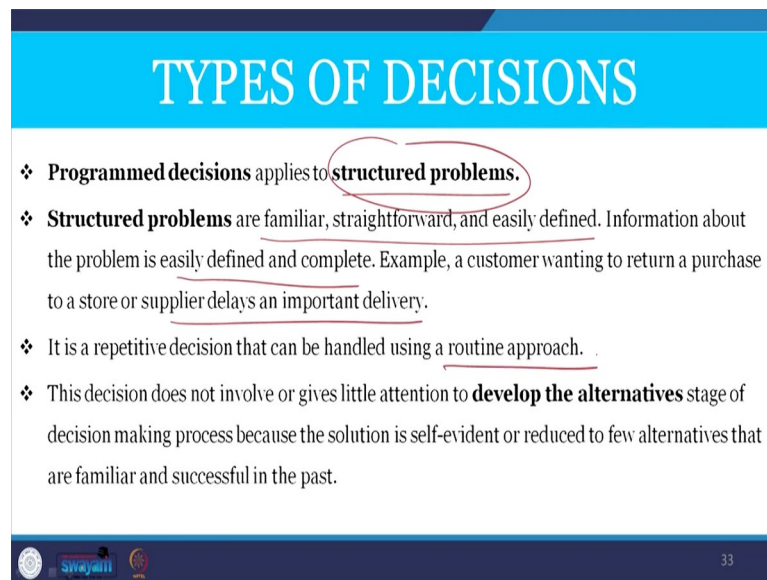


**Principles of Management**  
**Prof. Usha Lenka**  
**Department of Management Studies**  
**Indian Institute of Technology, Roorkee**

**Lecture - 20**  
**Decision Making - III**

In the third lecture on Decision Making, we will be discussing about the programmed decisions, structured problems and then various types of programmed decisions, non-programmed decisions and how the various types of decisions are being made by top level managers. What is the nature of problem and nature of decision making? Then, we will also discuss about the characteristics of the various types of problems.

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**TYPES OF DECISIONS**

- ❖ **Programmed decisions** applies to **structured problems**.
- ❖ **Structured problems** are familiar, straightforward, and easily defined. Information about the problem is easily defined and complete. Example, a customer wanting to return a purchase to a store or supplier delays an important delivery.
- ❖ It is a repetitive decision that can be handled using a routine approach.
- ❖ This decision does not involve or gives little attention to **develop the alternatives** stage of decision making process because the solution is self-evident or reduced to few alternatives that are familiar and successful in the past.

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And, so, coming back to the discussion of what are the various types of decisions. Let us start with the discussion on programmed decisions which applies to structured problems. So, what is a structured problem, what is an unstructured problem; I will discuss about these topics in more details.

Structured problems are the familiar, straightforward, and easily defined problems. So, information about the problem can be easily procured and it is easily defined and complete. For example, a customer wanting to return a purchase to a store or supplier delays an important delivery supplier delay. Like for example, a customer is not happy with the product. So, he wants to return it.

So, it is a kind of a structured problem, like many of us have keep on ordering products from Amazon, online market, online stores. So, if we are not happy, if we are not satisfied with the product or its features, or there is a defect being identified. So, we return it to the seller.

So, in this third lecture on decision making, we will proceed with what are the various types of decisions, programmed decisions and the structured problems, then different types of programmed decisions and how decisions are being taken with the help of procedure, rule, policy and what are non- programmed decisions and how it is applicable to unstructured problems.

So, with these discussions I will just start with what is a programmed decision and programmed decisions are applied to structured problems. What is a structured problem? Structured problems are familiar, straight forward and easily defined problems. Information about the problem is easily available and it is complete.

For example, customer wants to return a product which is purchased either through a retail store or an online store. So, the decision can be taken very easily. Because it is a repetitive decision that can be handled using a routine approach and then this decision does not involve or gives little attention to develop the alternatives stages of decision-making process what we discussed in the previous lecture.

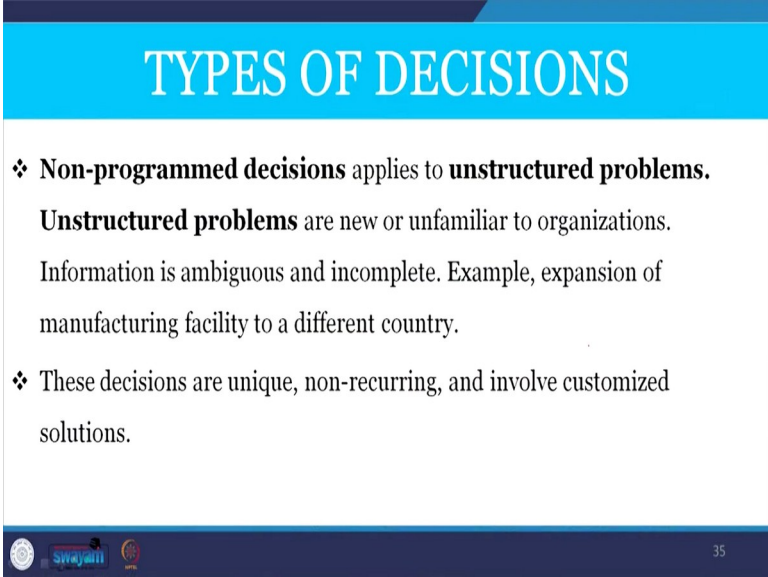
Because, the solution is self evident or reduced to few alternatives that are familiar and successful in the past. So, decision does not lead the person to be involved in the 8 steps of decision making that we discussed earlier. The identification of problem, identification of decision criteria, allocation of weights, development of alternatives, analyzing alternatives, selection of alternative and implementation of alternatives and evaluation of decision effectiveness.

So, these sequential steps need not be followed in case of structured problem which can be defined very easily and which is a straightforward approach and it is a kind of a familiar problem like returning a product within a stipulated time period and so, it is guided by some kind of policies, rules and procedures.

**Types of decisions** then we will discuss about what are the various types of programmed decisions. There are commonly three types of programmed decisions: one is procedure

which is a series of sequential steps used to respond to a problem. The second one being rule explicit statement spelling out what to do and what not to do, some do's and do not's are readily available. So, these are called the rules, policies general parameters or guidelines, which help a person to take decision which help any manager to take decision.

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**TYPES OF DECISIONS**

- ❖ **Non-programmed decisions** applies to **unstructured problems**.  
**Unstructured problems** are new or unfamiliar to organizations. Information is ambiguous and incomplete. Example, expansion of manufacturing facility to a different country.
- ❖ These decisions are unique, non-recurring, and involve customized solutions.

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Then, what are non-programmed decision and how are they applicable to unstructured problems. Let us start with understanding what is an unstructured problem. Unlike the structured problem, which is very familiar to the organization and information is complete, unstructured problem is something which is new or unfamiliar to organizations. Information is ambiguous or rather incomplete. Examples can be expansion of manufacturing facility to a different country. Unstructured problem is something which was never earlier experienced.

So, let us talk about the present situation where the health care crisis, which has been experienced by people across the globe. The health care crisis has affected the entire service and manufacturing firms and mostly the education sector has also encountered a large number of issues because in this sector, earlier the services were delivered when the service provider and the service seeker were available in one platform.

Now, as the students are not available in the campus. So, the services cannot be rendered and students are not available, so, there is no face-to-face interaction and in such a

scenario how the class can be engaged that is a problem. How the educational institutes will carry forward their academic sessions, this is a kind of unstructured problem and there was no ready solution available.

So, in this situation it was a new and unfamiliar situation encountered by all educational institutes. Similarly, hospitals where almost all the service organizations where the service cannot be complete if the service provider and the service seeker meets, so, in such a situation how services can be delivered? So, this was not defined earlier, this problem was a new problem and it was an unfamiliar situation for all organizations.

Even in the manufacturing sector, when people could not visit the locations of their jobs, they could not go because of the problems associated with COVID-19. The people have to maintain social distancing and there is a chance of spreading infections, if there is mass gathering. So, how to handle this situation? So, information was also not complete about the nature of the virus and there were several uncertainties and also the fear associated with the situation.

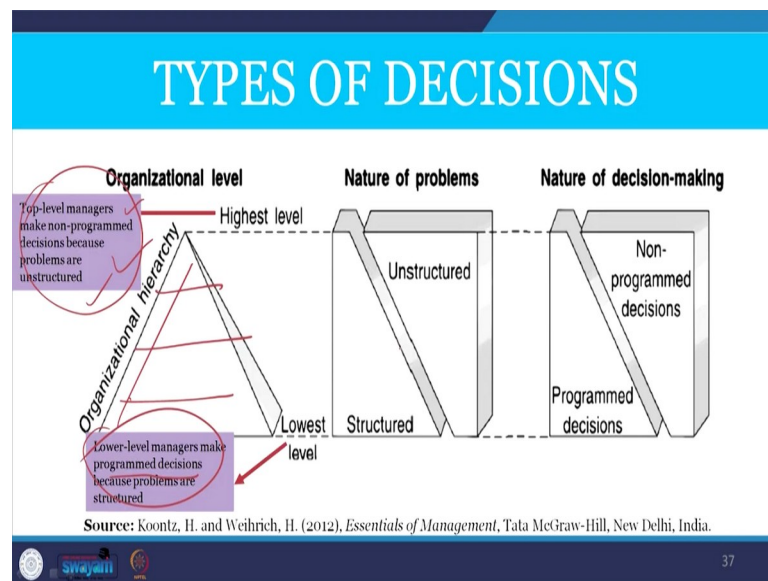
So, in this case the decision has to be unique, the decision is non-recurring and it involves customized solutions. What is customized? For healthcare, the solution is different, health care and wellness sector there is a different solution and all the solutions cannot be there cannot be uniform solution. For education it is a different solution and for the manufacturing setup there is a different solution or decisions, so that each of these can effectively function and can execute their activities efficiently.

So, in case of education sector, the classes cannot be engaged because if we allow students on the campus. If there is a mass gathering, it will lead to spread of infections. So, the classes were engaged through online platform using various services of the online services like WebEx or Google Meet, Moodle, etcetera and in healthcare sector, there is a different strategy being adopted.

The services can be provided; for critical services there is a critical care, there is a different approach; for non-critical issues, there is a different approach; for outdoor patients, for indoor patients there are different strategies being executed. So, which means that for there is no uniformity for unstructured problems; non-programmed decisions are being taken and each decision is unique and customized as per the requirement.

Next, moving forward, most non-programmed decisions are made by top level managers, because the decisions are complex and they are non-routine in nature they are unstructured; that means, there is no clear-cut solution available and there are so many ambiguities associated with the problem. And, it bears important consequences to organizations; it will have an adverse effect, if we do not take a right approach requires discretion of managers.

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So, what are the various types of decisions? Top-level managers make non-programmed decision. So, what we have concluded here is, in organizations there are different levels of organization being low to high level organizational hierarchy; there is a top-level management, middle level management and lower level of management.

So, the lowest level managers, the low-level managers— they are mostly involved in programmed decisions where the problem is structured and decisions can be taken easily using procedures with the help of procedures, rules and guidelines policies.

And what about the unstructured problems? Top-level managers generally make non-programmed decisions because the problems are ambiguous, complex and unstructured at large. So, what we have understood is the higher the uncertainty or complexity in the structure of the problem, the top level management would be more engaged in decision making and the decisions would be non-programmed.

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TYPES OF DECISIONS		
Characteristic	Programmed Decisions	Nonprogrammed Decisions
Type of problem	Structured problem	Unstructured problem
Managerial level	Lower levels	Upper levels
Frequency	Repetitive, routine problems	New, unusual problems
Information	Readily available	Ambiguous or incomplete
Goals	Clear, specific	Vague
Time frame for solutions	Short	Relatively long
Solution depends on	Procedures, rules, policies	Judgement and creativity

So, what are the different types of decisions and what are the characteristics of programmed decisions and non-program decisions let us discuss in more details. For a programmed decision the type of problem is structured and the managerial level involved is lower level of management.

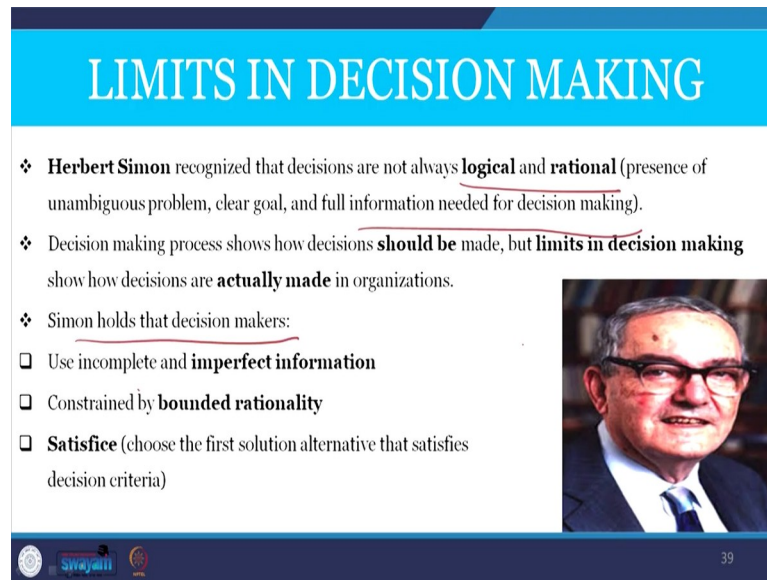
And, with respect to frequency, the problem is repetitive or routine problems; routine problems which we come across every day in our day-to-day life we meet across such problems. And the decisions can be taken with the help of already available guidelines, rules and policies.

Information about the problem is easily available and the goal is very clear and specific. Time frame for providing solution is short and solution depends on procedures, rules and policies. Whereas, in contrast, non-programmed decisions, the type of problem is unstructured, level of management involved in decision making is top management or upper levels of management.

The frequency of the problem is new and unusual problems, a complex problem which has no straight solution and information is ambiguous or incomplete; there is lot of ambiguity or complexity associated with the nature of the problem. And, goal of the problem is not very clear cut or you can rather say it is abstract or vague; time frame for solution is relatively long, very long.


We do not know when the solution can be procured and solution depends on the judgment and creativity of an individual. It is unlike the programmed decisions which depends on procedures, rules and policies. The solutions for non- programmed decision are mostly based on expert's judgment, opinion and creativity.

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**LIMITS IN DECISION MAKING**

- ❖ **Herbert Simon** recognized that decisions are not always **logical and rational** (presence of unambiguous problem, clear goal, and full information needed for decision making).
- ❖ Decision making process shows how decisions **should be** made, but **limits in decision making** show how decisions are **actually made** in organizations.
- ❖ Simon holds that decision makers:
  - ❑ Use incomplete and **imperfect information**
  - ❑ Constrained by **bounded rationality**
  - ❑ **Satisfice** (choose the first solution alternative that satisfies decision criteria)

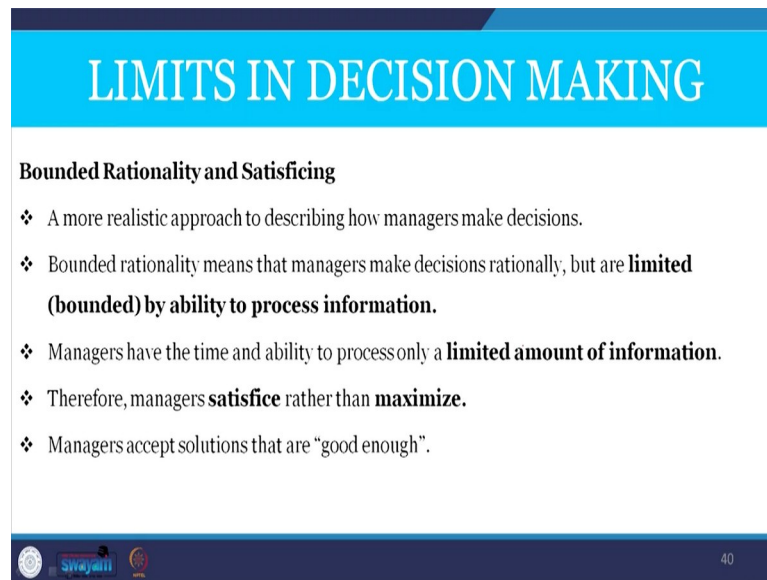


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So, what limits do we have in decision making? **Herbert Simon** recognized that decisions are *not always logical and rational*. Presence of unambiguous problem, clear goals and full information are needed for decision making. So, decision making process shows that how decisions should be made, but limits in decision making shows how decisions are actually made in organizations.

Simon holds that decision makers use incomplete or imperfect information. Constrained by bounded rationality and satisfices; that means, they choose the first solution alternative that satisfies, that satisfies decision criteria. These are the limits in decision making.

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The slide features a blue header with the title "LIMITS IN DECISION MAKING" in white. Below the header, the text "Bounded Rationality and Satisficing" is displayed. A list of four bullet points follows, each starting with a diamond symbol. The slide footer includes a logo on the left, the word "swajati" in the center, and the number "40" on the right.

## LIMITS IN DECISION MAKING

**Bounded Rationality and Satisficing**

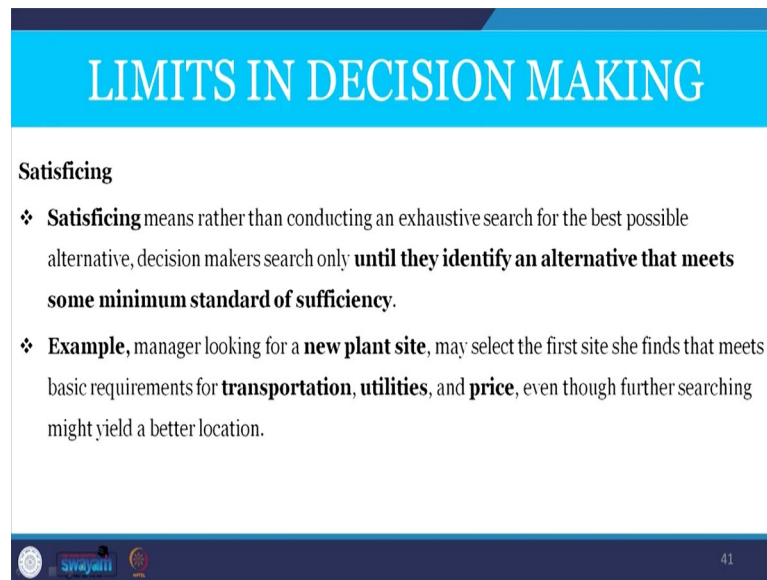
- ❖ A more realistic approach to describing how managers make decisions.
- ❖ Bounded rationality means that managers make decisions rationally, but are **limited (bounded) by ability to process information.**
- ❖ Managers have the time and ability to process only a **limited amount of information.**
- ❖ Therefore, managers **satisfice** rather than **maximize.**
- ❖ Managers accept solutions that are "good enough".

And, bounded rationality and satisficing. **What is bounded rationality?** A more realistic approach to describing how managers make decisions. So, it is a rational approach to decision making; bounded rationality means that managers make decisions rationally, but there is a boundary or limitation by ability to process information.

Managers also have the time and ability to process to a limited amount of information. Therefore, managers satisfice rather than maximize. They just go with what is most satisficing to them. Managers accept solutions that are good enough; satisficing means good enough.



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The slide features a blue header with the title "LIMITS IN DECISION MAKING" in white. Below the header, the word "Satisficing" is written in bold. Two bullet points, each starting with a blue diamond symbol, define the concept and provide an example. The first bullet point states that satisficing involves searching until a minimum standard of sufficiency is met. The second bullet point gives an example of a manager selecting a plant site based on transportation, utilities, and price. At the bottom of the slide, there are logos for Swajati and a small number "41".

## LIMITS IN DECISION MAKING

**Satisficing**

- ❖ **Satisficing** means rather than conducting an exhaustive search for the best possible alternative, decision makers search only **until they identify an alternative that meets some minimum standard of sufficiency.**
- ❖ **Example**, manager looking for a **new plant site**, may select the first site she finds that meets basic requirements for **transportation, utilities, and price**, even though further searching might yield a better location.

What is satisficing? Satisficing means rather than concluding an exhaustive search for the best possible alternative, like what we discussed in the 8-step strategy formulation, a 8 step decision making process.

So, managers generally conclude and an exhaustive search for the best possible alternative decision that until they identify an alternative that meets some minimum standards of sufficiency. For example, managers looking for a new planned site may see the first site; she finds that it meets basic requirements for transportation, utility and price, even though further searching might yield a better location.

But generally what people do is; just to take a better decision, they look for some certain criteria and confirm the decision. So, it is like selecting the alternatives which meet some minimum standards of efficiency or sufficiency. What are the organizational constraints? *Organizational constraints are performance evaluation, reward systems, formal regulations, system in imposed time constraints and historical precedence.*

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**ORGANIZATIONAL CONSTRAINTS**

- Performance Evaluation
  - Managerial evaluation criteria influence actions
- Reward Systems
  - Managers will make the decision with the greatest personal payoff for them
- Formal Regulations
  - Limit the alternative choices of decision makers
- System-imposed Time Constraints
  - Restrict ability to gather or evaluate information
- Historical Precedents
  - Past decisions influence current decisions

swajani

Performance evaluation – manager’s evaluation criteria influence its actions. Reward system – managers will make the decisions with the greatest personal payoff for them. Formal rules and regulations – limit the alternative choice of decision makers these are some organizational constraints.

Then system-imposed time constraint, restrict ability to gather or evaluate information, historical precedence – past decisions also influence current decisions. So, as we have seen, there are certain personal biases in decision making; perception has interfered in the decision-making process.

Similarly, the organizational specific constraints like reward system, formal rules and regulations, some system imposed time constraints and historical success in the past or past precedents also influence or interfere as a barrier in the decision making process.

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**DECISION MAKING BIASES**

- ❖ **Overconfidence bias** (to hold unrealistic positive views about oneself)
- ❖ **Immediate gratification bias** (desiring quick payoffs from decision)
- ❖ **Anchoring effect** (failing to adjust for subsequent information)
- ❖ **Selective perception bias** (selectively interpret events)
- ❖ **Confirmation** (reaffirm the past choices and discount contradictory information) ✓
- ❖ **Framing** (select and highlight some aspects of situation and exclude others) ✓
- ❖ **Availability** (remember events that are most recent)
- ❖ **Representation** (assess the occurrence of event based on similarity with other events) ✓
- ❖ **Randomness** (create meaning out of random events)
- ❖ **Self-serving** (take credit for success and blame others for failures) ✓
- ❖ **Hindsight** (once outcome is known, it is a belief that outcome was already known) ✓

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So, **what are the decision-making biases?** Let us discuss each one of them in more details. Decision making biases or decision biases like over confidence bias, immediate gratification bias, anchoring effect, selective perception bias, confirmation, framing, availability, representation, randomness, self – serving bias and hindsight. So, these are some decision-making biases, I will discuss about each one of them.

Over confidence bias – sometimes while taking decisions, managers become too confident about their decisions to hold unrealistic positive view about oneself they become too positive about solution which they are providing. So, which leads to over confidence and over confidence is very dangerous in situations in critical situations. So, it can also interfere in the decision-making process.

Immediate gratification bias – which is looking for or desiring quick payoffs from decisions. Some managers have a tendency to look for instant gratification of their needs, instant gratification, instant desire to get some payoff from the decision. So, which is also in a haste we should not take decision which is dangerous.

Anchoring effect: failing to adjust for subsequent information. Sometimes people do not look for alternatives and/or they fail to procure subsequent related information, if there is limited information, which will not lead to a successful decision. So, if there is lack of information the manager needs to search for more information with patience and they should give adequate amount of time to search for alternatives, search for say, some

more information related to the problem, but anchoring effect is a bias, which where the manager fails to procure more information.

Selective perception bias – what is selective perception? Selectively interpret events as we discussed sometimes back, we discussed about selectively retaining certain ads, which are flashed on television.

Some people have a tendency to select or and search for information which is of most interest to them. So, selective perception bias generally means that selectively interpreting events, there is an advertisement which goes on.

If I have an interest in that particular jingle in the particular color of which is there on the advertisement or because of some kind of similarity, because of some kind of personal bias, I may selectively perceive, I may selectively retain the jingle or the color or say, some features of the advertisement some emoticons. So, which means that there is a tendency of an individual to selectively perceive information, which may lead to decision errors.

The fifth point is confirmation – what is confirmation? Confirmation means reaffirm the past choice and discount contradictory information. Some people have the tendency to reaffirm their past decision to reaffirm what they have what decision they had taken in the past and discount some contradictory information.

This so happens, when people take decisions in a group, generally the person who is the spokesperson in the team or the person who is a facilitator, he seeks only that information which confirms to his past decision and discounts unfavorable decisions, discounts the decisions which are contradictory in nature. So, this is called confirmation bias.

And, then we will be discussing about framing, what is framing? Select and highlight some aspects of the situation while excluding others is called framing. Availability remembers events that are most recent. People generally try to remember or people generally remember it is a tendency of an individual to remember something which has happened in the recent past. So, that is called availability or recency effect.

Framing means select and highlight some aspects of situation, some aspects and exclude other aspects. Representation is assessing the occurrence of an event based on how much similar it is with other related events or other events.

Randomness is to create meaning out of people, try to frame meaning out of random events. Some event has happened and people try to accumulate that information, assess that information and try to make some meaning out of those random events, that is called randomness.

Representation is assessing the occurrence of event based on how much similar it is with other event and self-serving bias is take credit for success and blame others for failure. Some people; as we discussed in the first lecture self-serving bias, what is that? Generally, it is a tendency of individuals to claim for the success of any event and when there is a failure, they shift it or they shift the blame to others.

So, blame shifting is very easy and taking claims or taking benefit of success is generally cherished. So, self-serving bias also hinders in decision making process. Hindsight is once outcome is known; it is a belief that outcome was already known. Hindsight bias is when you get to know the information or result of the event; once outcome is known, it is a belief that outcome was as if it was already known.


So, individuals have different types of biases. Every individual is succumbed to some kind of bias or some kind of personal belief and which hinders in decision making processes. The over confidence bias which is like holding unrealistic positive view about oneself, immediate gratification, looking for some kind of instant payoff from a decision.

Anchoring is failing to adjust to subsequent information and selective perception by selectively retaining information interpreting events. Confirmation is reaffirming the past choice and discount for new information; framing is to select and highlight some of the aspects of situation and exclude others. So, all these biases interfere in decision making process.

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## Individual Differences in Decision-Making

- Personality
  - Conscientiousness may effect escalation of commitment
    - Achievement-strivers are likely to increase commitment
    - Dutiful people are less like to have this bias
  - Self-Esteem
    - High self-esteem people are susceptible to self-serving bias
- Gender
  - Women analyze decisions more than men – *rumination*
  - Women are twice as likely to develop depression
  - Differences develop early



Swajati

Now, let us move towards the next topic that is individual difference in decision making. Yes, of course, each manager has a different way of interpreting events, this different perception, they have different types of decision biases or this leads to errors in decision making.

So, **personality** is also one such factor of an individual, which is related to an individual difference in decision making. Conscientiousness as we know that each individual has a different personality and the individual's personality will interfere in the person's decision-making process. Conscientiousness or dutifulness may affect escalate escalation of commitment.

Achievement orientation or achievement oriented people are likely to increase commitment. Dutiful people that is conscientious people the conscientious means dutiful who are very sincere, dedicated; sincerity sincere people are less likely to have the bias dutiful people are less likely to have this kind of bias of escalation of commitment.

Then high self-esteem people are susceptible to self serving bias. Self serving bias the people who have strong sense of self esteem or confidence they are likely less likely to succumb to some biases like self serving bias and then self-serving bias which is to take credit for success and blame shift blames on others.

So, next point is **gender** – gender is also one factor which may interfere, which may lead to individual differences in decision making. Men take decisions differently women take difference decisions differently. Women analyze decisions more than men; that means it is called rumination.

Women are twice as likely to develop depression; they develop differences these differences develop early. So, after we discussed individual differences in decision making like personality and gender, then we will move forward with the discussion on ethics and decision making.

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The slide features a blue header with the title "ETHICS IN DECISION MAKING" in white capital letters. Below the header, the text is organized into a bulleted list. The main bullet point is "Ethical Decision Criteria", which branches into three sub-points: "Utilitarianism", "Rights", and "Justice". Each sub-point has its own list of specific criteria. At the bottom of the slide, there are three small logos: a circular logo on the left, a logo with the word "swyain" in the middle, and a circular logo on the right.

- Ethical Decision Criteria
  - Utilitarianism
    - Decisions made based solely on the outcome
    - Seeking the greatest good for the greatest number
    - Dominant method for businesspeople
  - Rights
    - Decisions consistent with fundamental liberties and privileges
    - Respecting and protecting basic rights of individuals such as whistleblowers
  - Justice
    - Imposing and enforcing rules fairly and impartially
    - Equitable distribution of benefits and costs

Ethical decision criteria – there are three types of the points that we would like to discuss on utilitarianism, rights and justice. Utilitarianism means decisions are made based on solely the outcome or the result. Seeking the greatest good for the greater number greatest number; that means, large the decisions which will be good for the large number of people, which will be which will have or which will affect a large number of people in a and then dominant methods which are generally used for by business people.

So, principles of utilitarianism emphasize on the results the decisions based on the outcome or the result, which will be good for a large number of people and which is dominant method used in the business world. Rights of individuals need to be protected. Next point is decisions which only those decisions which are consistent with the

fundamental rights of individuals, which rights liberties and privileges being given to the individuals.

And, which respects protecting basic rights of individuals for example, whistleblowers rights. As we discussed earlier also that an individual decision which are good for the entire community, which are good for the society and the people in the organization. So, there are in many instances where the individuals come across some unethical practices which are being carried out in the organization or which they feel will be detrimental for the society and they pass on this information to the people.

So, these individuals are called whistleblowers. They are trying to do good for the large number of people or for the organization and the society, but their interest is not protected. Their fundamental right is needing their safety, need to be need to be taken care of. So, whistleblowers are generally; their interest is not protected and they succumb to problems.

So, in this case we have to take care of that decisions are taken which protects the rights of individuals, which provides justice to the individuals imposing and enforcing rules which are fair, transparent and impartial; where there is equity in distribution of rewards, benefits. And then because ethics in decision making will be good for the organization's reputation.

Utilitarianism the pros or the positive aspects is it promotes efficiency and productivity. Its disadvantages are – can ignore individual rights especially the rights of minorities. The people who are limited in number the advantages are protects individuals from harm, preserves rights.

The disadvantages are – creating an overly legalistic work environment; justice advantages protects the individuals interest or interest of weaker members and disadvantages are encourages a sense of entitlement. So, with this I would like to conclude the session here. What we discussed here in this section?

We discussed about the types of decisions, programmed decisions, structured problems, then types of program decisions like; the procedures, rules, policies, non-programmed decisions, unstructured problems, unstructured decisions, non-programmed decisions are made by top level managers.



Then we discussed about the organizational hierarchy involved in the decision making and unstructured problems are addressed by the top-level managers and structured problems are generally addressed by the lower level of managers using the programmed decisions. Then we discussed about the characteristics of the programmed and non-programmed decisions and limits in decision making.

Then further we discussed about the bounded rationality and satisficing decisions and then what is organizational constraints in decision making. And, discussed and various decision-making biases, individual differences in decision making related to personality and then gender. And, lastly what we discussed is how ethics can improve decision making; ethics and decision making with respect to utilitarianism, rights and justice.

And, we concluded that if there is an ethical decision making, then it would improve the performance. It will improve the decision making or ethics in decision making will improve enhance decision making of managers. So, with this I would like to conclude the session here.

Thank you.