INTRODUCTION TO VISUAL COMMUNICATION

Unit–I : Communications

Definition- Nature and Scope – Intentions- Communication need- Importance of Human and Visual Communication as Expression- Skill and process- Understanding communication- SMCR model.

Unit–II : Communication Types


Unit–III : Visual Communication


Unit–IV : Perceptions


Unit–V : Graphics Design

UNIT I

Communication definition, Nature & Scope – intentions, communication need for and importance of human and visual Communication as expression, skill and process. Understanding communication: SMCR model.

Communication – sending of a message from one person to another, in simplest terms - has been one of the oldest characteristics of human life. Even when formal languages were not available, people were able to make each other understand their feelings and gestures to accomplish routine tasks.

There is no trace available as when the languages came into being, the communication among people, however, got on faster track than before with the availability of formal languages in the form of symbols, gestures, body expressions and words. Since those times the communication has been shaping into different forms and is supposed to be the key element in creation of different subjects and passing on experiences of one generation onto the next.

Starting from sending and receiving information amongst few individuals to high number of people, the communication is now well classified into different categories. Although main focus here is the mass communication, it is pertinent to understand some basic elements, fields and concepts of elementary communication before entering the very complex and widely exploited world of mass communication.

Basic Concepts of Communication

Well, the world communication has its origin in the Latin word COMMUNIS which stands for common or to create commonness with the people around you. This is possible when you share your feelings and ideas with others.

According to commonly used definition, communication is transfer of message from sender to receiver through a channel. It is understood that speech or utterances in the form of voice, were the initial stages of communication which gradually developed into a defined form of language when all the people of a community got to attach specific meanings to the voices and gestures.

It might have taken centuries to mankind to enter the stage of writing its messages on stones etc. But once writing was developed as one mean of communication there had been attempts to find some material to write on, which was more sustainable and easy to take along in travel. Using bark of certain trees for this purpose, the endeavor led to invention of paper, thus revolutionizing the early days’ communication.

Writing on paper by hand must have brought joy to people for sending their messages across to many others, after that, the invention of printing overwhelmed efforts to give new dimensions to communication.
This further led to setting up a whole new printing industry world over followed by modern means of communication, which will be discussed in detail in this course.

Why need communication?

Survival

The foremost reason to communicate to others for the human beings in particular is their own survival. There is hardly any sense in believing that a person can all alone live a life by fulfilling its daily life needs. The fact is that every next moment a person is dependent on others to survive. Hence it is inevitable for all of us to bank on communication.

Co-operation

There is a very genuine instinct in all the living creatures to cooperate with each other to keep the cycle of life running. Humans need this more cautiously as to keep their hard felt sense of superiority.

Relationships

Feeling of keeping a range of relationship from an individual to family and tribe was strong from early days of human civilization. It would have been extremely difficult to promote a life style without acknowledging the relationships among people living together for sometime. Communication was essential to identify relations among people to accomplish different tasks.

Persuasion

Communication proved handy in the course of persuasion and influence others to keep the human civilization grow. The task is done even today, though, with different techniques and in a rather complex world of communication.

Power

Better communication helped people and tribes to command power over others. This phenomenon is more evident in the fields of conflict and to bring the enemy down. To muster support by using better communication skills has always been the hallmark of human interactivity.

Social needs

Social needs grow with almost the same pace, human culture and civilization nurture. History stands as testimony to the fact that the circle of human social needs expands as people try to live together in more organized manner. Communication is the common most thing which knit societies to fulfill their desire to rise jointly.

Information

In more advance world, as it is today, it is a piece of information – a piece of communication, which brings relief to human living in a score of ways.
Information about roads, condition, may help you change your traveling plan, for instance. A small bit of information may have a life long impression on your future business.

**Decision making**

And not the least, in present day affairs communication goes long way in helping us in decision making. Not an individual alone, but families and nations, can draw certain conclusions with the help of available communication on certain matters which is likely to improve the overall living standards and a more secure life for all of human beings.

**Major Fields of Mass Communication**

**General Information**

The main field of mass communication has been to inform people at large about things which are in their immediate interest. This includes the vast area of news, views and current affairs. Apart of specific nature of news etc. people are also informed about entertainment which may include sporting events, music or recreation. To educate masses is also part of mass communication by exploiting all the means at hand to address a distant and high concentration of individuals.

**Public Relations**

Although this area of mass communication has assumed new dimensions in the modern world, keeping relations with various types of public has its traces from ancient history. This area has proved handy to organized and corporate sectors, which have a defined purpose to achieve by keeping relations with audience of their choice.

**Publicity**

Publicity, which is more known as advertising, is definitely an outcome of modern means of communication for it largely depends on the technology being exploited to address masses for purely commercial purposes. So enormous has been the impact of advertising through means of mass communication that a huge advertising industry has come up offering tens of thousands of jobs of different nature to people across the world.

**SEVEN CENTURIES OF MASS COMMUNICATION – FROM PRINTING TO COMPUTER**

As if printing process was an invention long been eagerly awaited to bolster communication at the level of masses, it opened doors for creation and discoveries of many valuable means in the area of mass transaction of messages which, as the time proved, had far reaching impression on the growth of societies, cultures, habits, disputes and organizations which could help people live in a world close to each other.

The printing process was first proved helpful to long desire of authors to reach a high number of readers. As the books circulation increased in the next
hundred years, which also included works on different scientific discoveries and sharing of newer physical ideas, it was the turn to publish things regularly. Since people’s interest was enormous in buying and reading books, an idea to bring out a publication on regular basis was never ruled out.

**Newspapers/ magazines**

It took almost two hundred years that the concept of regular publication appeared in the form of newspapers. There are conflicting ideas as who brought out the first newspaper in the world and how long it had sustained but according to the World Association of Newspapers, the first titled English language private newspaper, *The Corrant*, was first published in London in 1621.

The first English daily newspaper, the Daily Courant, was founded by Samuel Buckley on 11 March 1702. In 1631 *The Gazette*, the first French newspaper was founded. In 1690, *Public Occurrences in Boston* became the first newspaper published in America. In 1803, just 15 years after the first British penal colony was established, Australia’s military government published the *Sydney Gazette* and the *New South Wales Advertiser*, Australia’s first newspapers.

1884 Otto Merganthaler invents the Linotype machine which casts type in full lines, using hot lead, a quantum leap in newspaper publishing, and ushering in the era of "hot lead." The systems remained in general production in the industry well into the 1980s, when computerized pagination became prominent. This printing process was assumed by hundreds of regular publications of newspapers and magazines around the world and remained in frequent use for almost a hundred year.

1962 L.A. Times derived Linotype hot metal typesetters with perforated tape. The key was development of a dictionary and a method to automate the hyphenation and justification of text in columns (tasks that took up 40% of a manual operator's time). With the availability of other technologies and support like advanced mechanics and electricity more experimentation were done in publishing industry.

Since the 1980s, many newspapers have been printed with three-color process photography and graphics. This highlights the fact that the layout of the newspaper is of major importance in getting attention so readers will see and enjoy large sections of the newspaper.

**Circulation and Readership**

United Nations’ data from 1995 indicates that Japan is the country with most newspaper readership. It has three daily papers with a circulation well above 4 million. Germany’s *Bild*, with a circulation of 4.5 million, was the only other paper in that category. USA Today has daily circulation of approximately 2 million, making it the most widely distributed paper in the U.S.
Business side

Almost all newspapers make almost all their money from advertising. Publishers of commercial newspapers strive for higher circulation so that advertising in their newspaper becomes more effective, allowing the newspaper to attract more advertisers and charge more for the service. But some advertising sales also market demographics. Some newspapers might sacrifice higher circulation numbers in favor of an audience with a higher income. Some newspapers provide some or all of their content on the Internet, either at no cost or for a fee. In some cases free access is only available for a matter of days or weeks or readers must register and provide personal data. In other cases, extensive free archives are provided.

Radio – radical change in mass communication

As the world was enjoying the benefits of mass communication through print medium, scientists had been working on some other miracle – reaching out masses through voice. Though in the middle of 19th century it sounded as talking-high, towards the end of the century things had started shaping as the idea might be materialized. It actually did at the brink of 20th century when Italian born Guglielmo Marconi introduced to the world his marvel which today we all know as a radio – the device which brings voice to you from thousands of kilometers.

Marconi – transmits signals by radio waves

An Irish-Italian inventor Guglielmo Marconi is commonly credited for doing that in 1895. But, whether he was actually the first to send signals through the air is open to debate. Other countries have some impressive evidence that some of their citizens transmitted radio signals before Marconi. Even so, if you asked the question on some quiz show, you'll be safest with the name "Guglielmo Marconi." Once he proved that wireless transmissions (radio to you and me) could work, Marconi patented the invention in England and set up the Marconi Wireless Telegraph Company.

Brief Radio history

Once radio broadcasting was launched, people began to realize just how significant this new medium could be. The first regular radio broadcast in the USA in 1920 brought presidential election returns - in advance of the newspapers. People quickly took note of all the free music, information, and commentary that was suddenly available to anyone with a radio set.

But, something else was going on at the same time. Scores of people were building their own personal radio stations, probably motivated in part by the ability to be widely heard by friends, neighbors, relatives, and even strangers. That created a major problem. Soon there were too many stations for the number of frequencies available to separate them on the radio dial.

Some thought the solution was simply to use more power to drown out the competition. So it got to be a power battle too. But soon regulations were enacted by countries where radio stations were set up by people on their own. Now the states issued license to the willing public to run a radio station.
Broadcast Advertising

Then another element entered the picture — broadcast advertising. In 1922, a station in New York ran a 10-minute talk on the merits of some co-op apartments in Jackson Heights, N.Y — and charged $50 for their effort. That was deemed a toll broadcast — now better known as a commercial. At that point it was discovered that you could actually make money by promoting products on radio — and, of course, things have been the same since then.

Other countries had their own ideas about this new medium. In Great Britain this led to the establishment of the BBC (British Broadcasting Corporation) in 1923. The BBC used public taxes on radio receivers, rather than commercials, to pay for their broadcast system.

Later, the CBC (Canadian Broadcast System) was developed in Canada, patterned after the BBC. The problem in Canada was that a large percent of the population spoke French, which meant that programming systems in both English and French had to be developed. Although most counties of that era also adopted government sponsored radio broadcasting, the BBC and CBC are among the few that were able to insulate programming content from direct government influence. In other words, most countries used radio to further the political aims of those in power. Today, a great many still do.

Government Regulation

With the advent of paid radio advertising in the United States, sponsors were rather insistent on having their commercials heard. Since corporate money and profit were involved (which largely finance politics), the government suddenly started to get quite interested in doing something about the problem. So the U.S. Congress passed the Radio Act of 1927, which created the Federal Radio Commission (FRC). Its purpose was to organize the licensing of transmitters, including assigning radio station frequencies. In 1934, the FRC was reorganized into the agency that now controls U.S. broadcasting, the Federal Communications Commission (FCC). The FCC's regulatory powers expanded to include telephone and telegraph — and some years later, television.

Television – miracle in modern mass communication

It was not much later that people heard radio as one top and fast means of communication, that scientists brought a device in the middle which along the voice could support images and events unfolded in front of the people as a real life occurrence.

Championed in 1927, the invention of TV took hardly ten years to assume a regular shape as one strong source of mass communication. The 2nd World War towards the end of third decade of the last century, however, halted progress on this most modern mean of communication, the end of war saw a rapid advancement in telecommunication in which the transmission of the images ranked at the top. In most countries the TV stations were set up, regulations enacted and sets were sold in high number by the end of forth decade of the century. Next decade saw colored TV sets and transmissions
and use of remote controls. Pakistan had its first TV station in Lahore in November 1964.

**Computer**

The world had not yet fully exploited the TV as the strongest organ of mass communication that unending research and developments in the field of science and technology brought computers – internet, so to say, for people who wanted to be beneficiaries of mass communication. Computers which were introduced on limited scale in early 1960 for the purposes of communication and fast data processing became in 1990s the major source of communication across the world.

**ELEMENTS OF COMMUNICATION AND EARLY COMMUNICATION MODELS**

Like all the complex objects, communication is also made up of certain basic things called elements. A building has its elements in brick, sand, cement, iron, wood, paints and sanitary fittings. A machine has a number of components which are all elements joined together to enable the machine to give desired results. Communication is a complex business and involves certain elements which join together to help a message go across.

In this chapter we will give a long sight to various elements which have been marked by experts and which provide the very basics of any piece of communication however simple it may be.

**Elements of communication**

**Sender**

First and foremost is the person who sends a message. Known as sender in the jargons of communication, he or she is the chief initiator of any communication. In fact a communication may not take place if there is no sender. The sender may be singular and plural as well. It all depends on the nature of communication. If a teacher is delivering lecture, it constitute a case of sender as one individual. Sender comprising many is the case when a group of people shout together, or more than one person sing a song as chorus.

**Message**

When sender – the source of communication, decides to communicate he/she encodes the crux of the feeling in words/gestures or any other form commonly understood. This encoded form is called message. It may be a simple word or a very complex and technical integration of feelings by the source on a given subject.

**Channel**

No sooner a message is created by a sender, it enters in the channel. The channel is part of the communication process which helps carry the message to its desired destination. In case of printed words paper is the channel, in the
matter of voice air may serve as a channel. In telephonic conversation the wire and the sets make the channel. Some times the channel itself becomes part of message and sometime message is sent in a manner that a part of it serves as a channel.

**Receiver**

The process of communication may not be complete if the message does not reach a person, or persons, it is designed for. Receiver in this process is the element which is target of the message and actually receives it. The dimension of receiver is very wide – it may vary from an individual to an army of people, or a nation or all nations. Again, it depends what the message is.

**Interpreter**

Receiving message in most case is half the process of communication done. In most cases an interpreter is required to understand – decode – the message so that the purpose of communication is served. Noise always occurs at this stage. Noise means part of meaning which is lost from the original message. There is hardly a message which is decoded, or interpreted cent per cent.

**Feedback**

Sending and receiving of message is a simultaneous process in which the receiver continuously sends back its approval or disapproval after having interpreted the message. This helps the sender to modify or discipline its message. This element in the communication process is referred as feedback. For instance a person is delivering speech, the voices, gestures and facial expressions – all part of feedback, would help the speaker to check its loudness, smiles, rhetoric, contents or time to speak. If there is no feedback, the original message may never shape accordingly which may distort the whole communication exercise.

**Context**

Every message is delivered and received in a given context. Change in the background factors denoted as context, may change the meanings altogether. Context itself comprises multiple factors each one of them becomes essential when it comes to interpretation of the original message.

**Communication Model**

Communication experts have long been striving to arrange elements of communication into some graphic arrangement so that all the complexities of communication may come in view in a glance. But before we try to examine them lets try to understand what a model is.

What is a Model?

- A model is a systematic representation of an object or event in idealized and abstract form. Models are somewhat arbitrary by their nature.
• Communication models are merely pictures; they’re even distorting pictures, because they stop or freeze an essentially dynamic interactive or transitive process into a static picture.

• Models are metaphors. They allow us to see one thing in terms of another.

The Shannon-Weaver’s Model of Communication

The Shannon-Weaver's model is typical of what are often referred to as transmission models of communication. Claude Shannon and Warren Weaver were two different entities that jointly produced a model known after their names.

Claude Shannon and Warren Weaver produced a general model of communication.

This model is now known after them as the Shannon-Weaver's Model. Although they were principally concerned with communication technology, their model has become one which is frequently introduced to students of human communication early in their study.

The Shannon-Weaver’s Model (1947) proposes that all communication processes must include following six elements:

• Source
• Encoder
• Message
• Channel
• Decoder
• Receiver

These six elements are shown graphically in the model. As Shannon was researching in the field of information theory, his model was initially very technology-oriented. The model was produced in 1947. The emphasis here is very much on the transmission and reception of information. 'Information' is understood rather differently from the way you and I would normally use the term, as well. This model is often referred to as an 'information model' of communication.

Apart from its obvious technological bias, a drawback from our point of view is the model's obvious linearity. It looks at communication as a one-way process. A further drawback with this kind of model is that the message is seen as relatively unproblematic. It is fine for discussing the transformation of 'information' but when we try to apply the model to communication, problems arise with the assumption that meanings are somehow contained within the message.
Detailed analysis of the model

The Source

All human communication has some source (information source in Shannon's terminology), some person or group of persons with a given purpose, a reason for engaging in communication. You'll also find the terms transmitter and communicator used.

The Encoder

You, as the source, have to express your purpose in the form of a message. That message has to be formulated in some kind of code. How do the source's purposes get translated into a code? This requires an encoder. The communication encoder is responsible for taking the ideas of the source and putting them in code, expressing the source's purpose in the form of a message.

In person-to-person communication, the encoding process is performed by the motor skills of the source - vocal mechanisms (lip and tongue movements, the vocal cords, the lungs, face muscles etc.), muscles in the hand and so on. Some people's encoding systems are not as efficient as others'. So, for example, a disabled person might not be able to control movement of their limbs and so find it difficult to encode the intended non-verbal messages or they may communicate unintended messages.

A person who has suffered throat problem may have had their vocal cords removed. They can encode their messages verbally using an artificial aid, but much of the non-verbal messages most of us send via pitch, intonation, volume and so on cannot be encoded.

Shannon was not particularly concerned with the communication of meanings. In fact, it is Wilbur Schramm's model of 1954 which places greater emphasis on the processes of encoding and decoding. We will discuss threadbare Schramm's model in next lecture with special emphasis on the provision of interpretation of a message for a logical understanding of what has been sent by the source originally.

The Message

The message of course is what communication is all about. Whatever is communicated is the message.

Denis McQuail (1975) in his book Communication writes that the simplest way of regarding human communication is 'to consider it as the sending from one person to another of meaningful messages'. The Shannon-Weaver's Model, in common with many others separates the message from other components of the process of communication. In reality, though, you can only reasonably examine the message within the context of all the other interlinked elements. Whenever we are in contact with other people we and they are involved in sending and receiving messages. The crucial question for Communication Studies is: to what extent does the message received correspond to the
message transmitted? That's where all the other factors in the communication process come into play.

The Shannon-Weaver's model and others like it tends to portray the message as a relatively uncomplicated matter. Note that this is not a criticism of Shannon since meanings were simply not his concern: Frequently the messages have meaning that is they refer to or are correlated according to some system with certain physical or conceptual entities. (These considerations are irrelevant to the engineering problem).

The Channel

The words channel and medium are often used interchangeably, if slightly inaccurately. The choice of the appropriate channel is a vitally important choice in communication. It's obvious that you don't use the visual channel to communicate with the blind or the auditory channel with the deaf, but there are more subtle considerations to be taken into account as well.

COMMUNICATION MODELS – GRAPHIC PRESENTATION OF COMPLEX ISSUES

True, the Shannon-Weaver's model received attention of communication experts but as we know Shannon was not working to bring the communication – as we understand the term for exchange of messages for human consumption, in the form of a model. His endeavor was more on the engineering side where he was trying to put the elements of communication like the encoder and decoder along with channel in some logical sequence. To his own extent he was successful. But it also showed way to communicators of information in daily life how to manipulate different elements of communication graphically.

The major missing point or the drawback in Shannon-Weaver's model was that it showed little concern on the interpretation of the message. In a mechanical way he was more interested in decoding a message. But, as students of communication will agree, interpreting a message to give it meaning for a person, who is denoted as receiver, is entirely a different process. There is no decoder invented so far which could decode meaning of a human message to the extent as it is meant by the source of the sender.

This huge gap remained a point of concern by many till Schramm and Osgood developed a model by basically modifying the Shannon weaver's model by adding the elements of decoding in the sense of interpretation and giving the process of communication a much desired loop, circle, in the form of feedback.

Before we continue talking Schramm's model lets have a break and see communication models from a different angle:
Advantages of Models

Should give general perspective

A good model is useful, then, in providing both general perspective and particular vantage points from which to ask questions and to interpret the raw stuff of observation. The more complex the subject matter—the more amorphous and elusive the natural boundaries—the greater are the potential rewards of model building.

Should clarify complexity

Models also clarify the structure of complex events. They do this, as well known communication scholar, Chapanis (1961) noted, by reducing complexity to simpler, more familiar terms. Thus, the aim of a model is not to ignore complexity or to explain it away, but rather to give it order and coherence. Should lead us to new discoveries.

According to Mortensen, another prominent scholar, at another level models have scientific value; that is, they provide new ways to conceive of hypothetical ideas and relationships. This may well be their most important function. With the aid of a good model, suddenly we are jarred from conventional modes of thought. Ideally, any model, even when studied casually, should offer new insights and culminate in what can only be described as an “Aha!” experience.

Limitations of Models

But studying various aspects of communication through models is not devoid of certain drawbacks. Here are few points to keep in mind.

a. Can lead to over simplifications

There is no denying that much of the work in designing communication models illustrates the often-repeated charge that anything in human affairs which can be modeled is by definition too superficial to be given serious consideration.

We can guard against the risks of over simplification by recognizing the fundamental distinction between simplification and over-simplification. By definition, and of necessity, models simplify. So do all comparisons. As Kaplan (1964) noted, “Science always simplifies; its aim is not to reproduce the reality in all its complexity, but only to formulate what is essential for understanding, prediction, or control that a model is simpler than the subject-matter being inquired into.

b. Can lead to a confusion of the model between the behaviors it portrays

Mortensen: Critics also charge that models are readily confused with reality. The problem typically begins with an initial exploration of some unknown territory....Then the model begins to function as a substitute for the event: in short, the map is taken literally. And what is worse, another form of ambiguity
is substituted for the uncertainty the map was designed to minimize. What has happened is a sophisticated version of the general semanticist’s admonition that “the map is not the territory.” Spain is not pink because it appears that way on the map, and Minnesota is not up because it is located near the top of a United States map. “The proper answer lies in acquiring skill in the art of map reading.”

c. Premature Closure

The model designer may escape the risks of oversimplification and map reading and still fall prey to dangers inherent in abstraction. To press for closure is to strive for a sense of completion in a system. The danger is that the model limits our awareness of unexplored possibilities of conceptualization. We tinker with the model when we might be better occupied with the subject-matter itself. Building a model, in short, may crystallize our thoughts at a stage when they are better left in solution, to allow new compounds to precipitate. Having seen this discussion by a range of scholars, we continue to figure out more about the model we have chosen for analysis.

Schramm-Osgood’s Interactive Model, 1954

a. Background

Wilbur Schramm (1954) was one of the first to alter the mathematical model of Shannon and Weaver. He conceived of decoding and encoding as activities maintained simultaneously by sender and receiver; he also made provisions for a two-way interchange of messages. Notice also the inclusion of an “interpreter” as an abstract representation of the problem of meaning.

The strong points

1. This model provided the additional notion of a “field of experience,” or the psychological frame of reference; this refers to the type of orientation or attitudes that interacting people maintain toward each other.

2. Included Feedback
Communication is reciprocal, two-way, even though the feedback may be delayed.

- Some of these methods of communication are very direct, as when you talk in direct response to someone.
- Others are only moderately direct; you might squirm when a speaker drones on and on, wrinkle your nose and scratch your head when a message is too abstract, or shift your body position when you think it’s your turn to talk.
- Still other kinds of feedback are completely indirect.

**Few examples from our daily life**

- Politicians discover if they’re getting their message across by the number of votes cast.
- Commercial sponsors examine sales figures to gauge their communicative effectiveness in ads.
- Teachers measure their abilities to get the material across in a particular course by seeing how many students sign up for it the next term.

3. Included Context

A message may have different meanings, depending upon the specific context or setting. Shouting “Fire!” on a rifle range produces one set of reactions, reactions quite different from those produced in a crowded theater, though the word is the same. Culturally a message may have different meanings associated with it depending upon the culture or society. Communication systems, thus, operate within the confines of cultural rules and expectations to which we all have been educated.

**Drawback**

Schramm’s model, though less linear, still accounts for only bilateral communication between two parties. The complex, multiple levels of communication between several sources is beyond this model. The concepts of model carry some more points to students of communication. A few are mentioned below:

**Entropy**

Entropy is the measure of uncertainty in a system. Uncertainty or entropy increases in exact proportion to the number of messages from which the source has to choose. In the simple matter of flipping a coin, entropy is low because the destination knows the probability of a coin’s turning up either heads or tails. In the case of a two-headed coin, there can be neither any freedom of choice nor any reduction in uncertainty so long, as the destination knows exactly what the outcome must be. In other words, the value of a specific bit of information depends on the probability that it will occur. In
general, the informative value of an item in a message decreases in exact proportion to the likelihood of its occurrence.

**Redundancy**

Redundancy is the degree to which information is not unique in the system. Those items in a message that add no new information are redundant. Perfect redundancy is equal to total repetition and is found in pure form only in machines. In human beings, the very act of repetition changes, in some minute way, the meaning or the message and the larger social significance of the event. Zero redundancy creates sheer unpredictability, for there is no way of knowing what items in a sequence will come next. As a rule, no message can reach maximum efficiency unless it contains a balance between the unexpected and the predictable, between what the receiver must have underscored to acquire understanding and what can be deleted as extraneous.

**Noise**

The measure of information not related to the message. “Any additional signal that interferes with the reception of information is noise. In electrical apparatus noise comes only from within the system, whereas in human activity it may occur quite apart from the act of transmission and reception. Interference may result, for example, from background noise in the immediate surroundings, from noisy channels (a crackling microphone), from the organization and semantic aspects of the message, or from psychological interference with encoding and decoding. Noise need not be considered a detriment unless it produces a significant interference with the reception of the message. Even when the disturbance is substantial, the strength of the signal or the rate of redundancy may be increased to restore efficiency.

**Channel Capacity**

The measure of the maximum amount of information a channel can carry. “The battle against uncertainty depends upon the number of alternative possibilities the message eliminates. Suppose you want to know where a given checker was located on a checkerboard. If you start by asking if it is located in the first black square at the extreme left of the second row from the top and find the answer to be no, sixty-three possibilities remain—a high level of uncertainty. On the other hand, if you first ask whether it falls on any square at the top half of the board, the alternative will be reduced by half regardless of the answer. By following the first strategy it could be necessary to ask up to sixty-three questions (inefficient indeed!); but by consistently halving the remaining possibilities, you will obtain the right answer in no more than six tries.
Berlo's S-M-C-R Model (1960)

David Berlo’s SMCR Model (1960) proposes that there are five elements within both the source/encoder and the receiver/decoder which will affect fidelity.

**Source-Receiver relationship**

Berlo’s approach is rather different from what seems to be suggested by the more straightforward transmission models in that he places great emphasis on dyadic communication, therefore stressing the role of the relationship between the source and the receiver as an important variable in the communication process.

“A given source may have a high level of skill not shared by one receiver, but shared by another. We cannot predict the success of the source from her skill level alone.” Berlo (1960)
UNIT II

Types of Communication: Intrapersonal Communication, Interpersonal Communication and Mass communication, Functions of Communication, Group communication. Types of non-verbal behavior, public communication, barriers of communication – physical, linguistic, cultural and mechanical.

TYPES AND FORMS OF COMMUNICATION

Having understood elements of communication, their functions and placement in various models, it is time to complete an other chapter on types and forms of communication before resuming our discussions on various other areas of mass communication for a detailed study.

Types of communication

Broadly speaking, whole human communication could be classified into two distinct parts.

- Intra personal communication
- Inter personal communication

Intra personal communication

The part of communication in which self of a human being is involved only and the communication is confined to one human entity. This means that all the elements which come into action in a given piece of communication are located within the self of an individual. A message originating from source part of the brain travels through the channel of nerves to reach another location, however close it may be to the point of origin of message, where it is interpreted and understood as receiver.

All the process of meditation, thinking, monologue and even dreaming while asleep are all but examples of intra communication.

Inter personal communication

This part of communication belongs to involving two or more individuals for exchange of information. Since this part is experienced more due to its vastness, it is further classified in many categories.

Inter personal

The simplest form in which more than one individual communicate to each other

Group Communication

More often people are seen exchanging views with almost all the participants enjoying an equal status on one count or the other. Like all the players of a
hockey team, class-fellows, doctors, teachers, bureaucrats, politicians, economists etc.

Organizational communication

In this part, communication usually takes place on vertical lines. For instance, a company director is passing on instructions to managers who would be guiding accordingly to field officers and the relevant other field staff. An army general may not be talking to lowest rank men in khaki but would follow the chain of organizational command to deliver his message to the last rank people. Be it a corporate sector,

NGO, a political party, an educational institution, the communication process would strictly follow the essentials of the organizational communication.

Mass Communication

In this category we refer to the communication originating from one source and meant for all possible audience irrespective of distance, cast, creed, religion, nationality and beyond. The mass communication involves use of technology for it is not possible to carry message to a very high number of receivers without the use of certain devices or techniques. All other types of communication may take place when the source is coming across receivers without involving technology. That is why more research and investment has gone into handling the mass communication.

Forms of communication

In another way we can examine the communication process by dividing it into different forms of exchanging messages.

• Verbal
  • Non verbal

Verbal

All the messages said or written in words make part of the verbal communication. This way, all that appears as text in books, magazines and newspapers is part of verbal communication. One can guess the size of an industry in the area of mass communication based on verbal communication. Likewise, all the words heard on radio, television, telephone or any other public address system are also part of verbal communication. Again, the industry and technology based on verbal communication is enormous in size and value as well.

One amazing part of the verbal communication is the availability of events of significance in history. Little is understood about the past from the available artifacts but a great deal of human civilization, growth and conflict is available in the form of verbal communication. The spread of religions and sharing of most scientific work is also due to the verbal communication over the centuries which recorded facts, sentiments and event of common human interest.
It is on the basis of verbal communication that the world has seen great poets, writers, playwrights, historian and newsmen. This also proves at what great scale the verbal communication has created job opportunities. In modern days, people having verbal communication skills are in high demand, especially with the fast expanding media all across the globe.

**Non verbal**

**Senses**

Part of human communication involving other than written or spoken words is referred to as non verbal communication. It involves human senses – sight, taste, touch, hearing and smelling. As a matter of fact about 90 per cent communication among human beings takes place through their senses and the rest by the use of words as languages.

**Symbols, signs**

Emblems, gestures, symbols and signs make more vivid and strong communication as compared to words which are often difficult to decipher. For instance making a victory sign by politicians, army generals, sportspersons and leaders in general at the time of defeating enemy is easily understood even by the illiterate. If the same feeling is expressed in words, many may not come even close to understanding what it is.

The traffic signals, red-cross mark and the symbol of dove are but few illustrations to make people around understand what a message stands for.

**Combination**

For practical purposes, however, the use of verbal and non verbal makes a very strong piece of communication. One may see a match on TV but an enthusiast commentator may relish the joy if your favorite team is winning the game. Similarly, feature films, documentaries and dramas on mini screen stand for more effective pieces of communication than if only one for of communication is brought into use. Even the newspapers and magazines, which are more to bank on verbal communication, carry so much of non verbal communication in the form of images, graphics and maps.

The research journals also exploit the verbal-non verbal combination to share and advance the cause of scientific developments. In fact it has become rather impossible to find a newspaper and magazine, even books, which do not use non verbal communication to explain various aspects of daily life.

**MESSAGE – ROOT OF COMMUNICATION I**

Message in communication holds the key in determining what a piece of communication is all about. A slight change at the end from where a message is originating may lead to a yawning difference in understanding it at the end of receiver.

Human message is entirely different from a mechanical message which makes it a very tricky, some time complex but embarrassing proposition. If
you blow a horn of a motorcar it would sound the same if you try it a hundred times. The telephone bell will ring in the same fashion – sound and the level of volume, where you have adjusted it. Listen to a recorded music and you would hear the same no matter how many time you bother the machine to play it.

But human communication is very different. You can’t repeat a message exactly the ways you have done before for a range of variables occur in composing the message. As said a while ago, a slight change in message – in any manner – may lead to change its meanings at the receiving end. When we examine this property of message in the field of mass communication, the outcome suggest that the sender of a message need to draw extraordinary measures to avoid any misunderstanding on part of receivers who may be in millions in some given case. That is why lines (script) in mass communication is not changed frequently and highly trained people are employed to dispatch message in a quest to achieve the goal of communicating the same meanings – to a possible extent.

Here we will study nature and characteristics of message and the measures to be taken to avoid problems in communication especially when a message is meant for cross cultures, religions, continents, nationalities and casts etc.

**Division**

Messages are generally divided into two categories:

- Verbal
- Non verbal

**VERBAL MESSAGE**

A message composed in words – spoken or written – fall in this category. All we read in newspapers, magazines and books as well as listen to fellow beings face to face or radio, TV, telephone etc are clear examples of verbal messages.

**Linguistic Barrier**

All people even when they belong to one clan do not posses same linguistic skills. Nor a person ever knows that whatever he or she is saying – by composing in idioms and words – is to be understood as such by others. Think of a situation when people are talking to each other that belong to different areas where even the same words stand for different meanings. And if the sender and receiver of a message belong to areas where two different languages are spoken, the meanings of message are deciphered substantially and chances of misunderstanding, and misgiving, are high.

**Standard Meaning’s Problem**

Some time a language may not prove up to the mark even two very close people are exchanging views. For instance two people understand what is meant by the word ‘hot’. Even then if one person reports to other that it is hot
outside, the receiver may not quantify how hot it is unless physics (science) is applied and the sender says it is 40 degree Celsius outside. In normal language in which communication is done such physics references are a remote possibility. Hence there is always difference in understanding the exact meaning of a message.

Written Message Confusion

The written words offer more of this situation. It is difficult to articulate your thinking and feeling about an experience into words. It is even more difficult for the reader – receiver – to decode or understand who has no experience of those feelings. For instance a person has never visited Swat valley. It is so difficult to make him or her feel the way writer has felt the experience of visiting the all awesome valley even if he has chosen best words and articulation to describe the feelings.

You never know whether a person has exaggerated while giving an account of some event as words are not like mathematics to give same result after same exercise. This makes the task of historians extremely difficult who have to write for people centuries after when a sea of cultural changes would have taken place only to alter the meanings of the same words used by the authors of the history book. It is here that we can recall the Schramm-Osgood communication model which emphasizes on the common experience of the things talked about by the sender in a message.

Static Evaluation

Words themselves do not carry the same meanings through time and space. A word which gave a specific meaning a hundred years ago may not give the same meanings today – for scores of reasons. Similarly meanings of same words are changed at some distance. A verbal message which once stood for certain meanings, may not always stand for the same meanings because static meaning evaluation does not hold in any language.

NON VERBAL MESSAGE

Many messages we come across in our daily life are non verbal – not in words by in gestures, symbols, signs etc. Here we will see how this part of communication takes place.

Gestures

We usually adopt some patent gestures to communicate certain feelings. A victory sign is a clear example of sending a message of a win. A baby brings certain gestures on his/her face to communicate mother and others about the
pain or pleasure it is feeling. Wink of an eye may send a message across for multiple meanings.

**Signs and Symbols**

At times the non verbal communication – message, prove more to be understood beyond the bounds of culture and creed. A red-cross sign has assumed a global understanding for medical care. Blaring of siren by an ambulance sends the same meaning to all. Traffic signals are globally understood the same way.

**Cultural Conflict**

Some cultures however differ in communicating the same meanings of common symbols. For instance present a while rose in Japan may stand for meanings different if the same is done in the subcontinent. Seeing into the eyes may stand as a sign of truthfulness of a child, it may be deemed as an offense.

**Body Gestures (Language)**

As we send down a message even in words, we tend to attach some non verbal action to give more meaning to the message. If we have to say sit down please, we also extend our hand as to support the verbal communication.

**Voice Accentuation**

Not only at most inter-personal and group communications but also at the level of mass communication the common most thing in a message is the voice accentuation. Speakers at a mass rally or even on radio and television tend to change their voice level and stress words to give some particular meaning to their utterances. You also do it when you talk to a baby and discipline your voice level – with the same set of words – when talking to an older person like father or teacher for instance.

**Message in Mass Communication – Misgivings, Conflicts, Ethics and Solutions**

Message is the most sensitive area in communication. Send a message and all the confusion, conflict and misgivings are borne thereafter. The inherent problem with message is that it can't be understood with hundred per cent purity and the sender is never in a position to ascertain at the time of letting the message go across as what it may result into when interpreted by the receiver.

No other type of communication suffers this intrinsic property of a message more than the mass communication. Same set of words bring so different a meanings to different receivers that a conflict get on deepening instead of moving towards solution.
For example, Pakistan says it wants a peaceful solution of Kashmir. Exactly same set of words is said by India. The United Nations in a number of resolutions on Kashmir has used the same words. The US and all other western powers, and even the people of the valley say the same. Question arises: then why Kashmir is bleeding? Answer is simple; for every people meanings in the same set of words are different!

**Misgivings**

Treading in such a sensitive area of mass communication by composing an effective message is bound to cause doubts in the mind of receiver. A message at the mass communication level is never understood from the face value of the words, does not matter how smartly they are chosen, and so misgivings are very likely to arise.

Such a situation also occurs when one is going through a newspaper story, a book of history or watches a play on TV. The contents of a TV play may carry lines which may infuriate some and cause laughter for others.

A cartoon in a newspaper, a blend of verbal and non-verbal communication may bring smiles on the faces of political workers of one party and outrage others belonging to another.

**Conflicts**

The most difficult situation in composing a message for mass communication arises when the subject matter is already caught in a conflict. As has been cited in the Kashmir example above, even the softest and most carefully picked words by one party in the conflict may not appease the people living on other side of the conflict.

At times – in given context, an observation in its most objective form causes a conflict. For instance a Pakistani bowler is not performing well; an observation on his performance by an Indian commentator would generate a heated debate among their Pakistani counterparts or vice versa. Things may be different if the same observation is passed by a Pakistani commentator, obviously.

The world of mass communication abounds in surfacing conflicts across political, economic and social lines in almost all societies.

**Negative Message – Propaganda**

Here a deliberate effort is seen on part of sender to distort facts and outlook of a situation to further aggravate meanings (understanding) on a given subject and reap the benefit (resultant) by damaging the enemy. The composing of message as branded in the term propaganda is centuries old and widely used in wars and severe political discords.

**Message as a Commercial Product**

At times the sender attempts to use a message at mass communication scale to garner commercial benefit. This approach has led to setting up of an
entirely different industry in mass communication, known as advertising industry. We will see in coming lectures more as how a message is molded in a manner to fetch commercial gain. It again starts a controversy whether a message with commercial value tells the truth or discards it.

But it is not that conflict is a natural result of a message, though messages are generally under-understood. There are ways to overcome such a situation.

Solution

Since the gravity of misunderstood messages in communication is enormous, experts continue to work on lines to diffuse the negativity in this part of communication.

Use of Standard Language

One foremost practice all over the world is to use to a maximum possible extent of a standard language. There is nothing like a standard language, but in practice one believes that use of polite and decent words command more acceptability than harsh or intimidating words especially on matters of disputes.

Best example of this phenomenon is witnessed when foreign offices of different countries issue representative statements on behalf of their respective governments especially on issues of disagreements. Though the meaning still differ for different end-users of these statements, they generally remain safe to avoid escalation of a problem.

Brevity of Message

In case of severe conflicts, issuing a brief and calculated statement offers another solution to avoid the controversies to get to a point of no return. Fewer words are bound to cause fewer infringements and a situation is saved from spilling over and generating more confusion or tension.

Ethics

The world is multicultural. This composition of the world is most embarrassing for students of mass communication for it is next to impossible to address all the people belonging to different cultures which give one meaning to the words said.

Screening a TV play written and produced in one part of the world (culture) may hurt viewers of another part of the world where cultural values are different. But within one society the same problem may not exist with same intensity. It is advisable to take care of ethics while composing a message – which may be writing a script for a play, or even news. Religious and social values are very dear to people. A message would do a great deal of justice if it abides by these values.
EFFECTS OF COMMUNICATION

Communication generally and mass communication in particular has a great deal to serve a diversity of purposes human beings have always wished to achieve. The strong effects of striving to achieve purposes of human communication are visible and helped bring harmony of living in a number of ways. Here we will see how the process of communication at different scales has helped people of different societies to benefit from exchanging views (messages) on subjects of their interest. First we will see to what effect the communication stands for.

Discover

The immediate effect of communication is to discover something – from an individual to an idea to physical exploration – as a consequence of generating a message.

For centuries human beings have been striving to explore the world around them. Nothing more has helped them in this quest than the communication. It is usually the answer to a communication which brings in certain effects of discovery. Even today when two people meet the communication starts from here; my name is Sara and what is yours? Or, I live in Karachi and (where do) you (live)? It is an instinct of human nature to discover matters around him or her. The process of communication over the centuries has helped tremendously to mankind explore the world around and develop a civilization.

Relationship

Next to discovering, the most important effect of communication is to create relationship with people and things around. A piece of communication is always targeted towards other people with whom you want to have a relationship, or with whom a relationship – of friendship or enmity – already exist. Usually the effect of communication is that a new relationship is set or a fresh dimension, which may be strengthening an existing relationship, is given.

And this phenomenon is not confined to individuals. Nations have been seen striving to use the tool of communication to bring this effect. High level diplomats and even heads of states are seen engaged in fresh communication with their counterparts from societies with whom little association has been witnessed in the past.

The mass communication has always worked strongly to fetch this effect to societies living a distance apart from each other.

Historically, many a travelers roamed about the world even when traveling facilities had been scant, to communicate and establish relationship. In many cases an effort by a small group of travelers had helped set up long lasting relationships between people of two societies.
Helping Out Others

Hallmark of communication effects has been the human effort to provide assistance to other fellow beings. It is due to communication from one part of the world to another that the suffering humanity is saved from various disasters. At a lower scale as well, a piece of communication works miracle to save lives of many. Think of a situation when a house catches fire and a family is trapped inside. One call to rescue operation team – a piece of communication, I will say – activates so much movement of rescuers that in most cases many lives are saved from what could have been a major catastrophe.

Hurricanes, excessive rains, earthquakes, epidemics and floods are but everyday occurring around the globe but almost in every tragedy no sooner a communication is made, help starts pouring in from all around.

Stimulation

Stimulation, or persuasion, is another effect caused on human beings by communication. An advice from a teacher may effect into activating students to work more seriously, or conduct research on a given topic.

At mass level, an appeal from a cherished leader to donate blood or to draw certain measures may do a magic. For instance in the wake of soaring sugar prices if an appeal – a communication is made from a leader asking people to reduce use of the sweetener may work more than other administrative measures and the price may start falling due to low demand.

It is commonly observed that an organized and well thought after piece of communication causes a great deal of persuasion on matters of common interest.

Relaxation

Among effects of communication one huge area is the relief which is effective when an exchange of ideas or even receiving of messages is done in common life.

It is a frequent sight seeing people telling jokes to ward off their worries. Watching a humorous TV play when one is tense does substantially well to change the mood and lessen the anxiety level. Similarly, watching a tense match and seeing your favorite team winning eventually relaxes you to a large extent.

The effect of communication in relaxing people is also observed in meta-communication in which one is involved with non living things as well.

Social Growth

Growth of social values, physical structures and increase in the overall intellectual level of a society are result of the net effect it receives from the every day communication. The exchange of message on scores of issues commonly shared by the people living in one society always lead to
organizing people in a better way. The coherence in living style gives a sort of strength to people of one community which distinguishes it from others. Likewise, sharing of economic knowledge by the people of same society is the effect of common swapping of expertise which some people have gained by their individual efforts.

The present campaign of globalization and all the debate originating from it is a clear effect of the communication which has been taking place on this subject over the decades. It is a matter of common sense that the new approach of one village is going to benefit almost all the people who excel in any field of life. Again, it is a piece of communication which will make people in the same village to come to know how they can benefit from the expertise of others. Communication Effects in Time and Space.

Effects of communication are not limit to present day activities but as a matter of fact they go beyond the limits of time and space. This is quite possible that an idea generated at one time of history is materialized in some physical form at another stage.

Most scientific inventions, like radio, are the result of a multiple pieces of communication made by scientists over a period of 150 years. Many scientists who professed presence of electromagnetic waves but could not prove this in their life time, left behind a theory on which others worked and were able to discover a truth in the original idea.

The distance consideration has also been overcome by ever progressing process of communication. A little research done by a scientist on, for example a disease is widely known to others living miles away, thanks to communication. This brings great effect in the science world and makes the collective human progress more integrated.
Visual Communication: Visual culture, visualizing, visual power, visual pleasure. Fundamentals of Design: Definition, Approaches, Elements (line, Shape, Space, Color, Texture, Form, etc.,) Principles of Design – Symmetry, Rhythm, Contrast, Balance, Mass/Scale etc.,

Visual communication as the name suggests is communication through visual aid and is described as the conveyance of ideas and information in forms that can be read or looked upon. Visual communication solely relies on vision, and is primarily presented or expressed with two dimensional images, it includes: signs, typography, drawing, graphic design, illustration, colour and electronic resources. It also explores the idea that a visual message accompanying text has a greater power to inform, educate, or persuade a person or audience.

The evaluation of a good visual communication design is mainly based on measuring comprehension by the audience, not on personal aesthetic and/or artistic preference as there are no universally agreed-upon principles of beauty and ugliness. Excluding two dimensional images, there are other ways to express information visually - gestures and body language, animation (digital or analogue), and film. Visual communication by e-mail, a textual medium, is commonly expressed with ASCII art, emoticons, and embedded digital images.

The term ‘visual presentation’ is used to refer to the actual presentation of information through a visible medium such as text or images. Recent research in the field has focused on web design and graphically-oriented usability. Graphic designers also use methods of visual communication in their professional practice. Visual communication on the World Wide Web is perhaps the most important form of communication that takes place while users are surfing the Internet. When experiencing the web, one uses the eyes as the primary sense, and therefore the visual presentation of a website is very important for users to understand the message or of the communication taking place.

The Eye of Horus is often referred to as the symbol of visual communication. It is said to be a representation of an eclipse, as the corona around the pupil is like the corona around the sun during a solar eclipse.
**Visual Culture**

Visual Culture as an academic subject is a field of study that generally includes some combination of cultural studies, art history, critical theory, philosophy, and anthropology, by focusing on aspects of culture that rely on visual images. Among theorists working within contemporary culture, this often overlaps with film studies, psychoanalytic theory, gender studies, queer theory, and the study of television; it can also include video game studies, comics, traditional artistic media, advertising, the Internet, and any other medium that has a crucial visual component. Because of the changing technological aspects of visual culture as well as a scientific method-derived desire to create taxonomies or articulate what the "visual" is, many aspects of Visual Culture overlap with the study of science and technology, including hybrid electronic media, cognitive science, neurology, and image and brain theory. It also may overlap with another emerging field, that of "Performance Studies." "Visual Culture" goes by a variety of names at different institutions, including Visual and Critical Studies, Visual and Cultural Studies, and Visual Studies.

Early work on visual culture has been done by John Berger (Ways of Seeing, 1972) and Laura Mulvey (Visual Pleasure and Narrative Cinema, 1975) that follows on from Jacques Lacan's theorization of the unconscious gaze. Twentieth-century pioneers such as György Kepes and William Ivins, Jr. as well as iconic phenomenologists like Maurice Merleau-Ponty also played important roles in creating a foundation for the discipline. Major work on visual culture has been done by W. J. T. Mitchell, particularly in his books Iconology and Picture Theory and by the art historian and cultural theorist Griselda Pollock. Other writers important to visual culture include Stuart Hall, Jean-François Lyotard, Rosalind Krauss, Paul Crowther and Slavoj Žižek. Continuing work has been done by Lisa Cartwright, Margarita Dikovitskaya, Chris Jencks, Nicholas Mirzoeff and Gail Finney. Visual Culture studies have been increasingly important in religious studies through the work of David Morgan, Sally Promey, Jeffrey F. Hamburger, and S. Brent Plate.
EXPLORING THE ELEMENTS & PRINCIPLES

Elements of Design

A design is a visual plan you can use to create your 4-H project. Everything you can see has a design. When you describe something you see, you use words that tell about the lines, shapes, colors, textures, and spaces.

Line, shape, color, texture, and space are the basic elements of design.

The elements of design are important to everyone who works in textiles and clothing, home interiors, woodworking, photography, landscaping, architecture, foods, and the visual arts. If you understand the design elements, you will be more successful with your 4-H projects

Line

Lines can be horizontal, vertical, dotted, zig-zag, curved, straight, diagonal, bold, or fine. Lines can show direction, lead the eye, outline an object, divide a space, and communicate a feeling or emotion.

Shape

Shapes are made by connecting lines. Circle, square, triangle, and freeform are words used to identify shapes. Look at the objects around you and describe their basic shapes. Are they one shape, or are they a combination of many shapes? After doing this several times, you will begin to understand what shape really is. Line creates two dimensional or flat shapes. When shapes are three dimensional, we call them forms. A circle is a shape; a ball is a form. A square is a shape; a cube is a form. A drawing is a flat shape; a sculpture is a three-dimensional form.

Color

Color is described with the words hue, value, and intensity. Hue refers to the name of the color—red or blue, for example. Value tells the lightness or darkness of a hue. Intensity refers to the brightness or dullness of a hue. You can use a color wheel and learn how colors work together in the publication, 4H-633, Color.

Space

Space refers to the area that a shape or form occupies. It also refers to the background against which we see the shape or form. Space can be defined as positive and negative. The positive space of a design is the filled space in the design—often it is the shapes that make up the design. Negative space is the background. The negative space in design is as important as the positive area

Texture

Texture is the surface quality of an item. It's how something feels when touched, or looks like it would feel if touched. Sandpaper is rough. Velvet is smooth. A drawing of a tree stump could show rough outer bark and a smooth
inner surface. Search for ways to add texture to your projects. Texture adds variety and interest.

**PRINCIPLES OF DESIGN**

**Rhythm**

You have felt rhythm in music. Rhythm is also a part of things you see. It allows the eye to move from one part of a design to another part.

Rhythm can be created by:

- Repeating a color, shape, texture, line, or space when designing.
- Varying the size of objects, shapes, or lines in sequence (small to large).
- Using a progression of colors from tints to shades (light blue to dark blue).
- Shifting from one hue to a neighboring hue (yellow to yellow-orange to orange to red-orange to red).

Some combinations of design elements (line, shape, color, texture, and space) work better than others. Here are some guidelines to help you understand why some combinations work and others do not work as well. These guidelines—**rhythm, proportion, emphasis, balance, and unity**—are the principles of design.

**Honesty**

**Proportion**

Proportion refers to the relationship between one part of a design and another part or to the whole design. It is a comparison of sizes, shapes, and quantities. For example, the relationship between the vertical and horizontal measurements of a wall hanging may be pleasing because the unequal lengths produce an interesting contrast.

**Emphasis**

Every design needs an accent—a point of interest. Emphasis is the quality that draws your attention to a certain part of a design first. There are several ways to create emphasis:

- Use a contrasting color.
- Use a different or unusual line.
- Make a shape very large or very small.
- Use a different shape.
- Use plain background space.
Balance

Balance gives a feeling of stability. There are three types of balance.

Symmetrical, or formal balance, is the simplest kind. An item that is symmetrically balanced is the same on both sides. Our bodies are an example of formal balance. If you draw an imaginary line from your head to your toes dividing your body in half, you will be pretty much the same on both sides.

Designs that have a radial balance have a center point. A tire, pizza, and a daisy flower are all examples of design with radial balance. When you look through a kaleidoscope, everything you see has a radial balance.

Asymmetrical balance creates a feeling of equal weight on both sides, even though the sides do not look the same. Asymmetrical designs also are called informal designs because they suggest movement and spontaneity. Asymmetrical balance is the hardest type of balance to achieve and often takes experimenting or moving elements around until balance is achieved.

Unity

When things look right together, you have created unity or harmony. Lines and shapes that repeat each other show unity (curved lines with curved shapes). Colors that have a common hue are harmonious. Textures that have a similar feel add to unity. But too much uniformity sometimes can be boring. At the same time, too much variety destroys unity.

Honesty of Design

Honesty of design refers to three specific areas—media, form, and function.

You are being honest with a medium when you are familiar with that medium, use it to its best advantage, and avoid making it look like something else. Clay should not be glazed to look like wood, and wood should not be painted to look like clay bricks. Honesty related to form and function means that parts of a design should work in ways they were intended. Doors on woodworking projects should not be fake; they should open. A flower pot should be designed to complement the flowers and not draw more attention to the pot.

Ideas and Inspirations

Where do you get your ideas? Just as you do not copy from the encyclopedia when you write a term paper or from another person’s paper when you take a test, you should never copy another person’s design. You are what makes your designs special! Inspiration or sources for designs may come from
poetry, music, nature, and your own photographs and sketches. Let these inspirations be springboards for your imagination.

**Evaluating Design**

Evaluating your designs and those of others can help you improve your understanding about design.

You can get help in evaluating your work from many people, among them your parents, other 4-H'ers, leaders, teachers, and fair judges. There is seldom only one way to improve a design, so don’t be surprised if different people have different ideas on how you might change your work. In the end, the decision is yours. Becoming a good designer takes practice. The more you talk about and play with the elements and principles of design, the easier it will be to use them effectively.

Here are some questions to ask yourself about your designs.

1. Where did you get the idea for your design?
2. Describe one of the design elements. How did you use it?
3. What do you like about the way your design looks?
4. What might you change another time?
5. Is your design honest in media, form, and function?

**Principles of Visual and other Sensory perceptions:** Color psychology and theory (some aspects), Definition, optical/visual illusion etc.

**How do colors affect our moods?**

Color, without our realizing it, can have a profound effect on how we feel both mentally and physically. Dr. Morton Walker, in his book The Power of Color, suggested that the ancient Egyptians as well as the Native American Indians used color and colored light to heal. Below are some emotional associations that humans tend to have with certain colors. These are important to keep in mind in order to create the mood you are seeking.

**Blue** represents peace, tranquility, calm, stability, harmony, unity, trust, truth, confidence, conservatism, security, cleanliness, order, loyalty, sky, water, cold, technology, and depression. Blue can "slow the pulse rate, lower body temperature, and reduce appetite." Blue is considered a business color because it reflects reliability. In China, blue is associated with immortality. In Colombia, blue is associated with soap. For Hindus blue is the color of Krishna.

For the Jews, blue symbolizes holiness. In the Middle East blue is a protective color. Note: Blue is often considered to be the safest global color.
Black is the absence of light and therefore, of color. It represents power, sexuality, sophistication, formality, elegance, wealth, mystery, fear, evil, anonymity, unhappiness, depth, style, evil, sadness, remorse, anger, underground, good technical color, mourning and death. In speech we say "Don't let a black cat cross your path", "Black Market" or "Black Monday".

Green, one of most-often cited favorite colors. It represents nature, environment, health, good luck, renewal, youth, vigor, spring, generosity, fertility, jealousy, inexperience, envy, misfortune. "Its cool quality soothes, calms, and has great healing powers." It is often worn in operating rooms by surgeons. In China, green hats mean a man's wife is cheating on him; it is not a good color for packaging. In France studies have indicated green is not a good color choice for packaging either. In India green is the color of Islam.

In Ireland green has religious significance (Catholic). In some tropical countries green is associated with danger.

Orange is a combination of yellow and red. Orange is considered a warm color like red, but to a lesser extent; orange expresses energy. It has luminous qualities and has been used for attention-getting purposes, such as on caution signs. Orange brings up memories of fall leaves, pumpkins and Halloween. It symbolizes balance, warmth, enthusiasm, vibration, flamboyancy, and is demanding of attention. In Ireland orange has religious significance (Protestant).

Purple represents royalty, spirituality, nobility, ceremony, mystery, transformation, wisdom, enlightenment, cruelty, arrogance, mourning. Purple is considered an exotic color. Purple dye was made from the mucous gland of a snail. It required thousands of snails to yield 1 gram of dye causing it to be a color only nobles could afford. Today purple is a trendy color targeting creative types.

Red is the color that we pay the most attention to. It is the warmest and most energetic color in the spectrum. We associate red with love, valentines, danger, desire, speed, strength, violence, anger, emergency exit signs, stop signs and blood. Red can evoke a fight-or-flight response, raise blood pressure and make the heart beat faster. Red would not be the color of choice for psychiatric wards, prisons or a hospital. In China red symbolizes celebration and luck, used in many cultural ceremonies that range from funerals to weddings.

In India red is the color of purity (used in wedding outfits).

White is what we see when all colors come together in perfect balance.

It represents reverence, purity, simplicity, cleanliness, peace, humility, precision, innocence, youth, birth, winter, snow, good, sterility, and marriage.

We use white in figures of speech like "pure as the driven snow" or "a white lie." We associate white with the good guy in old western movies.

In Japan, white carnations signify death. In eastern cultures white symbolizes coldness and sterility.
**Yellow** represents joy, happiness, optimism, idealism, imagination, hope, sunshine, summer, gold, philosophy, dishonesty, cowardice, betrayal, jealousy, covetousness, deceit, illness, hazard, spirituality and inspiration. The yellow rose is a symbol of friendship, less passionate or threatening than red ones. In Asia yellow is sacred, and imperial.

**How do colors "move" in an image?**

Another important aspect of color is understanding how colors move in space. Bright, high-intensity, warm colors advance in space. They appear as though they are going to jump out at you. They get our attention.

Low intensity, cool colors, on the other hand, recede; they make a space appear larger than it is. By combining these colors you can create the appearance of dimension or depth to a one-dimensional picture:

**What are some color combinations that should be avoided?**

**Primary Colors**

Many people feel that primary colors go together. And indeed, there are many times when these combinations have been used successfully, especially with children's toys. But when viewed on the computer, it can be another story.

Here's an example. Stare at the red and blue stripes below for 5 to 10 seconds. (Uncomfortable, isn't it?) Then focus you eyes on the white part of the page and see what happens! Did you see orange and green stripes? Here's an example of a web site that uses high-intensity primary colors. Ouch!

The reason that primary color combinations tend to not work is because both are high intensity colors, and so side-by-side they appear to vibrate. The eye cannot make the adjustment where the two colors meet, making this combination very hard on the eyes. This color combination can be used very successfully if you use shades or tints of one of the colors, for instance bright red and navy blue.

**Dark on Dark**

Dark colors, especially dark colored text, on a dark background are very difficult to see. Consider contrast.
UNIT IV

Visual perception is the ability to interpret information and surroundings from the effects of visible light reaching the eye. The resulting perception is also known as eyesight, sight, or vision (adjectival form: visual, optical, or ocular). The various physiological components involved in vision are referred to collectively as the visual system, and are the focus of much research in psychology, cognitive science, neuroscience, and molecular biology.

The visual system in humans allows individuals to assimilate information from the environment. The act of seeing starts when the lens of the eye focuses an image of its surroundings onto a light-sensitive membrane in the back of the eye, called the retina. The retina is actually part of the brain that is isolated to serve as a transducer for the conversion of patterns of light into neuronal signals. The lens of the eye focuses light on the photoreceptive cells of the retina, which detect the photons of light and respond by producing neural impulses. These signals are processed in a hierarchical fashion by different parts of the brain, from the retina upstream to central ganglia i.e. the brain.

Note that up until now the above paragraph could apply to octopi, molluscs, worms, insects and things more primitive; anything with a more concentrated nervous system and better eyes than say a jellyfish. However, the following applies to mammals generally and birds (in modified form): The retina in these more complex animals sends fibers (the optic nerve) to the lateral geniculate nucleus, to the primary and secondary visual cortex of the brain. Signals from the retina can also travel directly from the retina to the superior colliculus.

Color psychology is the study of color as a factor in human behavior. This includes very diverse studies, ranging from quantizing individual color preference to investigating the relationship between shirts Color with match outcome in English football.

Placebo effect

The color of placebo pills is reported to be a factor in their effectiveness, with "hot-colored" pills working better as stimulants while "cool" colored pills work better as depressants. This relationship is believed to be a consequence of the patient's expectations and not a direct effect of the color itself. Consequently, these effects appear to be culture-dependent.

Blue public lighting

In 2000, Glasgow installed blue street lighting in certain neighborhoods and subsequently reported the anecdotal finding of reduced crime in these areas. This case was picked up by several news outlets and, although the significance of this finding is widely disputed, a railroad company in Japan installed blue lighting on its stations in October 2009 in an effort to reduce the number of suicide attempts.
Use of color to create ambiance

Color has long been used to create feelings of coziness or spaciousness. However, how people are affected by different color stimuli varies from person to person.

The hues in the blue range have been shown to have the highest preference amongst people.

There is evidence that suggests that people tend to prefer certain colors depending on the ambient temperature. People who are cold prefer warm colors like red and yellow while people who are hot prefer cool colors like blue and green.

Studies have shown that colors have an affect on people's moods and emotions. One problem that exists is that these studies are inconsistent on determining which colors bring out or reflect specific moods and emotions. In other words, the relationship between color and behavioral response exists but there hasn't been any consistency as to how it exists.

In regards to difference sex, women tend to feel pleasant seeing "warm" colors while men tend to feel pleasant seeing "cool" colors.

A few studies have shown that cultural background has a strong influence on color preference. These studies have shown that people from the same region regardless of race will have the same color preferences. Also, one region may have different preferences than another region (this meaning a different area of the same country or another country all together), again regardless of race.

When looking at age as a variable, it has been seen that children's preferences for colors they find to be pleasant and comforting can be changed and can vary while adults color preference is usually non-malleable.

Light, Color, and Surroundings

Light and color can influence how people perceive the area around them. For example when using light to create ambiance, in say one's home, it is important to take into consideration how the different light sources affect how the colors of walls and other objects are seen. Colors seen under natural sunlight may have specific hues but when seen under the light from an incandescent (tungsten) light-bulb they may appear to be more orange or "brownish" for lighter colors and just plain darker for darker colors. Light and the color of an object can affect how one perceives its positioning. If light or shadow, or the color of the object, masks an object's true contour (outline of a figure) it can appear to be shaped differently than what it really is. Objects under a uniform light-source will promote better impression of three-dimensional shape. More evidence is needed but it is believed that the color of objects can affect how one perceives their motion. Under a uniform light source light objects of different color can more easily be seen moving in different directions. However, under variable light sources, which are more common in reality, the motion of objects can be masked or not perceived as easily because one's mind is preoccupied with trying to differentiate the contour and color of the objects.
Color analysis

Color analysis, also called skin tone color matching or color seasons, is the process of finding colors of clothing and makeup to match a person's complexion, eye color, and hair color. It is often used as an aid to wardrobe planning and style consulting.

Color analysis is the process of determining the colors that best suit an individual's natural coloring. There are several means of analyzing personal coloring. The most well-known is "seasonal" color analysis, which places individual coloring into four general categories: Winter, Spring, Summer and Autumn. "Winters" and "Summers" have cool coloring. Some clues that a person has cool coloring might include ash tones in the hair, grey-blue eyes and pinkish undertones to the skin. "Springs" and "Autumns" have warm coloring. Some signs of warm coloring are red or golden hair, golden brown eyes and golden undertones to the skin.

Another system of color analysis relies on analyzing whether the person's coloring has high or low contrast; for instance, dark hair and pale skin create high contrast. Under this system, individuals are classified as "light-bright," "muted," "gentle" and "contrast." Still other systems combine analysis of warm and cool coloring with analysis of contrast levels.

Another color analysis system attempted to classify individual coloring into "morning," "noon" and "sunset" palettes. These palettes are called Color times and were developed by Leatrice Eiseman. The Color time names are Sunrise, Sunlight and Sunset are a reflection of the sun and how nature and people look at these times of day.

There is evidence the colors a person wears can affect how others perceive him or her; according to a British study, red and pink are thought to signal sexual attractiveness, particularly when worn by women. Dark colors like black or navy may convey authority or simply make the wearer seem less approachable. The theories of color analysis also teach that certain colors are capable of emphasizing or, conversely, de-emphasizing an individual's attractiveness to others. Unflattering colors may make a person look pale, for instance, or draw attention to such flaws as wrinkles or uneven skin tone. Flattering colors are thought to have the opposite effect.

One practical application for color analysis is that by limiting wardrobe color choices a person will probably find it easier to coordinate his or her clothing and accessories, thus possibly saving time, space and money.

Early History of Color Analysis (1810-1970s)

In 1810, German philosopher Johann Wolfgang von Goethe published his Theory of Colours. In 1840, it was published in English in London by John Murray. Goethe made an exhaustive study of color. However, he did not speak of the use of his theories with regard to choosing clothing colors, or with regard to the influence of hair color on the face.

Therefore it may be historically accurate to say that the first "color and image consultant" was Michel Eugene Chevreul (1786–1889). As the director of the
renowned tapestry firm, Les Teintures des Gobelins, Chevreul made it his business to know everything he could about color. In particular, he noted that colors interacted with each other when they were placed side by side. When viewed alone, however, the very same colors appeared quite different. When a client gave Chevreul a fabric swatch of her yellow curtains, for example, he was expected to incorporate that exact shade into the client's tapestry. Alas, when the carpet was completed, the yellow appeared not to match. However, when the yellow fabric swatch was placed next to the yellow pattern in the carpet, the two yellows did match. Chevreul discovered that the viewer's perception of the yellow in the carpet had been influenced or manipulated by the other colors alongside it, so that it appeared to be different than the yellow of the curtains. (The curtains, of course, hung completely alone, so they were not subject to the influence of another color.)

Chevreul further discovered that when looking at any given color, the eye demands that the opposite or contrasting color on the color wheel simultaneously be generated. Apparently the eye has a precise equilibrium, so that when looking at red, for example, the eye generates green, even though we are not aware of it. He called this phenomenon Simultaneous Contrast. In 1839, Chevreul published the findings of his meticulous and extensive research in a voluminous publication entitled De la Loi de Contraste Simultane des Couleurs. Chevreul devoted a separate chapter to his research on clothing and hair color, in which he concluded that any color worn next to the face, including hair color, would affect the appearance of the skin's color.

The French Impressionists were greatly influenced by Chevreul's book, and Georges-Pierre Seurat, in particular, became obsessed by Chevreul's theories with his Pointillism style. He learned to "manipulate" colors in his paintings and the mixture of the colors he used would very often take place only in the eye of the beholder, and not on the canvas. Van Gogh used many of the same principles, but his fiery temperament was not suited to the intricacies of pointillism, so he applied the theories to canvas using more assertive brushwork.

Two German-born artists and art educators who expounded upon the principles of simultaneous contrast set forth by Chevreul were Johannes Itten (1888–1967) and Josef Albers (1888–1976). Itten published The Art of Color in 1961, and Albers published Interaction of Color in 1963. Itten proposed a natural correspondence between the four seasons of the year and four groups of naturally harmonious colors, thereby establishing the framework upon which would be founded the "seasonal" color analysis that would become popular in the 1980s. He stated, "I have never yet found anyone who failed to identify each or any season correctly. This demonstrates that above individual taste, there is a higher judgment in man, which, once appealed to, sustains what has general validity and overrules mere sentimental prejudice."

"Seasonal" skin tone color matching for clothing and cosmetics

The concept of studying color in order to change and enhance the way a person looks was introduced in universities in the United States in the 1920s
and 1930s, when home economics teachers passed along the principles of color from art studies to their students. Until that time, only artists had been concerned with the study of colors and how their appearance could be manipulated and changed.

Starting in the 1970s, the availability of high-quality, accurate and inexpensive color printing made it possible for the first time to produce books for the mass market in which skin tones and clothing colors could be accurately reproduced. The result was a near-simultaneous publication by a number of authors of books proposing systems of color analysis designed to allow the reader to "discover which shades of color in clothes complement your natural coloring to look healthier, sexier and more powerful."

The authors of these books all present roughly similar ideas. Most agree, for example, on the following basic points:

- Most rely upon a color system in which the colors are divided into four groups of harmonious colors which are said to match with the four seasons of the year. The seasons are, to some degree, arbitrary, and it sometimes happens that someone will be on the cusp of two seasons. But, as Carole Jackson insists, "with testing, one palette will prove to be better than the other." Jackson also acknowledges, however, that the reference to the four seasons is nothing more than a convenient artifice: "We could call your coloring 'Type A,' 'Type B,' and so on, but comparison with the seasons provides a more poetic way to describe your coloring and your best colors."[6]

- A person's color season is simply a determination of their skin tone.

- An individual's basic color category, or season, remains the same over his or her lifetime, and is not affected by tanning, because "We still have the same color skin, but in a darker hue."

- Skin color, rather than hair or eye color, determines a person's season. Bernice Kentner warns, "Remember, do not rely on hair coloring to find your Season!" While hair color may change over the years (and hair or eye color may be artificially changed by dyeing and colored contact lenses), the person's color season will not change.

- A person's color season has nothing to do with the season of his or her birth or favorite season of the year.

**The four color "Seasons": The fundamentals**

Color analysts usually describe the seasons as being the result of a combination of the three traditional primary colors (red, yellow and blue), as they appear in the undertones of the skin. However, in practice things are a little more complicated.

Everybody's skin color includes strong elements of red (based on the color of the haemoglobin in his or her blood, which is visible, to some degree, through the translucent skin). Color analysts agree that this is the case for persons of all races, and for all varieties of skin color, The undertone, which will be either
blue or yellow, determines the person's color category, or season. A person's skin may have a strong or weak blue undertone, or it may have a strong or weak yellow undertone. Unfortunately, the blues and yellows in human skin are not actually the same as the primary colors on an artist's color wheel, as they are the result of melanin and carotene, two pigments which do not have the effect of turning the skin blue or yellow. Rather, melanin produces browns where it is the predominant pigment, and greys and blue-greys where it is mixed with the yellows and reds caused by carotene and hemoglobin. Where carotene is predominant, it produces undertones that are described as “golden” or “peach.”

Winter

Winter is, along with Summer, one of the two "cool" palettes. This means that a person who is a Winter should wear colors that have blue undertones. Winters differ from Summers in that their skin tends to contrast dramatically with their hair and eye color, and therefore seem “intense.” This means that they look best when dressed in colors that are relatively more intense, and that contain sharper contrasts, than would look best on a person belonging to the other "cool" season (Summer). When dressed in the strongly contrasting colours that suit them best, Winters look “intense”, “pure” and “clean”. When Winters dress in less intense or highly contrasting colours, the strong contrasts between their skin on the one hand and their hair and eyes on the other will seem “washed out.”

Summer

Summer is, along with Winter, one of the two "cool" (i.e. blue-based) palettes. This means that a person who is a Summer should wear colors that have blue undertones. Summers differ from Winters in that their skin tends to contrast gently with their hair and eye color, and therefore seem “softer” and “less intense.” This means that they look best when dressed in colors that are also relatively softer or less intense, and that contain less dramatic contrasts, than the colors which look best on a person belonging to the other "cool" season (Winter). When dressed in the less strongly contrasting colours that suit them best, Summers look “harmonious” and “subtle.” When Summers dress in more intense or highly contrasting colours, the gentle contrasts between their skin on the one hand and their hair and eyes on the other will seem “overpowered.”

Spring

Spring is, along with Autumn, one of the two "warm" (i.e. yellow-based) palettes. This means that a person who is a Spring should wear colours that have yellow undertones. The main difference between Spring and Autumn colour palette is that the Spring's colours are based on yellow such as yellow sparkling gold, in contrast with Autumn's colours which are based on deep gold. As a result spring's colours are intense, often bright and playful.
Autumn

Autumn is, along with Spring, one of the two "warm" (i.e. yellow-based) palettes. This means that a person who is an Autumn should wear colors that have yellow undertones. Generally the autumn colours are warm, soft, and deep. Some of the autumn colours are brick, coffee, caramel, beige, tomato red, forest green. People who fall under this category usually have brown hair with golden or red undertones but a person with almost black hair and skin with yellow undertones can find him or herself to be an autumn too.

Prominent systems of "seasonal" color analysis

A large number of color guides have been written since the 1970s. Unfortunately, as Alan Flusser notes in Dressing the Man, "their methodology was ... tortuous in detail and demanding in time...." Moreover, many of the books—and many of the associated color analysis websites that continue to exist to this day—were intended merely to be an entry-point to understanding color. The reader, it was hoped, would make further investments by ordering color wheels on which to determine the shades that looked best on her, or by attending seminars or workshops where a professional would review color swatches with her.

The section below attempts to provide this information in a more comprehensible and usable manner, outlining each author's system separately, but using the same set of subheads in the same order for each, in order to allow comparisons between them.
UNIT V

Graphic design

Graphic design is a creative process most often involving a client and a designer and usually completed in conjunction with producers of form (i.e., printers, programmers, signmakers, etc.) undertaken in order to convey a specific message or messages to a targeted audience. The term "graphic design" can also refer to a number of artistic and professional disciplines that focus on visual communication and presentation. The field as a whole is also often referred to as Visual Communication or Communication Design. Various methods are used to create and combine words, symbols, and images to create a visual representation of ideas and messages. A graphic designer may use typography, visual arts and page layout techniques to produce the final result. Graphic design often refers to both the process designing by which the communication is created and the products designs which are generated.

Common uses of graphic design include identity logos and branding, web sites, publications magazines, newspapers, and book, advertisements and product packaging. For example, a product package might include a logo or other artwork, organized text and pure design elements such as shapes and color which unify the piece. Composition is one of the most important features of graphic design, especially when using pre-existing materials or diverse elements.

History

While Graphic Design as a discipline has a relatively recent history, with the name 'graphic design" first coined by William Addison Dwiggins in 1922, graphic design-like activities span the history of humankind: from the caves of Lascaux, to Rome's Trajan's Column to the illuminated manuscripts of the Middle Ages, to the dazzling neons of Ginza. In both this lengthy history and in the relatively recent explosion of visual communication in the 20th and 21st centuries, there is sometimes a blurring distinction and over-lapping of advertising art, graphic design and fine art. After all, they share many of the same elements, theories, principles, practices and languages, and sometimes the same benefactor or client. In advertising art the ultimate objective is the sale of goods and services. In graphic design, "the essence is to give order to information, form to ideas, expression and feeling to artifacts that document human experience."

The advent of printing

During the Tang Dynasty (618–906) between the 4th and 7th century A.D. wood blocks were cut to print on textiles and later to reproduce Buddhist texts. A Buddhist scripture printed in 868 is the earliest known printed book. Beginning in the 11th century, longer scrolls and books were produced using movable type printing making books widely available during the Song dynasty (960–1279). Sometime around 1450, Johann Gutenberg's printing press made books widely available in Europe. The book design of Aldus Manutius
developed the book structure which would become the foundation of western publication design. This era of graphic design is called Humanist or Old Style.

**Emergence of the design industry**

In late 19th century Europe, especially in the United Kingdom, the movement began to separate graphic design from fine art.

In 1849, Henry Cole became one of the major forces in design education in Great Britain, informing the government of the importance of design in his Journal of Design and Manufactures. He organized the Great Exhibition as a celebration of modern industrial technology and Victorian design.

From 1891 to 1896 William Morris' Kelmscott Press published books that are some of the most significant of the graphic design products of the Arts and Crafts movement, and made a very lucrative business of creating books of great stylistic refinement and selling them to the wealthy for a premium. Morris proved that a market existed for works of graphic design in their own right and helped pioneer the separation of design from production and from fine art. The work of the Kelmscott Press is characterized by its obsession with historical styles. This historicism was, however, important as it amounted to the first significant reaction to the stale state of nineteenth-century graphic design. Morris' work, along with the rest of the Private Press movement, directly influenced Art Nouveau and is indirectly responsible for developments in early twentieth century graphic design in general.

**Twentieth century design**

A Boeing 747 aircraft with livery designating it as Air Force One. The cyan forms, the US flag, presidential seal and the Caslon lettering were all designed at different times and combined by designer Raymond Loewy in this one final design.


Raffe's Graphic Design, published in 1927, is considered to be the first book to use "Graphic Design" in its title. The signage in the London Underground is a classic design example of the modern era and used a font designed by Edward Johnston in 1916.

In the 1920s, Soviet constructivism applied 'intellectual production' in different spheres of production. The movement saw individualistic art as useless in revolutionary Russia and thus moved towards creating objects for utilitarian purposes. They designed buildings, theater sets, posters, fabrics, clothing, furniture, logos, menus, etc.

Jan Tschichold codified the principles of modern typography in his 1928 book, New Typography. He later repudiated the philosophy he espoused in this book as being fascistic, but it remained very influential. Tschichold, Bauhaus typographers such as Herbert Bayer and Laszlo Moholy-Nagy, and El Lissitzky have greatly influenced graphic design as we know it today.
pioneered production techniques and stylistic devices used throughout the twentieth century. The following years saw graphic design in the modern style gain widespread acceptance and application. A booming post-World War II American economy established a greater need for graphic design, mainly advertising and packaging. The emigration of the German Bauhaus school of design to Chicago in 1937 brought a "mass-produced" minimalism to America; sparking a wild fire of "modern" architecture and design. Notable names in mid-century modern design include Adrian Frutiger, designer of the typefaces Univers and Frutiger; Paul Rand, who, from the late 1930s until his death in 1996, took the principles of the Bauhaus and applied them to popular advertising and logo design, helping to create a uniquely American approach to European minimalism while becoming one of the principal pioneers of the subset of graphic design known as corporate identity; and Josef Müller-Brockmann, who designed posters in a severe yet accessible manner typical of the 1950s and 1970s era.

Applications

From road signs to technical schematics, from interoffice memorandums to reference manuals, graphic design enhances transfer of knowledge. Readability is enhanced by improving the visual presentation of text.

Design can also aid in selling a product or idea through effective visual communication. It is applied to products and elements of company identity like logos, colors, packaging, and text. Together these are defined as branding (see also advertising). Branding has increasingly become important in the range of services offered by many graphic designers, alongside corporate identity. Whilst the terms are often used interchangeably, branding is more strictly related to the identifying mark or trade name for a product or service, whereas corporate identity can have a broader meaning relating to the structure and ethos of a company, as well as to the company's external image. Graphic designers will often form part of a team working on corporate identity and branding projects. Other members of that team can include marketing professionals, communications consultants and commercial writers.

Textbooks are designed to present subjects such as geography, science, and math. These publications have layouts which illustrate theories and diagrams. A common example of graphics in use to educate is diagrams of human anatomy. Graphic design is also applied to layout and formatting of educational material to make the information more accessible and more readily understandable.

Graphic design is applied in the entertainment industry in decoration, scenery, and visual story telling. Other examples of design for entertainment purposes include novels, comic books, DVD covers, opening credits and closing credits in film, and programs and props on stage. This could also include artwork used for t-shirts and other items screen printed for sale.

From scientific journals to news reporting, the presentation of opinion and facts is often improved with graphics and thoughtful compositions of visual information - known as information design. Newspapers, magazines, blogs, television and film documentaries may use graphic design to inform and
entertain. With the advent of the web, information designers with experience in interactive tools such as Adobe Flash are increasingly being used to illustrate the background to news stories.

Skills

A graphic design project may involve the stylization and presentation of existing text and either preexisting imagery or images developed by the graphic designer. For example, a newspaper story begins with the journalists and photojournalists and then becomes the graphic designer's job to organize the page into a reasonable layout and determine if any other graphic elements should be required. In a magazine article or advertisement, often the graphic designer or art director will commission photographers or illustrators to create original pieces just to be incorporated into the design layout. Or the designer may utilize stock imagery or photography. Contemporary design practice has been extended to the modern computer, for example in the use of WYSIWYG user interfaces, often referred to as interactive design, or multimedia design.

Visual arts

Before any graphic elements may be applied to a design, the graphic elements must be originated by means of visual art skills. These graphics are often (but not always) developed by a graphic designer. Visual arts include works which are primarily visual in nature using anything from traditional media, to photography or computer generated art. Graphic design principles may be applied to each graphic art element individually as well as to the final composition.

Typography

Typography is the art, craft and techniques of type design, modifying type glyphs, and arranging type. Type glyphs (characters) are created and modified using a variety of illustration techniques. The arrangement of type is the selection of typefaces, point size, line length, leading (line spacing) and letter spacing.

Typography is performed by typesetters, compositors, typographers, graphic artists, art directors, and clerical workers. Until the Digital Age, typography was a specialized occupation. Digitization opened up typography to new generations of visual designers and lay users.

Page layout

The page layout aspect of graphic design deals with the arrangement of elements (content) on a page, such as image placement, and text layout and style. Beginning from early illuminated pages in hand-copied books of the Middle Ages and proceeding down to intricate modern magazine and catalogue layouts, structured page design has long been a consideration in printed material. With print media, elements usually consist of type (text), images (pictures), and occasionally place-holder graphics for elements that are not printed with ink such as die/laser cutting, foil stamping or blind embossing.
Interface design

Since the advent of the World Wide Web and computer software development, many graphic designers have become involved in interface design. This has included web design and software design, when end user interactivity is a design consideration of the layout or interface. Combining visual communication skills with the interactive communication skills of user interaction and online branding, graphic designers often work with software developers and web developers to create both the look and feel of a web site or software application and enhance the interactive experience of the user or web site visitor. An important aspect of interface design is icon design.

Printmaking

Printmaking is the process of making artworks by printing on paper and other materials or surfaces. Except in the case of monotyping, the process is capable of producing multiples of the same piece, which is called a print. Each piece is not a copy but an original since it is not a reproduction of another work of art and is technically known as an impression. Painting or drawing, on the other hand, create a unique original piece of artwork. Prints are created from a single original surface, known technically as a matrix. Common types of matrices include: plates of metal, usually copper or zinc for engraving or etching; stone, used for lithography; blocks of wood for woodcuts, linoleum for linocuts and fabric plates for screen-printing. But there are many other kinds, discussed below. Works printed from a single plate create an edition, in modern times usually each signed and numbered to form a limited edition. Prints may also be published in book form, as artist's books. A single print could be the product of one or multiple techniques.

Tools

The pencil is one of the most basic graphic design tools.

The mind may be the most important graphic design tool. Aside from technology, graphic design requires judgment and creativity. Critical, observational, quantitative and analytic thinking are required for design layouts and rendering. If the executor is merely following a solution (e.g. sketch, script or instructions) provided by another designer (such as an art director), then the executor is not usually considered the designer.

The method of presentation (e.g. arrangement, style, medium) may be equally important to the design. The layout is produced using external traditional or digital image editing tools. The appropriate development and presentation tools can substantially change how an audience perceives a project.

In the mid 1980s, the arrival of desktop publishing and graphic art software applications introduced a generation of designers to computer image manipulation and creation that had previously been manually executed. Computer graphic design enabled designers to instantly see the effects of layout or typographic changes, and to simulate the effects of traditional media without requiring a lot of space. However, traditional tools such as pencils or
markers are useful even when computers are used for finalization; a designer or art director may hand sketch numerous concepts as part of the creative process. Some of these sketches may even be shown to a client for early stage approval, before the designer develops the idea further using a computer and graphic design software tools.

Computers are considered an indispensable tool in the graphic design industry. Computers and software applications are generally seen by creative professionals as more effective production tools than traditional methods. However, some designers continue to use manual and traditional tools for production, such as Milton Glaser.

New ideas can come by way of experimenting with tools and methods. Some designers explore ideas using pencil and paper. Others use many different mark-making tools and resources from computers to sculpture as a means of inspiring creativity. One of the key features of graphic design is that it makes a tool out of appropriate image selection in order to possibly convey meaning.

**Computers and the creative process**

There is some debate whether computers enhance the creative process of graphic design. Rapid production from the computer allows many designers to explore multiple ideas quickly with more detail than what could be achieved by traditional hand-rendering or paste-up on paper, moving the designer through the creative process more quickly. However, being faced with limitless choices does not help isolate the best design solution and can lead to endless iterations with no clear design outcome.

A graphic designer may use sketches to explore multiple or complex ideas quickly without the distractions and complications of software. Hand-rendered comps are often used to get approval for an idea execution before a design invests time to produce finished visuals on a computer or in paste-up. The same thumbnail sketches or rough drafts on paper may be used to rapidly refine and produce the idea on the computer in a hybrid process. This hybrid process is especially useful in logo design where a software learning curve may detract from a creative thought process. The traditional-design/computer-production hybrid process may be used for freeing one’s creativity in page layout or image development as well. In the early days of computer publishing, many 'traditional' graphic designers relied on computer-savvy production artists to produce their ideas from sketches, without needing to learn the computer skills themselves. However, this practice has been increasingly less common since the advent of desktop publishing over 30 years ago. The use of computers and graphics software is now taught in most graphic design courses.
Occupations

Graphic design career paths cover all ends of the creative spectrum and often overlap. The main job responsibility of a Graphic Designer is the arrangement of visual elements in some type of media. The main job titles include graphic designer, art director, creative director, and the entry level production artist. Depending on the industry served, the responsibilities may have different titles such as "DTP Associate" or "Graphic Artist", but despite changes in title, graphic design principles remain consistent. The responsibilities may come from or lead to specialized skills such as illustration, photography or interactive design. Today’s graduating graphic design students are normally exposed to all of these areas of graphic design and urged to become familiar with all of them as well in order to be competitive.

Graphic designers can work in a variety of environments. Whilst many will work within companies devoted specifically to the industry, such as design consultancies or branding agencies, others may work within publishing, marketing or other communications companies. Increasingly, especially since the introduction of personal computers to the industry, many graphic designers have found themselves working within non-design oriented organizations, as in-house designers. Graphic designers may also work as free-lance designers, working on their own terms, prices, ideas, etc.

A graphic designer reports to the art director, creative director or senior media creative. As a designer becomes more senior, they may spend less time designing media and more time leading and directing other designers on broader creative activities, such as brand development and corporate identity development. As graphic designers become more senior, they are often expected to interact more directly with clients.