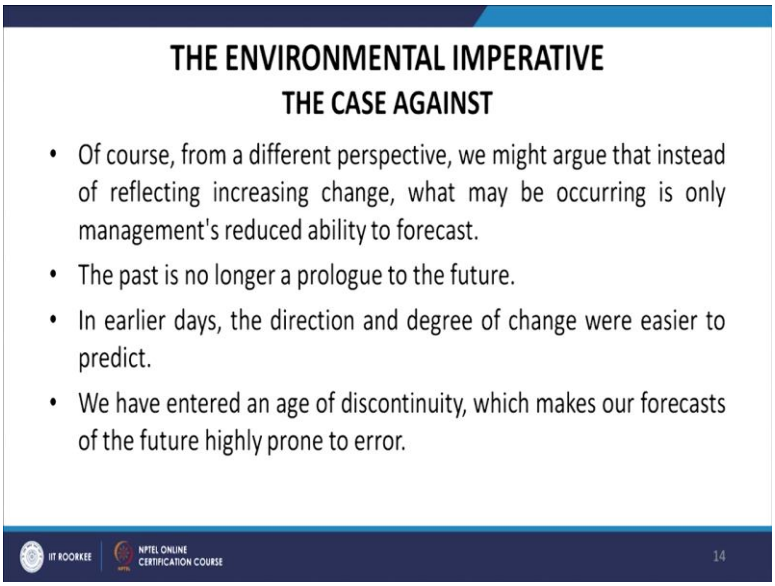

Of course, from a different perspective, we might argue that instead of reflecting increasing change, what may be occurring is only management's reduced ability to forecast. The past is no longer prologue to the future. In earlier days, the direction and degree of change were easier to predict. We have entered an age of discontinuity, which makes our forecasts of the future highly prone to error.

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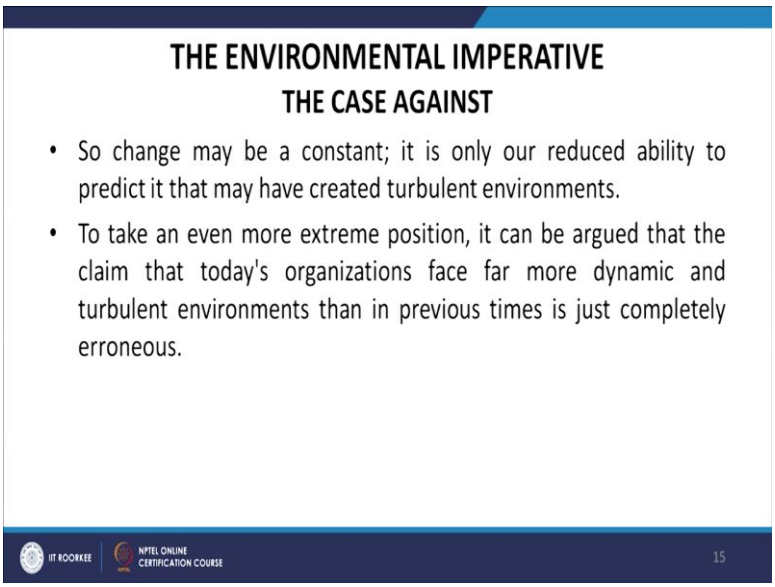

So, change can be constant; it is only our reduced ability to predict it that may have created turbulent environments. To take an even more extreme position, it can be argued

that the claim that today's organizations face far more dynamic and turbulent environments than in previous times is just completely erroneous.

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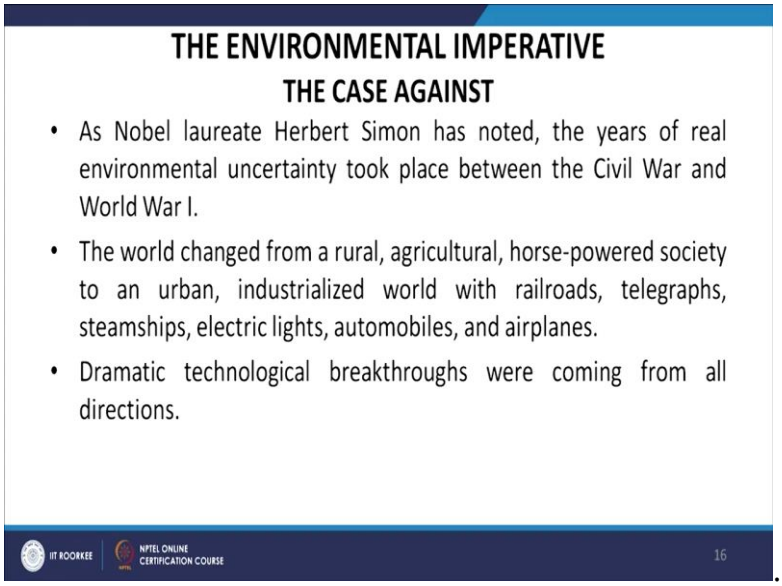

As Nobel laureate Herbert Simon has noted, the years of real environmental uncertainty took place between the Civil War and the World War I. The world changed from a rural, agricultural, horse powered society to an urban, industrialized world with railroads, telegraphs, steamships, electric lights, automobiles and airlines.

Dramatic technological breakthroughs were coming from all directions. Simon argues that, nothing in the past years with the possible exceptions of the bomb has so changed the basic terms of human existence as these new technologies did.

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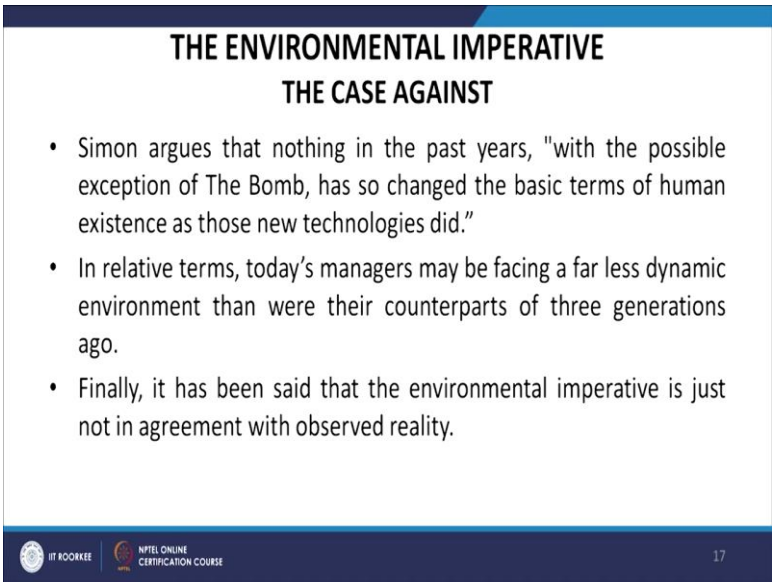

In relative terms today's managers may be facing a far less dynamic environment than were their counterparts of the three generations ago. Finally, it has been said, that the environmental imperative is just not in agreement with observed reality.

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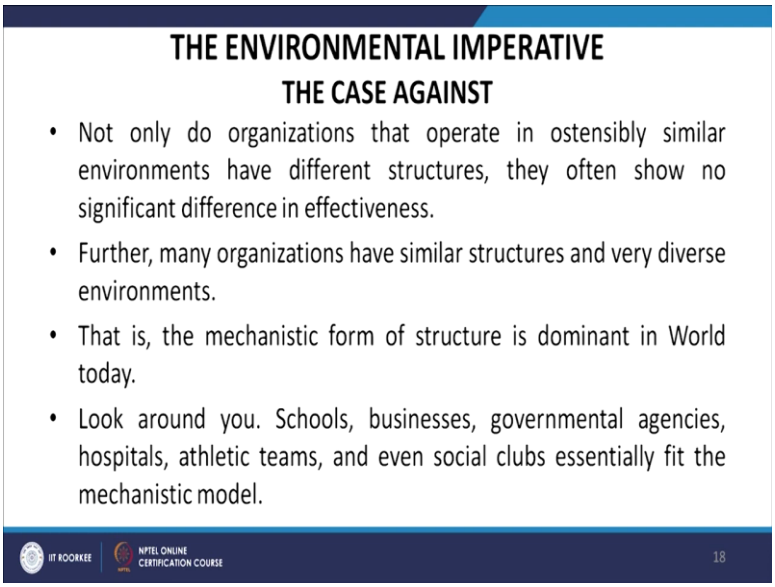

Not only do organizations that operate an ostensibly similar environments have different structures, they often show no significant difference in effectiveness. Further, many organizations have similar structures and very diverse environments; that is the mechanistic form of structure is dominant in world today. Look around you. Schools,

businesses, governmental agencies, hospitals, athletic teams and even social clubs essentially fit the mechanistic model.

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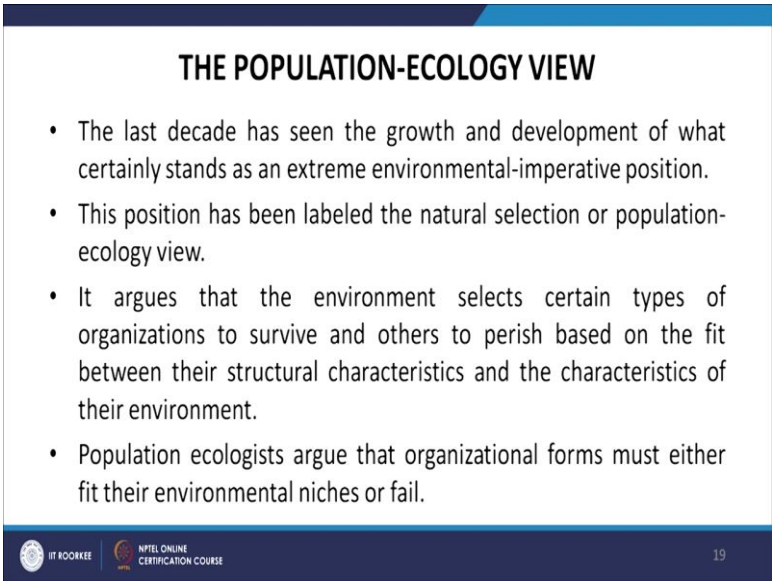

Now, let us see the population-ecology view. The last decade has seen the growth and development of what certainly stands as an extreme environmental imperative position. This position has been labeled the natural selection or population-ecology view.

It argues that the environment selects certain types of organizations to survive and others to perish based on the fit between their structural characteristics and the characteristic of their environment. Population ecologists argue that the organizational forms must either fit their environmental niches or fail.

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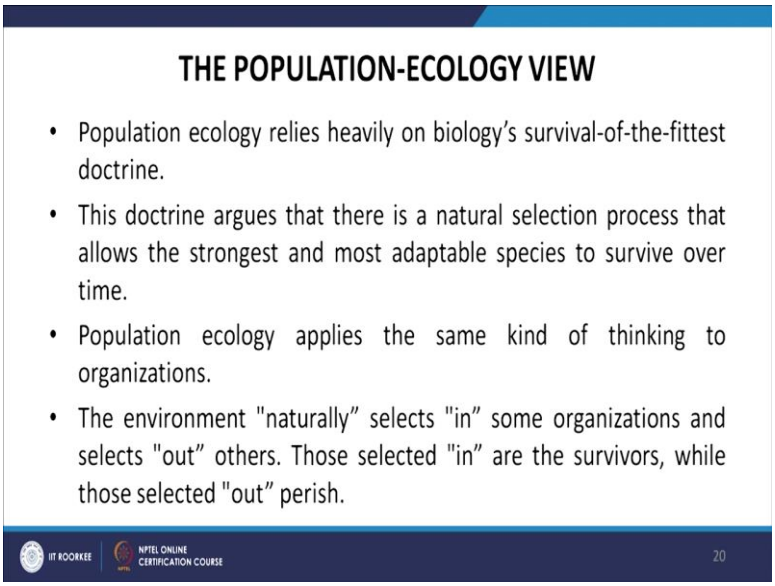

Population ecology relies heavily on biology's survival of the fittest doctrine. This doctrine argues that there is a natural selection process that allows the strongest and most adaptable species to survive over time. Population ecology applies the same kind of thinking to organizations. The environment naturally selects in some organizations and selects out others. Those selected in are the survivors while those selected out will perish.

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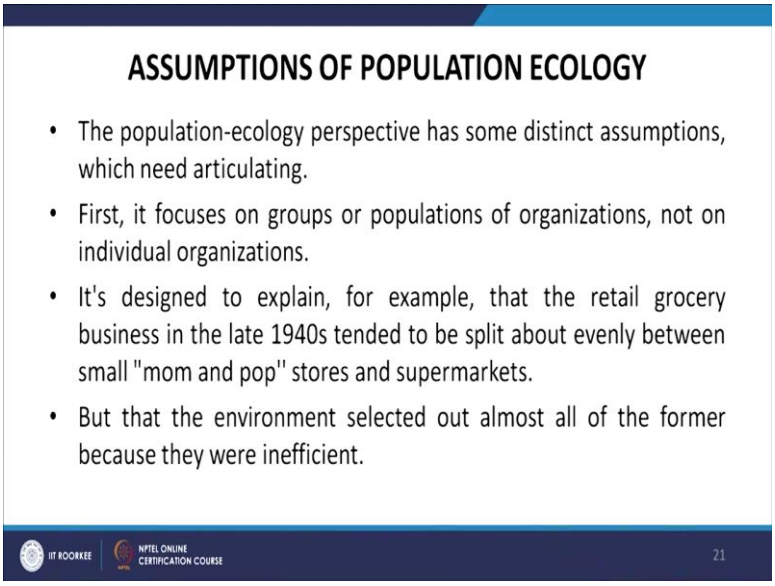

Now, let us look at the assumptions of population ecology. The population ecology perspective has some distinct assumptions which needs articulating. First it focuses on groups or populations of organization not on individual organization. It is designed to explain for example, that the retail grocery business in the late 1940s tended to be split about evenly between small mom and pop stores and supermarkets. But that the environment selected out almost all of the former because they were inefficient.

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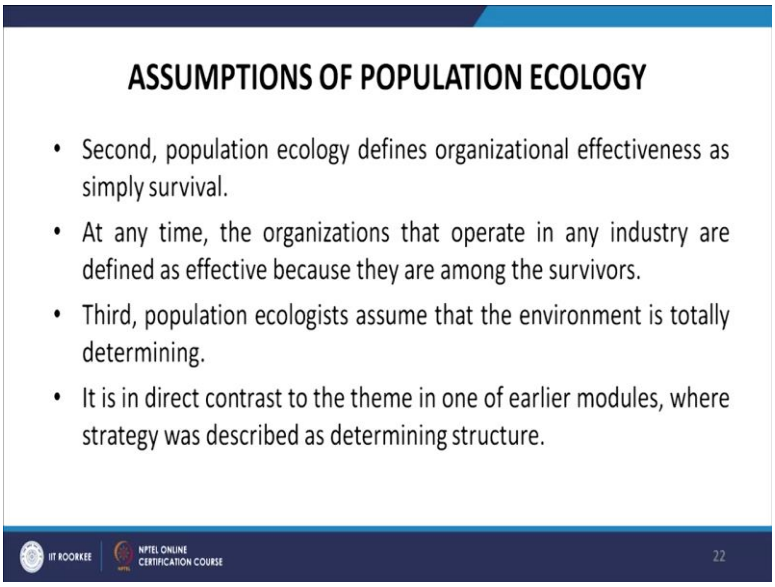

Second population ecology defines organizational effectiveness as simply survival. At any time, the organization that operates in any industry are defined as effective because they are among the survivors.

Third the population ecologist assumed that the environment is totally determining. It is in direct contrast to the theme in one of the earlier modules, where strategy was described as determining structure. But the population ecology view assumes that management at least in the short or intermediate terms has little impact on an organization's survival.

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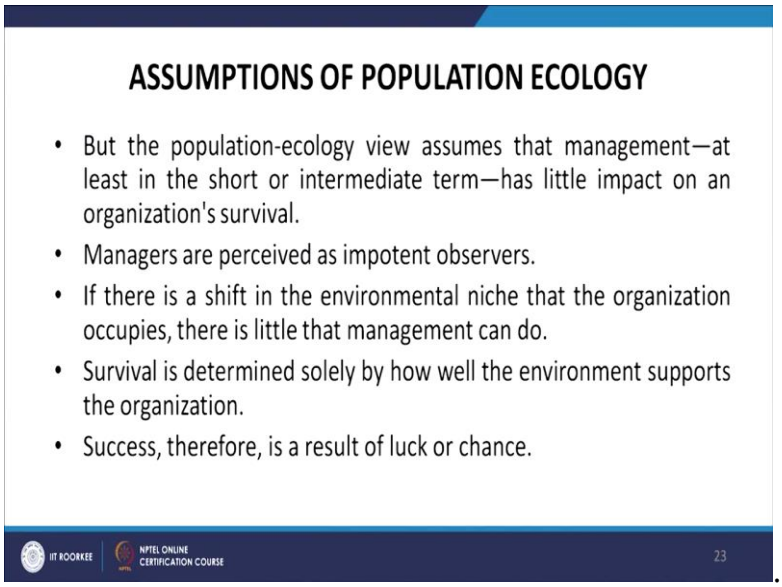

Managers are perceived as important observers. If there is a shift in the environmental niche that the organization occupies, there is little that management can do. Survival is determined solely by how well the environment supports the organization success therefore is a result of luck or chance.

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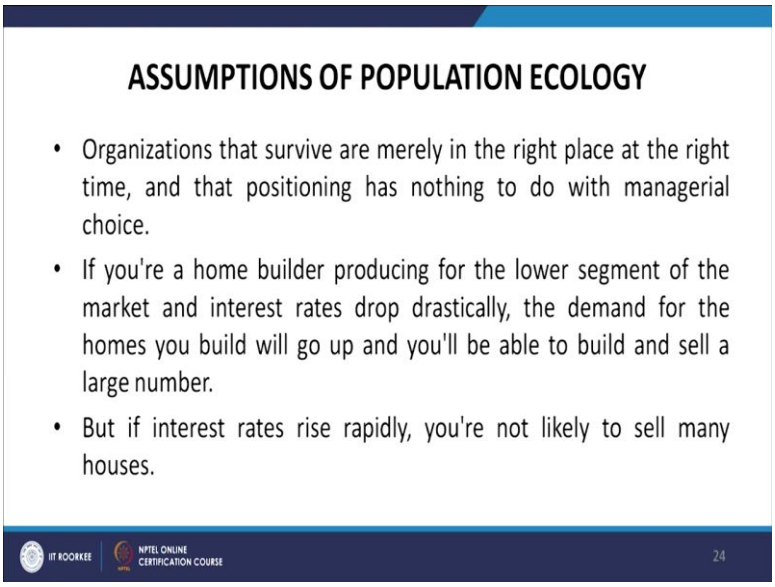

Organizations that survive are merely in the right place at the right time and that positioning has nothing to do with managerial choice. If you are a home builder producing for the lower segment of the market and interest rates drop drastically, the

demand for the houses you build will go up and you will be able to build and sell large numbers. But if interest rates rise rapidly, you are not likely to sell many houses.

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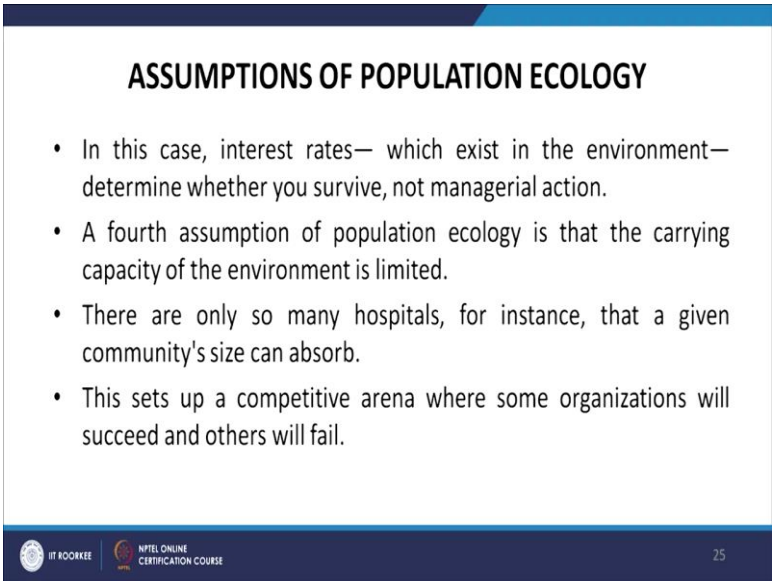

In this case, interest rates which exist in the environment determine whether you survive, not managerial action. A fourth assumption of population ecology is that the carrying capacity of the environment is limited. There are only so many hospitals, for instance, that a given community size can absorb. This sets up a competitive arena where some organizations will succeed and others will fail.

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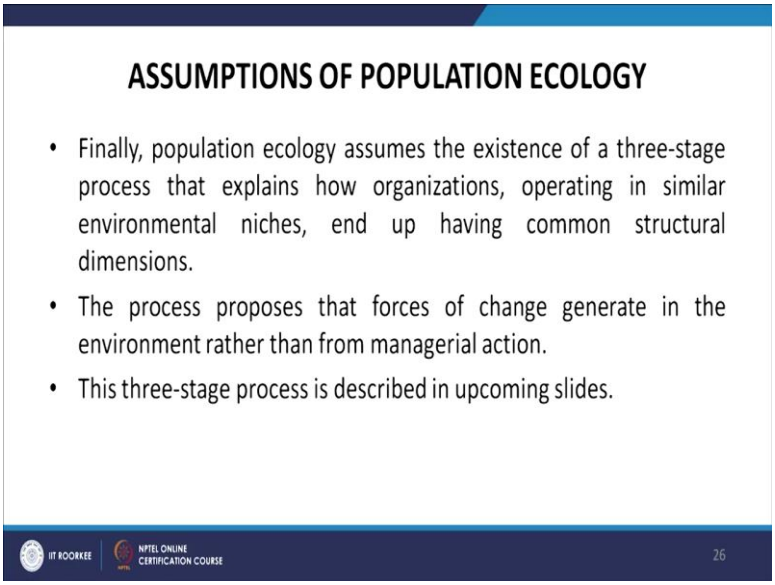

Finally, population ecology assumes the existence of a three-stage process that explains how organizations operating in similar environmental niches end up having common structural dimensions.

The process assumes that forces of change generate in the environment rather than from managerial action; this three-stage process is described in the upcoming slides.

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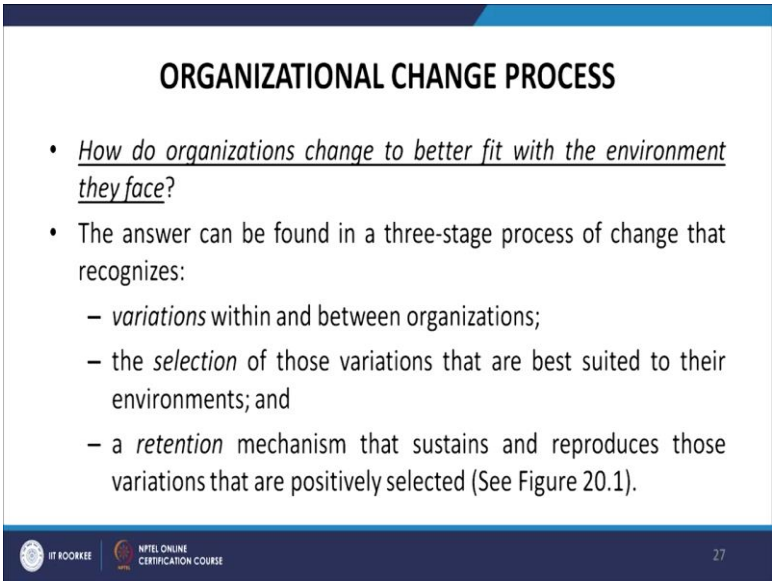

So, let us look at organizational change process. How do organizations change to better fit with the environment they face? The answer can be found in three stage process of change that recognizes; 1, variation within and between organizations, 2 the selection of these variations that are best suited to their environments and 3 a retention mechanism that sustains and reproduces those variations that are positively selected. Let us look at this figure 3 figure 20.1 which shows this population ecology view of the change process.

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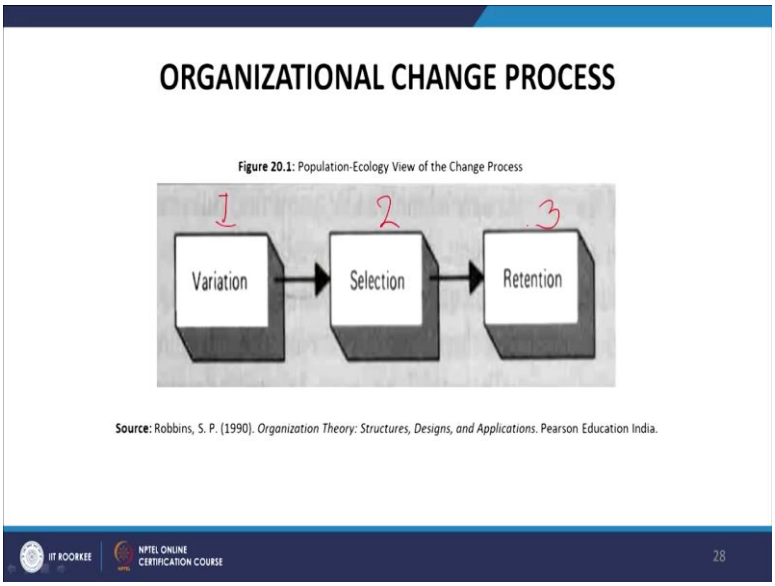

So, this is these are the three stages; variation is the first stage, the second stage is selection and the third is retention.

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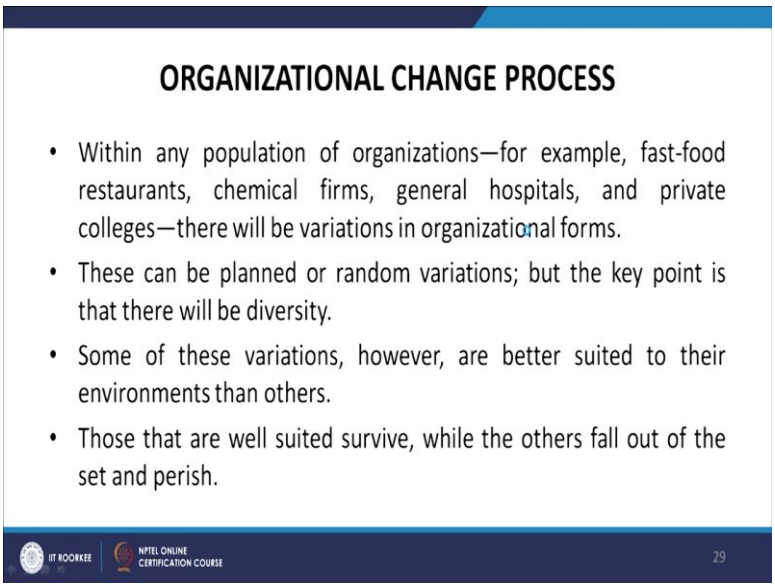

Within any population of organization, for example fast food restaurants, chemical firms, general hospitals and private colleges there will be a variation in organization forms.

These can be planned or random variations; but the key point is that there will be diversity. Some of these variations however are better suited to their environments than others. Those that are well suited survive while the others fall out of the set and perish.

Organizations that have a form that fits their environment are positively selected and survive; while others either fail or change to match their environmental requirements.

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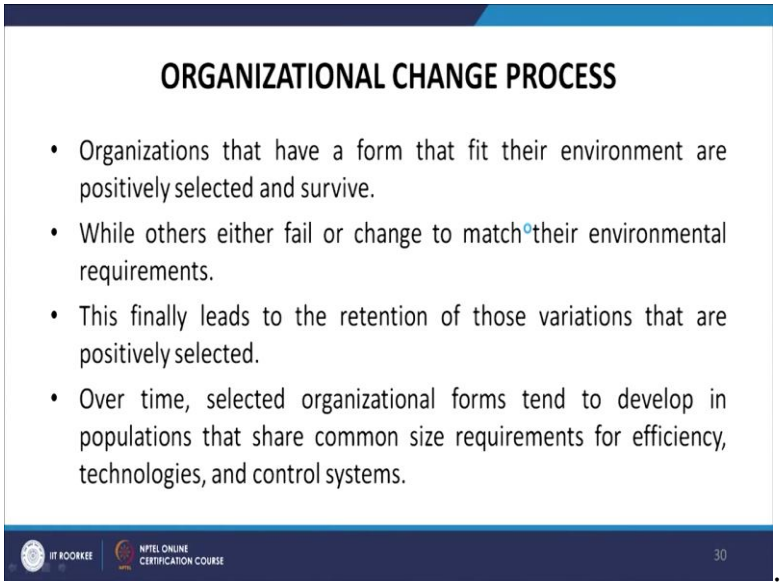

This finally leads to the retention of those variations that are positively selected. Over time, selected organizational forms tend to develop in populations that share common size requirements for efficiency, technologies and control systems.

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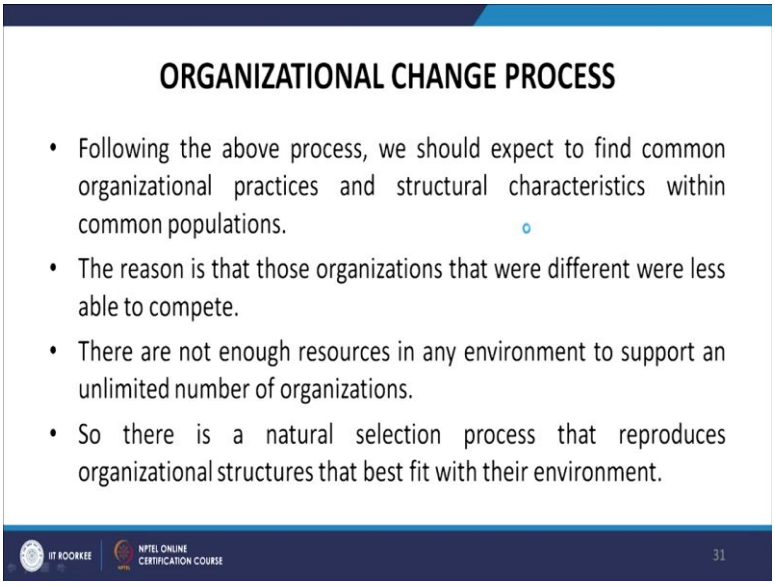

Following the above process, we should expect to find common organizational practices and structural characteristics within common populations. The reason is that those organizations that were different were less able to compete. There are enough resources in any environment to support an unlimited number of organizations. So, there is a national selection process that reproduces organizational structure that best fits with their environment.

Over the very long run, of course, even the positively selected variations are likely to be selected out; because environments change and, in so doing, favor a different set of variations.

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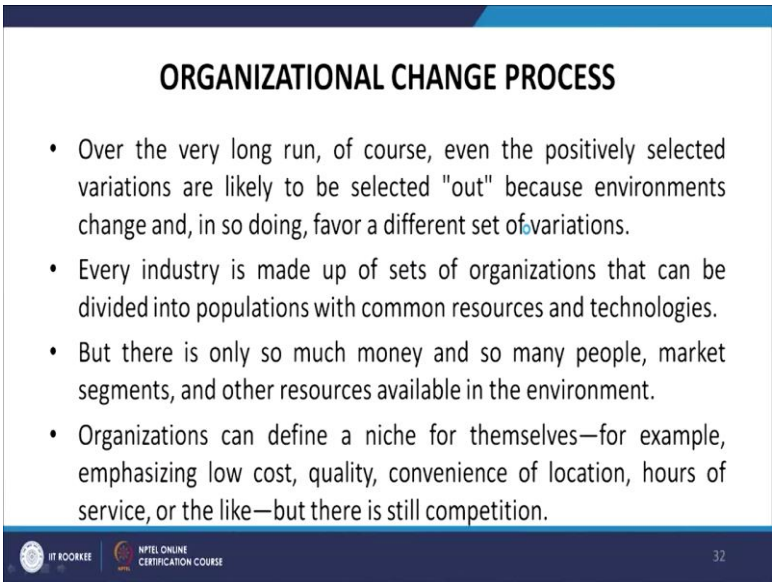

Every industry is made up of sets of organizations that can be divided into populations with common resources and technologies. But there is only so much money and so many people, market segments, and other resources available in the environment. Organizations can define a niche for themselves; for example, emphasizing low cost, quality, convenience of location, hours of service or the like but there is still competition.

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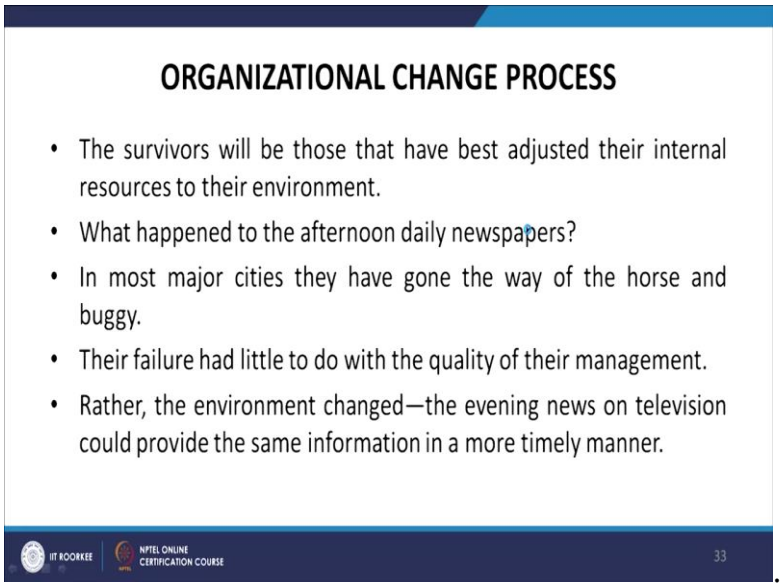

The survivors will be those that have best adjusted their internal resources to their environments. What happened to the afternoon daily newspaper? In most major cities they have gone the way of the horse and buggy; their failure had little to do with the quality of their management.

Rather the environment changed; the evening news on television could provide the same information in a more timely manner. Those newspapers that have survived in metropolitan areas have tended to be the large morning papers. The airline industry also offers an illustration of what happens when the environment changes.

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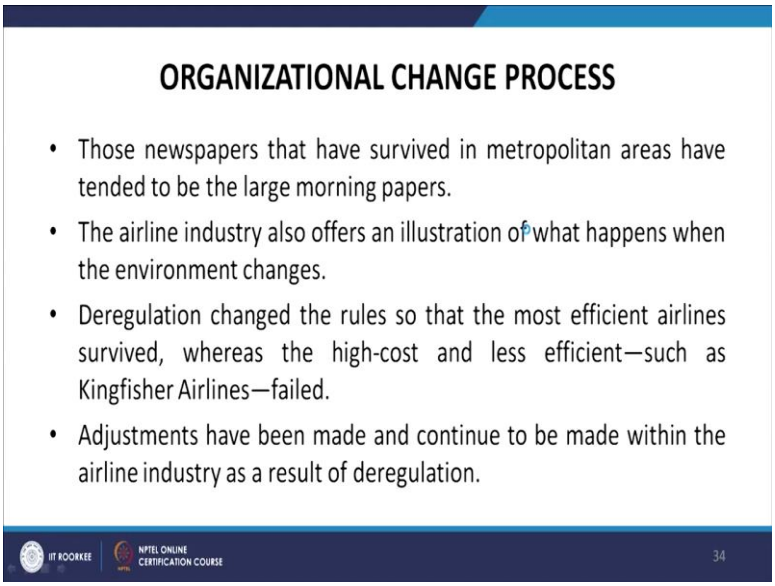

Deregulation changed the rules so that the most efficient airlines survived whereas the high cost and less efficient such as Kingfisher Airline failed. Adjustments have been made and continue to be made within the airline industry as a result of deregulation. We can expect that airlines under conditions of deregulations will probably become more efficient, more price competitive, less unionized and less middle sized.

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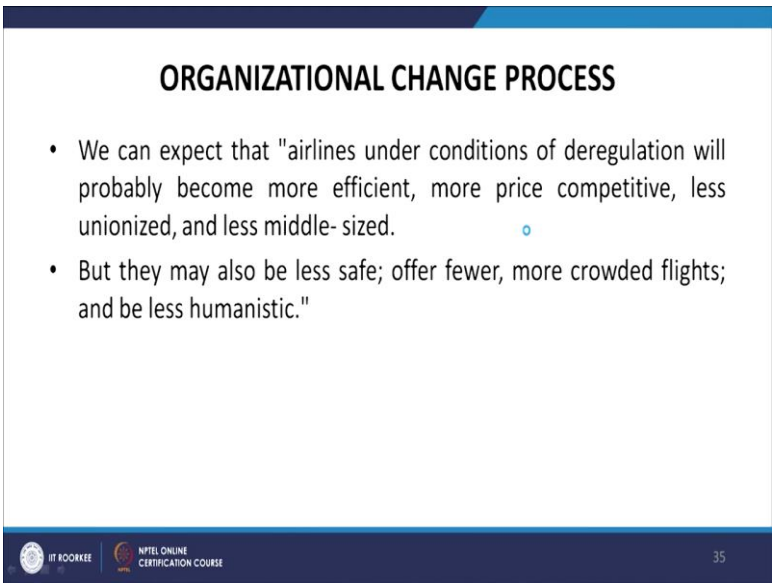

But they may also be less safe, offer lesser more crowded flights and be less humanistic.

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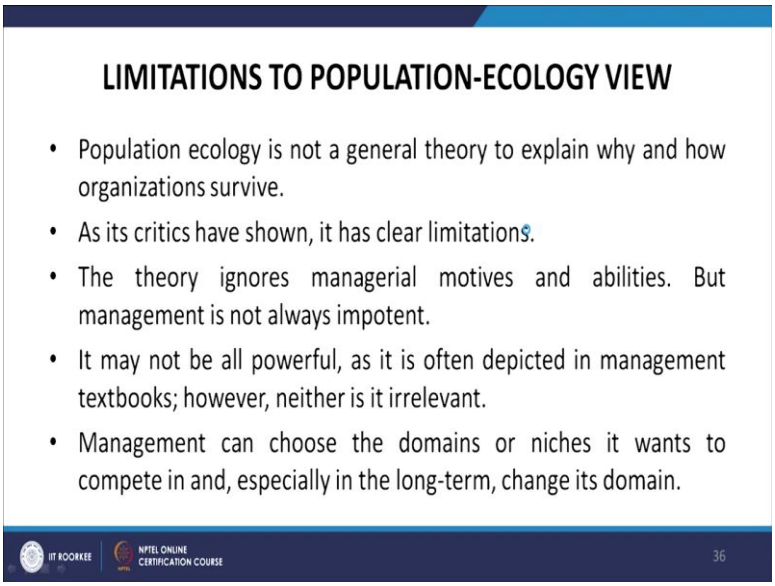

Now, let us look at the limitations to population ecology view. Population ecology is not a general theory to explain why and how organizations survive; as its critics have shown it has clear limitations.

The theory ignores managerial motives and abilities; but management is not always important it may not be all powerful as it is often depicted in management textbooks; however, neither is it irrelevant. Management can choose the domain or niches it wants to compete in and especially in the long term change its domain.

Population ecology appears to have limited applications to large and powerful organizations. The reason is that these organizations can often insulate themselves against failures. They have strong constituencies in government that will protect them.

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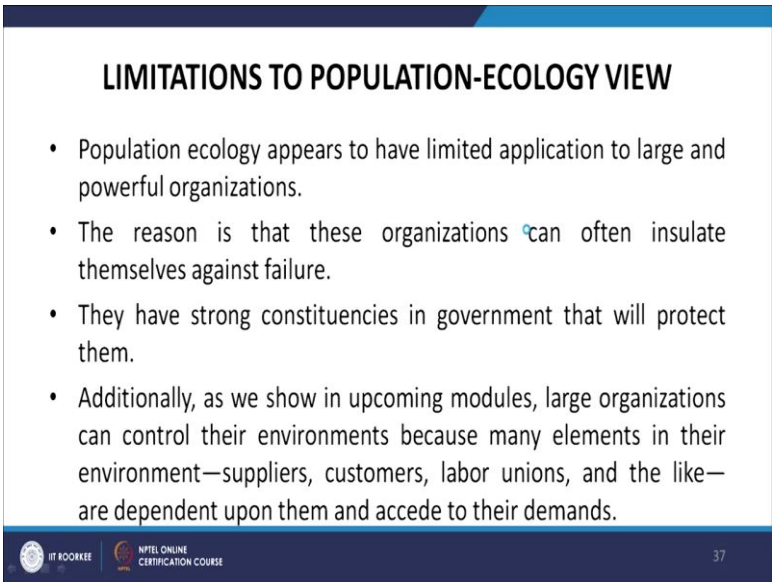

Additionally, as we show in upcoming modules, large organizations can control their environment; because many elements in their environment suppliers, customers, labor unions and the like are dependent upon them and accede to their demands.

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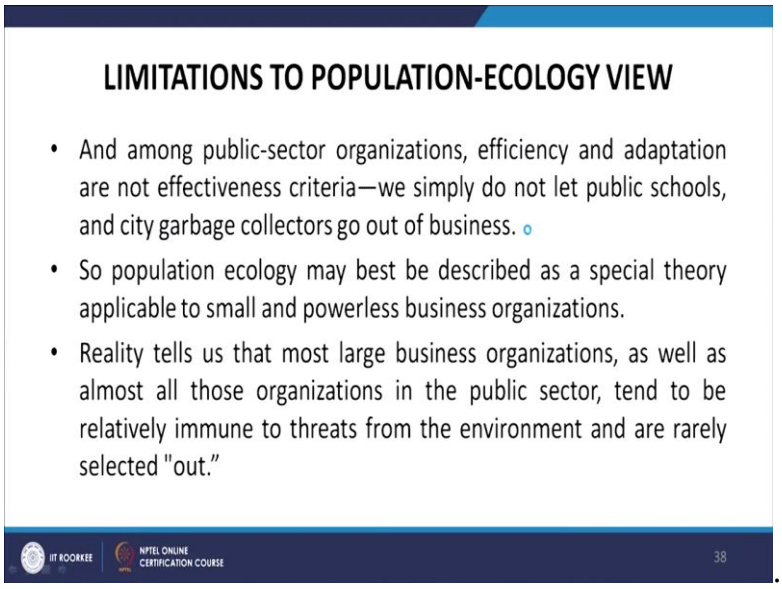

And among the public sector organizations, efficiency and adaptations are not effectiveness criteria; we simply do not let public schools and city garbage collectors go out of business. So, population ecology may best be described as a special theory applicable to a small and powerless business organizations.

Reality tells us that most large business organizations as well as almost all those organizations in the public sector tend to be relatively immune to threats from the environment and are rarely selected out.

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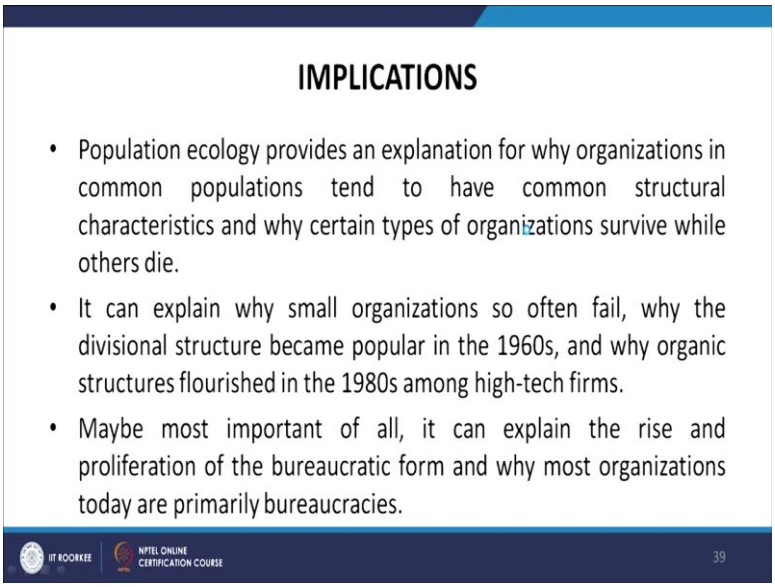

Now, implications of this theory are that, population ecology provides an explanation for why organizations in common populations tend to have common structural characteristics and why certain types of organizations survive while others die.

It can explain why small organizations so often fail, why the divisional structure become popular in the 1960s and why organic structure flourished in the 1980's among high-tech firms. Maybe most important of all it can explain the rise and proliferation of bureaucratic form and why most organization's today are primarily bureaucracies.

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Additionally, the more stable the environment, the harder it is for new organizations to enter and compete. Stable, certain environments tend to retain large organizations with high market shares. For organization theory researchers, population ecology's contribution include calling into questions traditional research methods.

OT researchers have traditionally looked at different structural relationships and sought to relate them to varying degrees of organizational effectiveness. Population ecologist have correctly noted that such research is biased.

It does not survey all organizations, merely the survivors; the truly ineffective organizations are not studied because they died too soon. So the value of OT research is likely to be improved, if researchers look at organizations that are failed as well as those that have survived.

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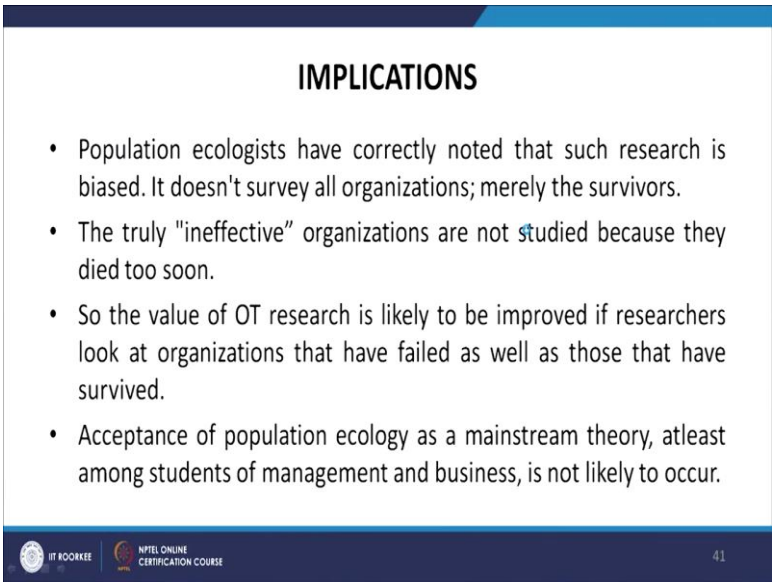

Acceptance of population ecology as a mainstream theory at least among students of management and business is not likely to occur.

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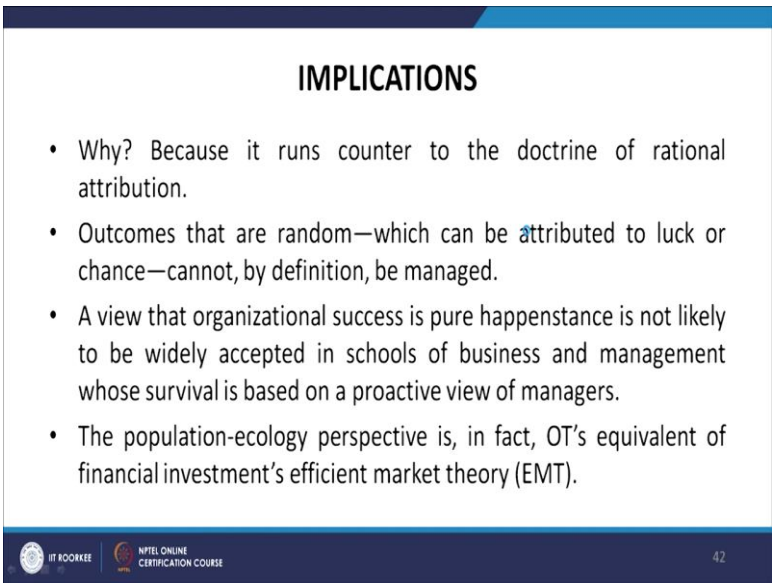

Why? Because it runs counter to the doctrine of rational attribution. Outcomes that are random which can be attributed to luck or chance cannot by definition be managed. A view that organizational success is pure happenstance is not likely to be widely accepted in schools of business and management; whose survival is based on proactive view of

managers. The population ecology perspective is in fact OT's equivalent of financial investment's efficient market theory.

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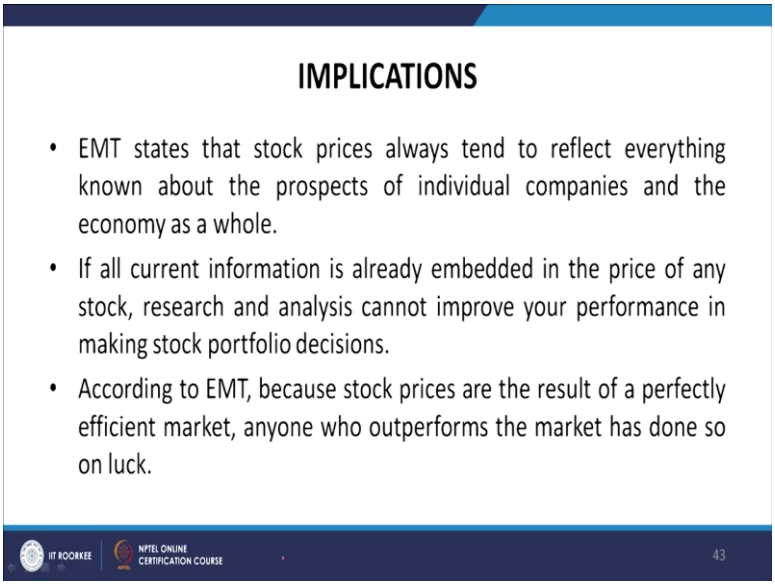

So, efficient market theory states that stock prices always tend to reflect everything known about the prospect of individual companies and the economy as a whole. If all current information is already embedded in the price of any stock, research and analysis cannot improve your performance in making stock portfolio decisions. According to EMT, because the stock prices are the result of a perfectly efficient market, anyone who outperforms the market has done so on luck.

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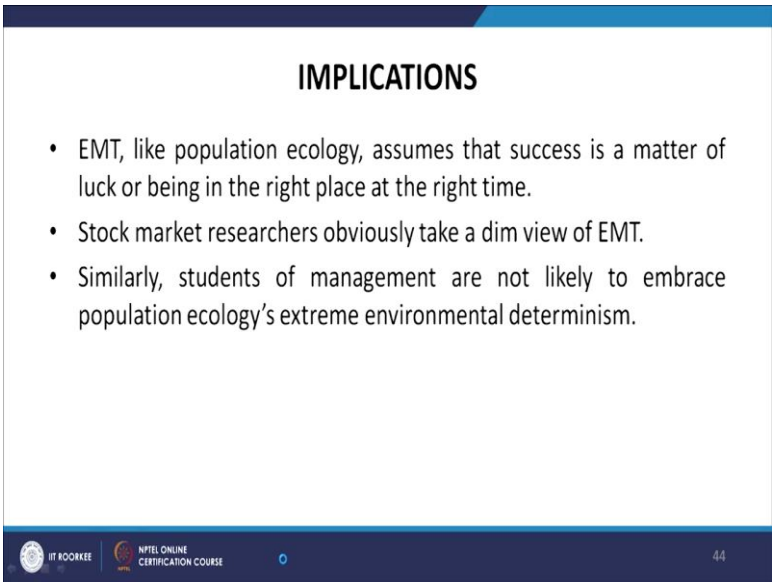

Efficient market hypothesis like population ecology assumes that success is a matter of luck or being in the right place at the right time. The stock market researchers obviously take a dim view of efficient market theory. Similarly, students of management are not likely to embrace population ecology's extreme environmental determinism.

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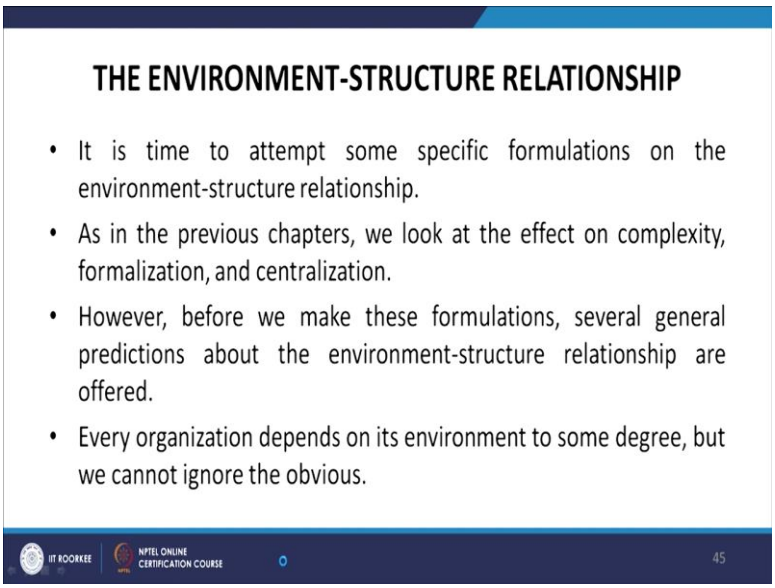

Now, let us look at the environment structure relationship; it is time to attempt some specific formulations on the environment structure relationship. As in the previous chapter we look at the effect on complexity, formalization and centralization.

However, before we make these formulations, several general predictions about the environment structure relationship are offered. Every organization depends on its environment to some degree; but we cannot ignore the obvious.

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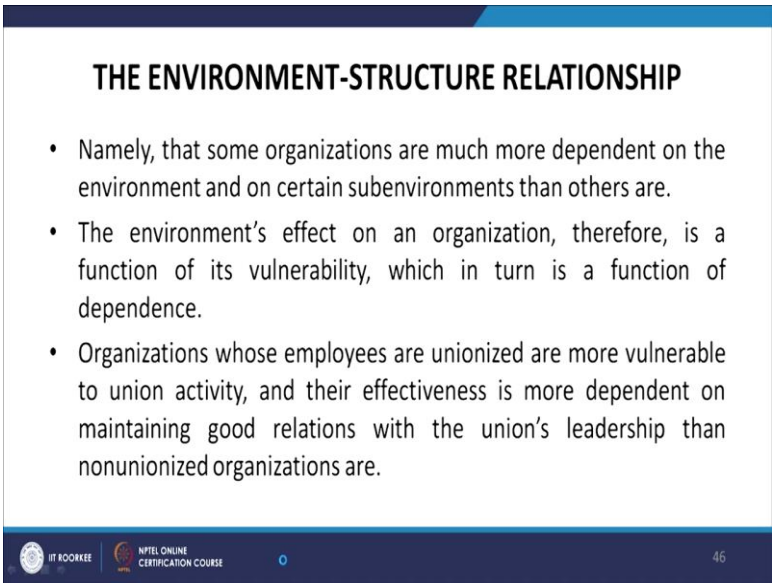

Namely, that some organizations are much more dependent on the environment and on certain sub environments than others are. The environment's effect on an organization therefore is a function of its vulnerability which in turn is a function of dependence. Organizations whose employees are unionized, are more vulnerable to union activities and their effectiveness is more dependent on maintaining good relations with the union's leadership then non unionized organizations are.

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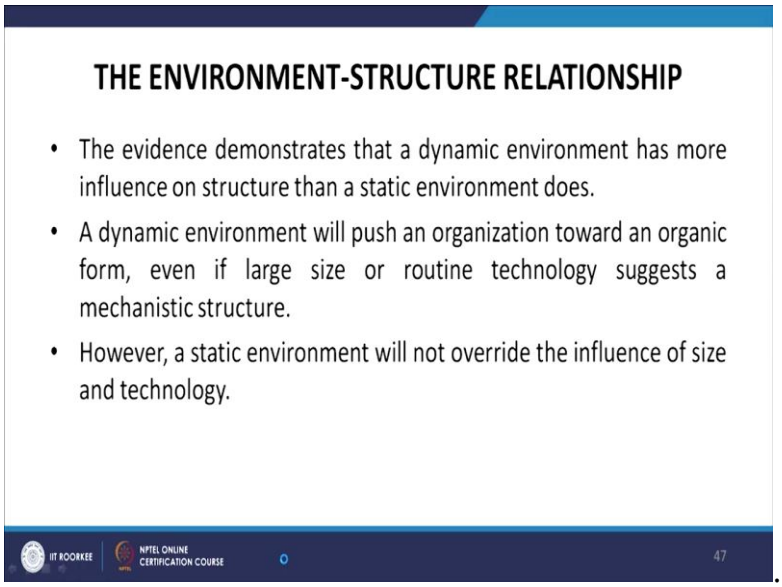

The evidence demonstrate that a dynamic environment has more influence on a structure than a static environment does. A dynamic environment will push an organization towards an organic form; even if large size or routine technology suggests a mechanistic structure. However, a static environment will not override the influence of size and technology.

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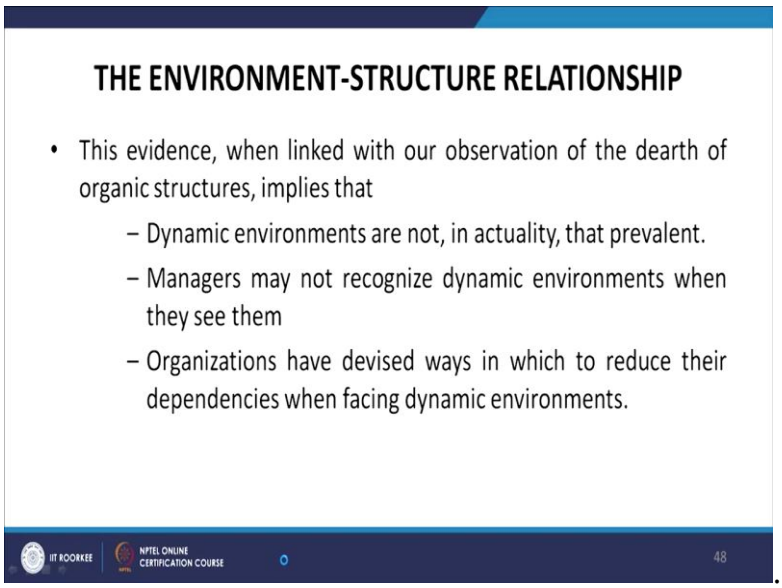

This evidence when linked with our observation of the dearth of organic structure implies that; 1, dynamic environments are not in actuality that prevalent. 2, managers

may not recognize dynamic environments when they see them. Organizations have devised ways in which to reduce their dependencies when facing dynamic environments.

Now, we are looking at environment and complexity; environmental uncertainty and complexity are directly related; that is high environmental uncertainty tends to lead to greater complexity. In order to respond to a dynamic and more complex environment organizations become more differentiated.

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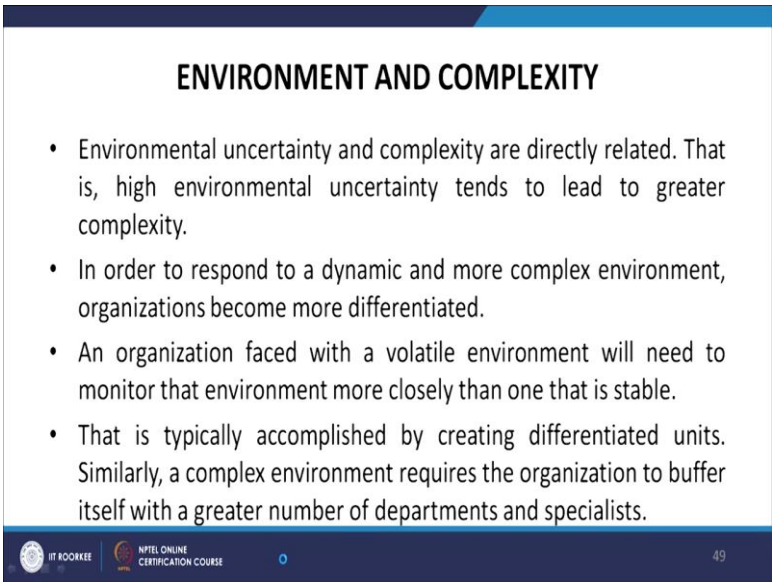

An organization faced with a volatile environment will need to monitor that environment more closely than one that is stable; that is typically accomplished by creating differentiated units. Similarly, a complex environment requires the organizations to buffer itself with a greater number of departments and specialists.

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Stable environments should lead to higher formalization; because 1, stable environments create a minimal need for rapid responses and economies exist for organizations that standardize their activities. But we caution against assuming that a dynamic environment must lead to low formalization throughout the organization. Management's preference will undoubtedly be towards insulating operating activities from uncertainty.

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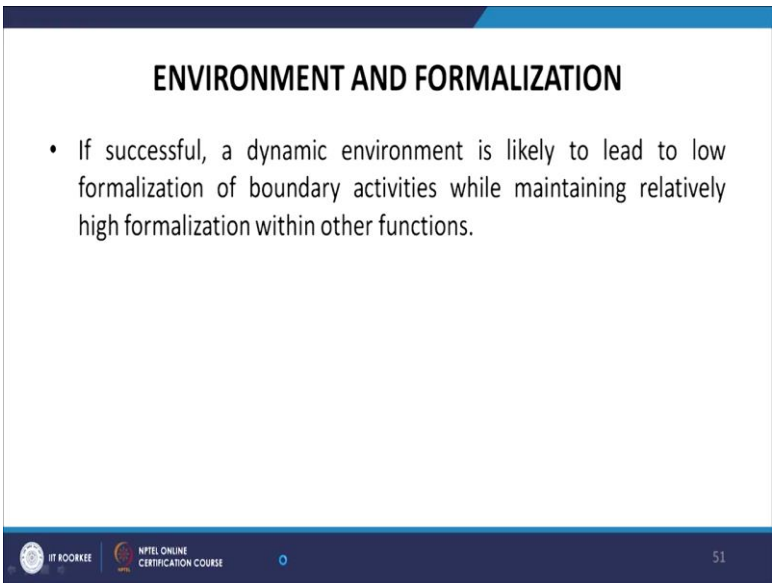

If successful, a dynamic environment is likely to lead to lower formalization of boundary activities while maintaining relatively high formalization within other functions.

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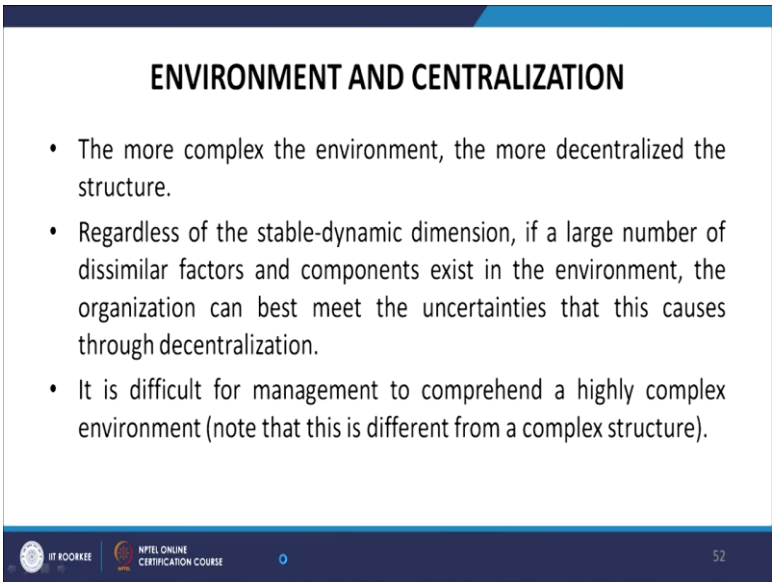

Next is to look at environment and centralization. The more complex the environment, the more decentralized the structure; regardless of the stable dynamic dimension, if a large number of dissimilar factors and components exist in the environment, the organization can best meet the uncertainties that this causes through decentralization. It is difficult for management to comprehend a large complex environment note that this is different from complex structure.

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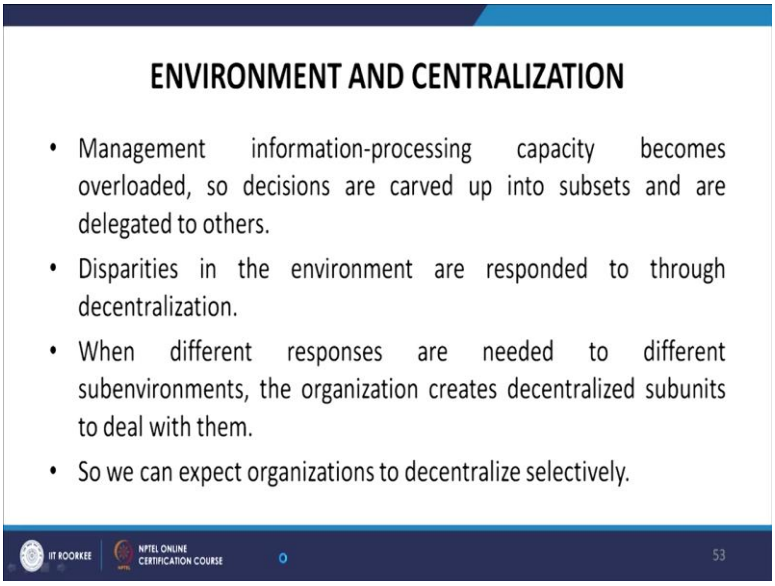

Management information processing capacity becomes overloaded, so decisions are carved up into subsets and are delegated to others. Disparities in the environment are responded to through decentralization. When different responses are needed to different sub environment the organization creates decentralized sub units to deal with them. So, we can expect organizations to decentralize selectively.

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This can explain why even in organizations that are generally highly centralized marketing activities are typically decentralized. This is a response to disparity in the environment, that is, even though the environment is generally static the market sub environment tend towards being dynamic. Finally, the evidence confirms that extreme hostility in the environment drives organizations to at least temporarily centralize their structures.

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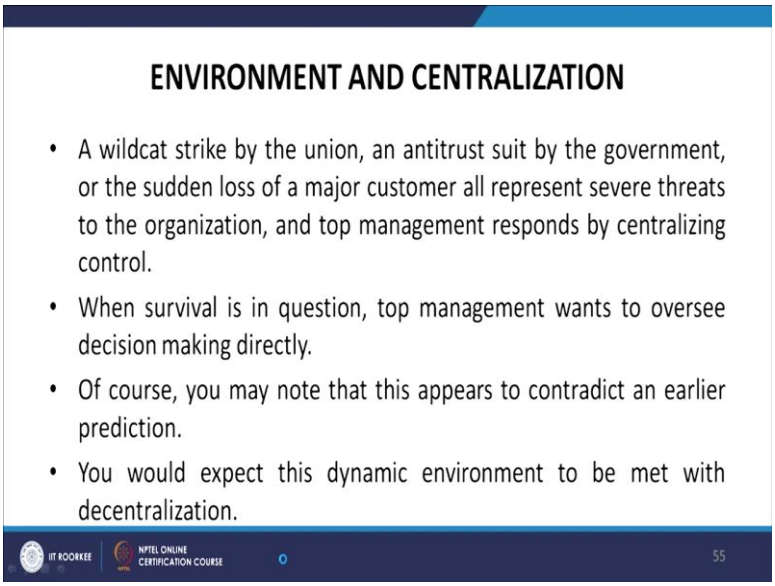

A wildcat strike by the union, an antitrust suit by the government or the sudden loss of a major customer will represent severe threats to the organization and top management response by centralizing control. When survival is in question top management wants to oversee decision making directly. Of course, you may note that this appears to contradict an earlier prediction. You would expect this dynamic environment to be met with more decentralization.

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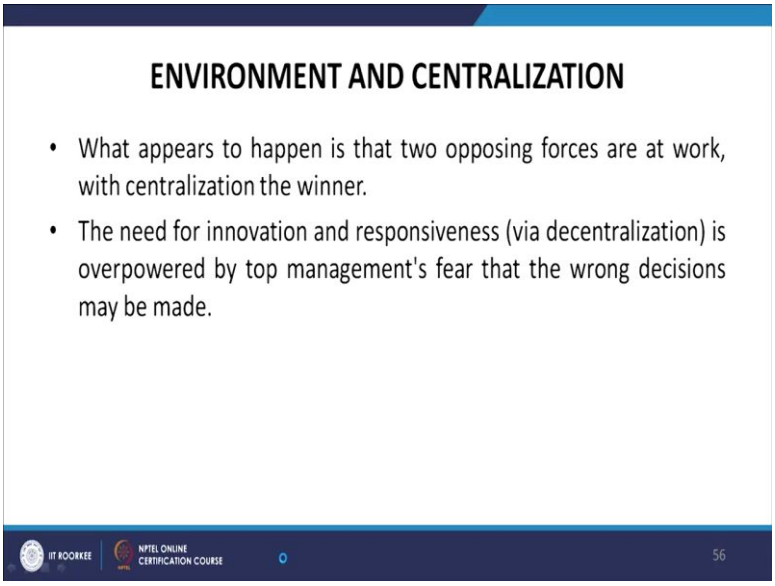

What appears to happen is that two opposing forces are at work with centralization the winner. The need for innovation and responsiveness via decentralization is overpowered by top management's fear that the wrong decisions may be made.

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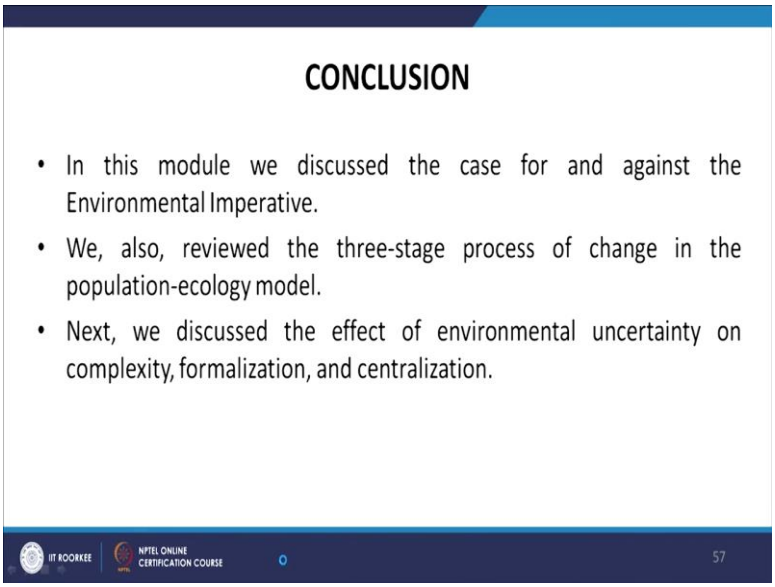

So, to conclude this module, we had discussed the case for and against the environmental imperative. We have also reviewed the three-stage process of change in the population ecology model. Next, we discussed the effect of environmental uncertainty on complexity, formalization and centralization.

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And these are the four books from which the material for this module was taken.

Thank you.