



- ◆ Trabajo realizado por la Biblioteca Digital de la Universidad CEU-San Pablo
- ◆ Me comprometo a utilizar esta copia privada sin finalidad lucrativa, para fines de investigación y docencia, de acuerdo con el art. 37 de la M.T.R.L.P.I. (Modificación del Texto Refundido de la Ley de Propiedad Intelectual del 7 julio del 2006)

Theory of Communication and Psychiatry

A. POLAINO-LORENTE

Introduction

The strong vigorous development of Communication Theory is due to two outstanding works, published forty years ago in 1948. I am referring to the paper titled *The Mathematical Theory of Communication*, which Claude E. Shannon published in the July and October issues of the *Bell System Technical Journal* and to Norbert Wiener's book *Cybernetics: Control and Communication in the Animal and the Machine*.

Besides these two works another, which was published in the fifties, must be added owing to the vast repercussions that its content had for Language Psychology, Cognitive Psychology, Psycholinguistics, etc. I am talking, of course, about *Syntactic Structures*, published by Noam Chomsky in 1957.

Most of the notions and terms later developed by modern Communication Theory come from the outstanding contributions first proposed by Claude E. Shannon & Weaver (1949).

Although it is true that the above facts are correct, it is, however, absolutely indispensable to mention another basic notion: feedback, introduced by Cannon (1932) and first applied to biological aspects in 1943. Without it, today's Communication Theories would not be possible.

The term "feedback" refers to the consequences of a given act or behaviour: when those consequences are sent or

transferred to the centre which controls that information, they generate an outstanding effect. This organism carries out the taking of decisions and the ensuing behaviour, influenced by and taking into account this effect.

Several functions are imputed to feedback. The following can be mentioned as being the most important among them: to correct the information provided to an organism and to link this information to the actions or behaviours that are later undertaken.

It is in this special linkage between the physical universe (action or behaviour) and the symbolic universe (action schemes, behaviour planning, future action organization) where one of the most revolutionary landmarks raised by Communication Theory lies.

Because of this message exchange, it can now be said, that finally the old psychophysical parallelism that ruled over the old Descartes division between mind and body has been surpassed. By virtue of feedback, human behaviour cannot only be controlled, but it can also be maximized with regard to the taking of decisions in the future. In other words, feedback would be of use in adjustment behaviour for human adaptation to the environment, and for individual survival.

When human behaviour deteriorates, it becomes disordered in some way; without feedback it is difficult either to exploit previous experience, or to foresee what is

going to happen later, or to set in motion the right behaviour which, enriched with previous experience, can be planned, according to the clues, attributes and traits that characterize the situation that has been previously anticipated.

Human communication allows very different levels of analysis (semantic, syntactic, pragmatic, semiotic, logic, psychoanalytic, etc.), so it is not rare that to refer to this concept we make use of several definitions.

In the most synthetic way it can be said that communication consists of a process through which personal hermetism is avoided: in this way a continuum is established between the information that comes from two different sources – the participants – who up to that moment were together in an isolated way.

Once communication is reduced to its simplest elements, we can distinguish between the perception or information input (input), the taking of decisions from previous experience, the anticipation of what is going to happen in the future and the content of the given information. In other words, the above elements provide recognition and analysis of the given information, the thought or processing of this information and the memory or storage of the given data (central elaboration) and also the expression in which the new emission of information is shown by the new sender (output).

The stimulus that reaches the receiver (signal) – which is able to generate a certain response – must be arranged in a certain order or regulation (code), which should be shared by receiver and sender so it can be understood. When a receiver can attribute referential properties to a signal, if this is useful for solving problems it is called a sign. If this referential property has been publicly agreed on, the sign becomes a symbol. Semantics studies the meaning (referential properties of signs and symbols). Pragmatics studies the relation between signs and users. Syntax studies the articulation of signals, signs and sym-

bols. Semiotics includes all of them (Ruesch 1982).

Each communicated message needs a method of transmitting the information from sender to receiver (communication network) and a referential frame that allows the participants to interpret, analyse, deduce and understand the received message (metacommunicative processes).

Interpersonal communication disturbances – which is what makes people today complain about a lack of communication – are due to very different causes. These causes have an effect on the different stages of the process of communication.

Here is an enumeration of some of the main mistake sources that can distort or misrepresent the meaning of the received message: incorrect meaning attributed to the received/expressed message; codification/decodification of the information given by sender/receiver: erroneous inferences that sender/receiver takes from the message due to prejudices, topics, devices: noises (unexpected, uncertain, doubtful or unwanted signals that disturb the main message and that come from the subject or from society), etc. The genesis of many processes of disturbance of interpersonal communication comes from a bad organization of communication (lack of control of message flow, confusion as to participants' roles: disorder or ambiguity concerning the rules that particularize who, in this communication, are equal, subordinate and supervisor).

Any communication disturbance can be the cause/consequence of many interpersonal conflicts. Because they mean stressful factors, reciprocal incomprehension and genesis of demonstrative anxiety, those can generate the resulting social conflicts with their very complex psychopathological consequences, which are not always easy to solve.

Below (Fig. 1) is a reproduction of Shannon's Diagram (1948) which allowed for the posterior development of Communication Theory due to its great originality and simplicity.

Theory of Communication and Psychiatry

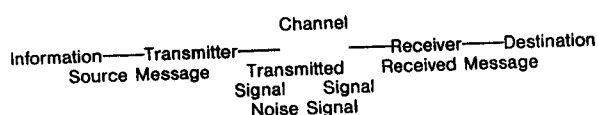


FIGURE 1. The UNIVERSAL COMMUNICATION SYSTEM symbolically represented in this block diagram was originally proposed by Claude E. Shannon in his influential 1948 paper *The Mathematical Theory of Communication*.

It seems convenient here to analyse or evaluate interpersonal communication in which the analyst tries to observe, record and answer the following questions: *Who addresses who?* (status, function, identity, social and professional roles — in the family, doctors, psychiatrists, psychologists, lawyers, teachers, professors, politicians, journalists, patients, communicators, sociologists, etc. — of the people who try to communicate, senders as much as receivers).

What was expressed and/or communicated between communicants? (Contents of communication: text, context and pretext of the supplied information: signs, signals, symbols and private/public/semipublic dictionaries or codes introduced; logical, inferential, psychological, professional, racial, idiosyncratic, cultural, etc. clues of interpretation of this information.)

When and where that communication took place? (Time and space with all their consequences, characteristics, traits, attributes and peculiarities that restrict, limit, specify and tint the communicated information: communication speed, historical period, social context, situational etiquette — sorrow, traffic accident, birthday celebration, birth, marriage, work luncheon, political meeting, psychiatric waiting room group therapy —. When and where also impose restrictive rules as to who takes the lead in communication, which subjects can or cannot be spoken about, what is expected from receiver /sender and from their respective roles, who must start/end the message, for how long, under which rules, what

must be done when those rules are broken, etc.)

How that communication takes place (here we are talking about the way in which the message is transcribed, expressed or conveyed. We are talking, of course, about what is used for the communication of a message. Some authors [McLuhan 1967], have stood by the interdependence of the message with regards to the way used to communicate — the isomorphis between way and message. Others, on the contrary, in spite of admitting a more or less reciprocal dependence between way and message still sustain the total difference between one and another).

In fact, each ideogram (abstract and complex notion) limits or enlarges, but always modifies its meaning, depending on which way of communication is used. Today, we can say that an ideogram in some way modifies its meaning depending on the denotative system that is used (computers, television, films, photography, telegraphy, telephone, press, radio, mimic, etc.). In my opinion, if the way is not more basic than the message, there will be a radical modification of the message due to the way. The difficult connection inter- and intrasubject in spoken, written and gestual communication is even more distant because of the actual proliferation, diversification and multiplication of the ways used by an uncontrolled designer industry.

Finally, what are the effects caused by communication on receiver/sender?: here, we intend not to restrict ourselves only to

study what the impact of communication on the receiver is, but, very specially, as we already commented when referring to feedback, we intend to analyse what the consequences of information or emitted message on the sender are.

Communication analysis and evaluation

There is no doubt that Communication Analysis and Evaluation is one of the most difficult tasks that the psychiatrist may face. Most of these difficulties are due to the nature of interpersonal communication itself: A necessary dynamic and changing process that, due to its versatile nature – whether we refer to verbal and non-verbal communication – is very difficult to understand. For another one which is added to this difficulty that could be considered natural, derives from the large number of models and theories on human communication that today typify the different approaches, most of them being relatively contradictory.

There have been so many models over the last few years, that, today, it could be wise to plead for a *birth control* of possible new models, at least until some of those previously raised may, in some way, be checked.

At present, regarding only General Theory of Systems, we can recognize Communication, Interaction and Information as being different processes (Waltlawick 1975); others emphasize the importance of the observer, since his is the only position from where the interactional system which forms communication can be observed (Nisbett et al. 1977).

Some talk about manifest or latent communication, and about the possible lack of firmness and incongruity between them (Haley 1976). Others propose different unity patterns (transactional and structural minimum) used as much for the analysis of the punctuation message as for the contextual message (Harré 1974, Ashby 1968).

Against the importance given to the ob-

server, some authors underline the importance of the participants, whose messages influence as an antecedent or consequence in the communication process that, in this way, becomes an alternating process (Jones et al. 1967). Finally, some (Colett 1977) insist on the importance of satisfying those rules, that deriving from a negotiation process, become defining elements of the relation itself. Therefore, analysis of the communication process must, necessarily, attend to those rules.

On the other hand, among the Communication Models that have had most importance for Communication Theory the following are outstanding: Systemic Model (Heinemann 1980); Transactional Models (Taver 1975, Ross 1978); Inferential Sociological Model (Schramm 1973); Information Theory Model (Berlo 1969); Holmes Perceptive Model (1958); and Cybernetic Model (Shannon-Weaver 1949).

Underlying all those models there are some problems which are very difficult to solve such as: speech interdependence, interpersonal perception and its outcomes in communication: speakers expectatives/cognitive styles and attributional processes that lie under the inferences which hinder the understanding of speech; cognitive factors revealed by symbolic interactionism: the relations between the attitudes, empathy and roles of the different speakers, etc. It is sometimes very difficult not to become lost in the presence of such complicated theory. There is no doubt that some of these theoretical efforts have contributed to explain the complicated process of human communication: but we must also say that there have been other theories and models which have contributed to exactly the opposite.

Whatever the case may be, it is a fact that all the theoretical approaches agree to point out the need of a better research into the relation which forms communication (dynamic process), instead of studying the participants (static process) who exchange their messages. There is, as well, an insistence on applying a positivist methodo-

logy closer to empiricism or almost experimentalism, rather than phenomenological or strictly-speculative methodologies, although these also are indispensable at the moment of evaluating the results obtained by the latter. Given the increasing complexity of the former assumptions, it is not strange that we have very different ways to evaluate and analyse interpersonal communication, as has been started in many recent papers (Heslin & Patterson 1982, Bull 1987, Buck 1986, Leff & Vaughn 1985, Duck 1986, Taylor & Cameron 1987, etc.).

The Psychiatrist can be helped to establish a clinical diagnosis by a mere observation of non-verbal communication, as we have proved with depression and other psychopathological disturbances (Polaino-Lorente 1987, Polaino-Lorente & De Pablo 1987, De Pablo & Polaino-Lorente 1987a, b, 1988).

The same conclusion can be reached from the study of emotional expressivity (EE) in family atmosphere, and from its larger or smaller incidence on the relapse of schizophrenic patients. As Vaughn et al. (1984) have corroborated, it has been observed that in patients whose relatives had a high EE (77%), the rate of relapse was very high if there was interaction for more than thirtyfive hours a week. In those patients whose relatives had a low EE and continued medication regularly there was no relapse. In this subgroup, among those who did not continue their medication regularly there was a 25% relapse rate whereas a 100% relapse was observed in those patients living with high EE relatives for more than 35 hours weekly in spite of having their medication regularly.

The previous data have promoted research on parental attitudes, negative affective behaviour, expression of emotions and communication disturbances as being significant clues in the primary symptoms of schizophrenia in adolescents (Doane et al. 1981, Norton 1982 and Valone et al. 1983).

From this perspective, we can understand that, in *schizophrenia* there is a deep

disturbance in the communication process and in the communications network. Singer & Wynne (1965) showed the presence of deep communication disturbances in parents of schizophrenic patients (meaning confusion, excessive precision, peculiarities in verbal communication with poor non-verbal communication), as well as their usefulness to predict the severity of the disturbance in their children. This disturbance would allow the behavioural disorder in the patient, who, when he changed the flow of messages reaching him is incapable of taking adaptative decisions. For this reason psychotherapy tends to set up or place the communication process on a structural frame which can be useful to guide the patient in his/her communication; an increase of social contacts through clubs and associations, reorganization of family communication, planning of free time, learning of useful gestures for non-verbal communication are all necessary for the patient's rehabilitation, together with the importance of drug therapy.

It has also been seen in *Alcoholism*, that the disturbances of communication in the family atmosphere are an outstanding element. In many cases this can induce an increase in alcohol consumption or a patient's relapse (Jacobs & Seilhamer 1987). The consequences of these disturbances in family interaction can also close up the perfect and morbid vicious circle that exists between the alcoholic patient, his/her partner and his/her children (child abuse, marriage conflicts, aggressivity, hostility, etc.).

In some *psychosomatic disturbances*, it is very clear that the appearance of a deficit in social and communicative abilities restricts and limits the smoothness in the message exchange between the patient and his/her environment. This special difficulty would help to cause the inhibition, passivity and lack of social competence to take the correct decisions which would solve the patient's problems. Thus those patients can easily delegate the decision taking onto their relatives and, at the same time, be-

come dependent on them: when this delegation and dependence twin, they constitute the basis for possible symbiotic relations that transform the personality in an anomalous way, even becoming resistant to further psychotherapeutic treatments.

In the case of the traditionally known *neurotic personalities* there is always a deep disturbance in communication. Do not forget that as much speech as non-verbal communication have a self-regulating function in behaviour, as well as the power to cause some significant answers in others. In neurotic behaviour, the communication function either does not exist or is disturbed so it is of no use as a self-regulating process, becoming substituted by other gestures, hints, emblems, adaptators and elements of paralanguage through which the patient tries to obtain some social control of the situation. The former limitations obviously cause him/her to communicate in a multichannel way which is somewhat unnatural and contradictory as what he/she is expressing by means of a gesture contradicts what he/she is conveying by means of language, although both ways of expression can be even further obscured by the cover of latent contents that definitely submerge its meaning. At other times the same neurotic symptomatology (note the conversion hysteria, hysterical paralysis) forms a special type of pathological communication, half way between verbal and non-verbal communication.

Certain alterations of interpersonal communication can also be observed in *psychopathic personalities*. This is the case of the skills, often highly developed, which are needed for simulation or for cohesive procedures used by the patient so as not to fulfill the most explicit social rules without any apparent guilt. It can be said that in many psychopaths the regulation of interaction, one of the basic functions of communication, does not work, and for this reason the patient is incapable of correcting the altered information he/she has, as much concerning the environment as concerning him/herself.

All that has been said up to now regarding this short list of psychiatric diagnoses, can also be applied to *manic-depressive psychosis, childhood mutism, neurotic lack of communication* (Polaino-Lorente 1973), *familiar and marital lack of communication*, etc.

At the present, even if the psychiatrist does not intend to become a communicologist, it is, nevertheless, necessary to recognize that research into human communication is a central subject, an irrenunciable key for the practice of his/her profession. This is so for three reasons. First, because the psychiatrist throws his own speech into the inner space of the other, and at the same time he generates the word that pierces the silence of the "you" to whom he addresses himself.

In the second place, because the patient, as a speaker, aims to get into the company of the psychiatrist to whom he/she is talking, that is to say, of the listener he addresses himself to. And that very company in which the communication psychiatrist-patient is solved, makes the speaker perceive him/herself not only as an "I" that speaks, but also as a "You and I", that is to say as a "We" in which that dialogic relationship is incarnated.

And in the third place, because in every therapeutical process, the psychotherapist lives as much his/her patient's experience of living as the patient lives the way his/her psychotherapist experiences him/her.

Thus, without communication, psychiatric diagnosis would be very difficult and psychotherapeutic processes would be even more impossible. Therefore it is very clear that, without interpersonal communication, Psychiatry itself is not possible.

REFERENCES

- ASHBY, "Principles of the self-organizing System", W. Buckley (ed.), *Modern Systems Research for the Behavioural Scientist*, Chicago, Aldine Publishing Co., 1968.
- BERLO, D.N., *El Proceso de la Comunicación*, Barcelone, El Ateneo, 1969.

- BUCK, R., *The Communication of Emotion*, New York, Guilford Press, 1986.
- BULL, P.E., *Posture and Gesture. International Series in Experimental Social Psychology*, Vol. 16, Oxford, Pergamon Press, 1987.
- CANNON, W.B., *The Wisdom of the Body*, Norton, 1932.
- CHOMSKY, N., *Syntactic Structures*, Cambridge, MA, MIT Press, 1957.
- COLLET, "The rules of conduct", P. Collet (ed.), *Social Rules and Social Behaviour*, Oxford, Basil, Blackwell, 1977.
- DOANE, J. et al., "Parental communication, deviance and affective style: predictors of subsequent schizophrenia spectrum disorders in vulnerable adolescents", *Arch. Gen. Psychiatry* 38 (1981), 679-685.
- DUCK, S., *Human Relationship: An Introduction to Social Psychology*, Beverly Hills, CA, Sage Publications Inc., 1986.
- HALEY, "Development of a theory: a history of a research project", C.E. Sluzki & D.E. Ransom (eds.), *Double Mind: the Foundation of the Communicational Approach to the Family*, New York, Grune & Stratton, 1976.
- HARRE, R., "Blueprint for a new science", N. Aristead (ed.), *Reconstructing Social Psychology*, Harmondsworth, Penguin, 1974.
- HEBLIN, R. & PATTERSON, M.L., *Nonverbal Behaviour and Social Psychology*, New York, Plenum Press, 1982.
- HEINEMANN, P., *Pedagogía de la Comunicación no Verbal*, Barcelona, Herder, 1980.
- HOMES, O.W., *The Autocrat of the Breakfast Table*, Boston, Philip-Simpson and Co., 1958.
- JACOB, T., *Family Interaction and Psychopathology: Theories, Methods, and Findings*, New York, Plenum Press, 1987, 535-580.
- JACOB, T. & SEILHAMER, R.A., "Alcoholism and Family Interaction", T. Jacob (ed.), *Family Interaction and Psychopathology: Theories, Methods, and Findings*, New York, Plenum Press, 1987.
- JONES & GERARD, *Foundation of Social Psychology*, New York, Wiley, 1967.
- LEFF, J. & VAUGHN, C., *Expressed Emotion in Families: Its Significance for Mental Illness*, New York, Guildford Press, 1985.
- MCLUHAN, M., *The Medium is the Message: An Inventory of Effects*, New York, Randon House, Inc., 1967.
- NISBETT, R.E. & WILSON, T.D., "Telling more than we can know: verbal reports on mental processes", *Psychological Review* 84 (1977), 231-259.
- NORTON, J.P., "Expressed Emotion. Affective Style, voice Tone and Communication Deviance as Predictors of Offspring Schizophrenia Spectrum Disorder" (Unpublished doctoral dissertation), Los Angeles, University of California, 1982.
- PABLO, A. DE & POLAINO-LORENTE, A., "Desarrollo de un sistema de observación conductual para la evaluación de pacientes depresivos", *Psiquis VIII*, 9, 10 (1987a), 21-26.
- , "La observación conductual de la depresión como indicador del progreso terapéutico: un estudio longitudinal", *Revista de Psiquiatría y Psicología Médica de Europa y América Latinas XVIII*, 1 (1987b), 35-46.
- , "La observación comportamental y su eficacia en el diagnóstico psicopatológico en Pediatría", *Acta Pediátrica Española* 46, 1 (1988), 19-27.
- POLAINO-LORENTE, A., "Modificación de la conducta verbal y de la interacción social en niños con retraso mental: eficacia diferencial de algunos procedimientos", *Galicía Clínica LIX*, 4 (1987), 126-132.
- , "La incomunicación en la sociedad actual", *Revista de Medicina de la Universidad de Sevilla V*, 22 (1973), 79-90.
- POLAINO-LORENTE, A. & PABLO, A. DE, "La observación comportamental en la evaluación de la depresión: una revisión", *Anales de Psiquiatría* 3, 2 (1987), 54-60.
- ROSS, R.S., *Persuasión, Comunicación y Relaciones Personales*, Trillas, 1978.
- RUESCH, J., "Comunicación y Psiquiatría", A.M. Freedman, H.I. Kaplan & B.J. Sadock, *Tratado de Psiquiatría*, Vol. I, Barcelone, Salvat, 1982.
- SCHRAMM, W., *Hombre, Mensajes y Medios*, Forja, 1973.
- SHANNON, C.E. & WEAVER, V., *The Mathematical Theory of Communication*, Urbana, IL, University of Illinois Press, 1949.
- SINGER, M.T. & WYNNE, L.O.C. "Thought disorder and family relations of schizophrenics. IV. Results and implications", *Arch. Gen. Psychiatry* 12 (1965), 201.
- TAYLOR, T.J. & CAMERON, D., *Analysing Conversation. Rules and Units in the Structure of Talk*, Vol. 9, New York, Pergamon Press, 1987.
- THAYER, *Communication and Communication System*, Barcelone, Peninsula, 1975.
- VALONE, K. et al., "Parental expressed emotion and affective style in an adolescent sample at risk for schizophrenia spectrum disorders",

J. of Abnormal Psychology 92 (1983), 399-407.
VAUGHN, C.E. et al., "Family factors in schizophrenic relapse: A California replication of the British research on expressed emotion", *Archives of General Psychiatry* 42 (1984), 1169-1177.

WATZLAWICK, P., *The Language of Change*, New York, Basic Book, 1975.

WIENER, N., *Cybernetics, or Control and Communication in the Animal and the Machine*, Cambridge, MA, MIT Press, 1948 (2nd ed. 1961).