The S-E-M-D-R Model of Schramm:
Description and Application to Mass Communication in Different Social Systems

Amare Asgedom[*]

ABSTRACT: *Schramm's S-E-M-D-R Model has been widely used in communication literature. However, literature on the application of the model in a specific communication situation and with implications to different social systems is scarce. Scattered research results have been reviewed and compiled to show the application of the model to mass communication situations in varying social systems.*

Introduction

The school, the church, the group, the family and various associations are some of the major institutions where major communications take place. The mass media or the presently proliferating interactive media are also becoming major institutions of communication. These institutions, one would normally think, complement and sometimes compete for the attention of their audiences. A need arises, therefore, to make assessments of the communication environment that serves as a context of the educational system. This paper tries to assess a communication theory (Schramm's Model) in a mass communication situation.

The S-E-M-D-R model of Schramm does not make the sharp distinction that Shannon and Osgood (Severin and Tankard, 1982:35) make between technical and non-technical communication; but Schramm acknowledges that many of his ideas are inspired by Osgood. The idea behind this *component approach* to the study of communication process is that each separate component influences the effects of communication. Klapper (1960:104) admits that these components themselves, and the extra-communication factors (communication environments) together determine the process of *information transmission; meaning exchange; reinforcement or conversion.* The model also shows a one-directional flow of information. Feedback is either not considered or is assumed to be subsumed in one of these elements. Unlike Shannon's model (Severin and Tankard, 1982:31), *noise* source is not indicated; the application

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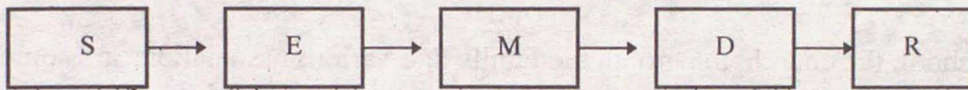
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of the model to either interpersonal or mass communication is not specified. This paper will, however, try to describe the model in the context of mass communication by using the examples of different social systems.

The source (S) is the advocate of a communication situation; the encoders (E) convert thoughts (mental energy) into transmittable form, select and rearrange the message and act as gatekeepers. The message (M) are the symbols transmitted usually in different forms of energy - electrical, mechanical, electromagnetic forms, etc. The decoder (D) are the sense organs, act as their own gatekeepers; they monitor what to tune in and what to tune out; and the receiver (R) is usually referred to by the effect or destination of communication, a formation or change of behavior (see figure 1).

Figure 1: The S-E-M-D-R Model of Schramm

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┌─────────┐    ┌─────────┐    ┌─────────┐    ┌─────────┐    ┌─────────┐
│    S    │───▶│    E    │───▶│    M    │───▶│    D    │───▶│    R    │
└─────────┘    └─────────┘    └─────────┘    └─────────┘    └─────────┘
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Note: Information flow is from source to receivers. No feedback system is indicated.

The Source (S)

There are several ways of looking at the analysis of the source. One way is to treat the *source* as a *control system*; another way is to look at the efficacy and persuasive role of the source in effecting messages. The journalist as a source, or the influence of journalists by external sources, can be another analytical strategy. These perspectives will be examined in general with the support of pertinent data.

In persuasive communication, the audience image (source credibility) of the source has been known to influence the efficacy of communication itself (Klapper, 1960:104). Sources who base their communication efforts on the basis of audience research and who canalize their messages on clear understanding of audience attitudes—and the function of these attitudes to these attitude holders—succeed most. Studies carried out by Hovland, Kelly and Janis (1953) indicate that high source credibility is an important factor in the effect of messages on their audiences. Chancellor and Mear's (1983)

emphasis on the need for sourcing reports is aimed at increasing credibility which has an impact on the audience.

The analysis of the source as a *control system* leads to one of the controversial issues of the *free flow of information* and to the idea of control systems of the various media systems of many countries. While governments or other public sectors control the media systems of the rest of the world, the *market* controls the media systems of countries with *Libertarian Philosophy*.

In those countries, the advertiser, the public relations practitioner, the public, the government, etc., have access to the mass media. The dictum, *a free market as a place of ideas*, determines the control system, the concept of professionalism — ethical values, balance, fairness, etc.,— act as additional control systems in the gate-keeping process of the mass media.

Many critics, however, say that the advertiser is over-represented in the American mass media (Schiller 1973). There are also those who believe that this is consistent with the social goal of the American society. Nicosia (1974) stated that since World War I, the doctrine of **consumption** became the indicator of progress and prosperity. Advertising became the propeller of the American economy. There was higher production; this needed higher consumption which inevitably required promotion and advertisement. The access of the advertiser to the mass media was also justified by its ability to reduce price of goods, provide consumer information, break down monopolization of products, etc. Its ability to generate the growth and expansion of the mass media by providing them with rich sources of income was one which required little need for documentation support.

It is also believed that ideas of diversified orientations have access to the mass media in the United States. Nevertheless, MacNeil (1968) and others show that sources with distorted images of women, romantic messages and generally low-taste messages predominate in the American mass media.

The analysis of sources in the mass media of *The Third World* shows rather a very complex situation. A major function of the mass media could be *social mobilization and promotion of development objectives*. However, in general, it can be argued that the government and different publics or individuals loyal to

government policies have more access to or more control over the mass media than others. It is also argued that transitional advertisers, foreign cultures and ideologies have much access to the mass media of developing countries (Fejes, 1980:36-49).

In Ethiopia, the press has undergone several stages of evolution, starting from an authoritarian form (during the monarchical system) to a totalitarian Soviet type (during the Military Government) and to a presently diversified form. Publications of diverse views are reflected in the current press system of Ethiopia. Taking the forms of private and public control, views that range from strongly anti-establishment to strongly pro-establishment appear in newspapers, magazines, books, etc. Of course, adherence of the media to such journalistic tenets as balance, fairness, objectivity in covering issues, people and events remains much to be desired. But in general, it can be tentatively stated that the Ethiopian press inclines more towards political than other matters.

Encoding (E)

In interpersonal communication, encoding mechanisms pertain to the sources' communication skills to convert thoughts into transmittable form. Gesture and vocal mechanism make up one type of encoding system. The hands and muscles are another. In mass communication, writing skills, photography, editing skills, etc., are required by the journalist to communicate with one's audience. Problems of semantics make it necessary for proper encoding. Chancellor and Mears (1983) emphasize the need to consider the use of language, organization and clarity of thought in communication. They say that simple and *right words* do portray messages effectively. They insist that vague, abstract and unusual words should not be used: *The story written in precision is to be read that way,* they argued. McDonald (in Merrill & Barney, 1982:69-82) adds the need for *denotation* instead of *connotation* and identity instead of allusiveness. He also says that technical jargons must be avoided because they confuse readers and obscure meaning.

Chancellor and Mears also discuss the need for *analysis—provision* of context and background. The arrangement of ideas in logic, which the two authors call *style* or which is often referred to as *oganization* by others, enhances

understanding or conveys meaning effectively. They also mention the need for *repetition.* These ideas seem to be consistent with the notion of optimization of *redundancy* and *entropy* in any information transmission systems (Shannon & Weaver, 1949). The information must be redundant enough to help understanding and must at the same time have some degree of uncertainty for it to have *novelty.* Encoding problems are also concerned with problems of *slanting* and the difficulty of objectivity (Lin, 1973:22-56). *Semantic problems* — problems of language such as the static nature of language and the dynamic nature of reality, the limited nature of language and virtually the unlimited nature of reality, and the abstract nature of language—unless seriously considered — limit the objectivity of encoders (Tankard and Severin 1982:51-58). In the case of daily journalism, deadline requirements may interfere with meeting the demands of proper encoding process.

Message (M)

The analysis of message usually known as *content analysis* (Lasswell, 1971:84-99) tries to answer the question of *what is being said* and *how it is being said.* The latter is concerned with the nature of the *appeals* made in the communication and with the problem of the order of presentation of the arguments within the communication. In a study by Hartman (1955) to determine the effect of emotional versus rational appeals, he found that the emotional appeal was approximately 50 percent more effective than the rational appeal.

Other studies were carried out by Janis and Feshbach (1953) to examine a fear appeal message and how it can lead to a change in attitude. They showed that persuasive communication which employ threat appeals are likely to be less effective as the threat becomes more extreme.

In an experimental study of the effect of one-sided versus two-sided messages, Hovland and his associates (1951) found that presentation of both sides was more effective in converting the poorly educated. One-sidedness also proved generally more effective among men originally favoring the advocated view, i.e., as a technique of reinforcement. Two-sided messages appear, however, to be more efficient inoculators than are one-sided communication.

Klapper (1960) observed a difficulty in presenting both sides: if both sides are presented in apparent but deceptive impartiality, there may be boomeranging effects. On the other hand, if the impartiality is too nearly complete, the propaganda may become a truly balanced presentation in which case it will tend to be without effect. Waples, Berelson and Bradshow (1940), noted l that when readers are confronted with arguments both for and against an issue, the effects tend to cancel out.

One can observe an overlap between the source (S) and the message (M) in answering the question *What is being said*. One can also safely examine the "content" of advertisements, entertainments, persuasive communication, development messages, news, etc. In general, messages that are consisent with the audience's prevailing cognitive structure face little resistance. Other messages that advocate change will also be confronted with a minimum amount of resistance if the advocated change is perceived by the audience as leading to a desired goal (Carywright, 1971:426-447).

Hynes (1978:63-70), Williams (1973) and Schramm (1961) have consistently shown that the content of television programming in the United States is full of violence, crime and fantasy. These authors also show that television aestheticizes politics and usually the *form* predominates the *content*. Although advertisements in the United States are believed to keep the balance between production and consumption, they are accused of reinforcing already existing social problems.

Messages in the mass media of developing countries are mainly persuasive, mostly aimed at mobilization and development. Inavailability of data on the nature of the media has, however, restricted the author to emphasize analysis of research results of the developed countries. Pertinent Third World data are of international nature.

Martin, Chaffee and Izcaray (1979:296-404) in their studies of media consumerism in Venezuela reject the hypothesis that advertisements are responsible for the high want/get ratio. Anderson (1981:10-22) sees the possibility of transitional advertisements as a potential tool for purposes of social change in China. Chu (1982:40-45) believes that advertising could be used to propagandize the achievements of the socialist economy in China.

Other scholars observed a danger that can be brought about (to developing countries) by transitional advertisement messages. Fejes (1980:36-49) says that low income earners are eagerly waiting for an opportunity to turn their respectable amounts of discretionary income into mass-produced and mass-distributed goods and services. Schiller (1976) reports that international messages, be it in the form of advertisements, political models or development theories are dominating, are incompatible with the culture of the receiving country, and reinforce the existing *dependency* of developing countries on the developed world. He also rejects the western model of media professionalism because he believes usually the *form* rather than the *content*, the container rather than what is in the container is emphasized during the straining programs.

Decoding (D)

Decoding problems are largely the obverse of the encoding problems referred to earlier. Categorizing behavior, information theory, language learning, perception of speech, audition, visual perception, vision are all relevant to decoding problems.

The study of categorizing behavior facilitates answers to such questions as: what particular attributes will the recipients of a communication attend to and use in categorizing the events transmitted? If, in transmitting information about a particular event, the sources have made use of certain criterial attributes, will the subjects make use of these to the same extent and in the same manner as the communicators? If the criteria for the two are quite disparate, what kind of communication will they have? How much redundancy must be introduced into a message in order to ensure that the recipient will perform the same categorizing judgments as the communicator" (National Education Association, 1960:38-50)

Chancellor and Mears's (1983) assertions of the need for simple-language usage, arrangement and analysis have much to do with the decoding process. Schramm uses the concept, *common field of experience* to refer to the extent to which receivers can decode messages from the source. The selective processes (selective exposure, selective perception and selective retention) which Klaper calls *mediating* factors mediate the amount of message flow. The audience can

decode messages within the range of what is common to both the source (decoders) and the audience (decoders).

The fact that television requires no reading skill (decoding skill) has attracted large media audience consistent with the theory of reward-with-the-least-effort. McLuhan's (1967) conception of television as having the power of involvement, all-at-oneness and involving all the senses, refers to the problem of decoding. One of the reasons why advertisements are effective is because they seriously consider the decoding problems and capabilities of their audiences. Information reaching the sense organs is a prerequisite for communication. Communications that lie beyond the range of audience capabilities do not generate responses.

The Receiver (R)

The receiver is the final link in the communication process. The theory about receivers in the pre-1940s was derived from *mass society theory*. This theory neglected the theory of individual difference and failed to recognize the existence of diverse publics. The mass society theory denotes an aggregate of anonymous people who are dispersed and who lack social organization and feeling. The masses were hooked to the mass media without having any relationship to one another (DeFleur, Ball-Rockeach, 1982:143-165). They were, therefore, considered passive receivers of mass communication messages. The outdated "Hypodermic-Bullet Theory" had developed from this misleading assumption.

Later studies by Lazarsfeld and others (1948), Katz and Lazarsfeld (1955) showed that messages from the media reach first opinion leaders who then pass on what they read or heard to associates or followers who regard them as influentials. This process was named the *two-step* flow of communication. This finding paved the way for further discovery—existence of different social groups, individual difference theory, the power of the audience, etc. Audience analysis started to consider age, education, social or economic status, self-esteem, relationship with the source, etc. Social, psychological and physiological factors were considered major factors affecting audience permeability to persuasive communications.

Klapper (1960) insisted that, in general, the mass audience is very *active* and *interactive*. It often plays crucial roles in the communication process as well as in the effects communication will have on individuals.

Media critics in the developed world, however, complain that children are susceptible to violence, sex, crime and other emotional messages. Many scholars also admit the susceptibility of the Third World's audiences to the Western culture, particularly entertainments (Schiller, 1976).

The susceptibility of the different publics to different messages was shown by Hovland, et al. (1949). They reported that there was an increasing education of the audience. However, it was indicated that intellectual ability correlated with greater resistance to change of opinion if the communication was noticeably biased. Hovland and others (1951:635-650) also showed that in situations where there were small discrepancies between the position of the recipient and the position of the communication, there would be more attitude change than with large discrepancies between the two. Festinger's (1957) cognitive dissonance theory, which stated that with increasing discrepancy there was more change than the opposite, is inconsistent with the foregoing theory. Studies made by Adams, Maccoby and Romacy (1959) show that there is increasing attitude change with some individuals, whereas for others there is increased rejection.

Finally, we may mention personality characteristics of recipient as important variables in the communication process. Janis and Cohen (1956:663-567) have studied the relationship between self-esteem and the tendency to be influenced. They have found out that feelings of inadequacy, social inhibitions, richness of fantasy and controversy were positively and significantly related with persuasibility. In addition, they found that hyperaggressiveness is nearly significantly related to persuasibility. In addition, they found that hyperagressiveness is nearly significantly related to persuasibility. A further study by Janis (1956) shows that anxiety, neurosis and the presence of obsessional symptoms are, on the other hand, associated with resistance to persuasion.

Conclusions

It has been shown that communication is a very complex process for it entails many components. Its fidelity (effectiveness and efficiency) depends on the fidelity of its components (S-E-M-D-R) and on the fidelity of the extra-communication factors, such as, the social environment. Source factors such as credibility, knowledgeability, attitude and communication skills (encoding, decoding and interpreting capabilities) have been found as important determinants. The *pragmatic factors*-- perceived relevance of the message to the audience-- syntactic and *semantic* problems including styles as well as currency of the message have also been indicated as important fidelity factors. The receiver—the final link of communication—is not only the destination of communication but one's own gatekeeper—selecting information (tuning in and tuning out) on the basis of one's past experience and present focus of attention. The receiver sometimes referred to as the audience has been found to be a very powerful factor in influencing the efficacy of communication. An audience research with regard to analysis of past experience, selective processes (selective exposure, selective perception and selective retention), hierarchy of agenda need to be used as vantage points in communication planning and execution.

The broader social environment and the specific communication content in which the communication act takes place has been found to put a substantial influence on fidelity of communication. Communication planners, media scientists, instructional planners and development communication experts need to make proper analysis of the nature and characteristics of communication factors and need to have an understanding of the social environment in which the specific communication takes place.

Schramm's Component Model is, therefore, useful in conceptualizing the communication variables and the interrelationship of these variables. The model also raises a number of research issues, thus, motivating further investigations. It, however, fails to pay attention to showing the source of communication barriers, such as, *noise* (information added to the message from outside-the-source) and *equivocation* (information, that is, transmitted by the source but not received by the audience). If noise source and equivocation had been added to the five-component model, this model could have been very .

useful in conceptualizing all factors that positively or negatively account for the efficacy of communication. The model also ignores the important factor, feedback.

The fact that the model also applies to a mass communication situation is a virtue that characterizes good models. As abstractions of many realities, good models demonstrate applicability to a wide variety of situations.

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