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Cross-Fertilization between Studies on ICT Practices of Use and Cross-Modal Analysis of Verbal and Nonverbal Communication

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Abstract
The following are comments and considerations on how the Information Communication Technology (ICT) will exploit research on cross modal analysis of verbal and nonverbal communication.

Keywords: Communication behaviors, multimodal signals, human-machine interaction

1 Introduction

In the first place let us to propose some reflections on how the cross-fertilization between the field of studies on ICT use practices and the cross-modal analysis of Verbal and Nonverbal Communication [1-4] could take place in a reciprocal and productive way. One notion that might be corrected in the current studies is that of face-to-face communication with body-to-body communication. In sociological studies the expression face-to-face, that is still used in many technical studies, has been criticized and overcome in favor of the expression body-to-body [6]. In fact, as all the tradition of studies on non-verbal language points out, individuals talk with all their body not only with their face, although the face is a very strategic site of the communication process. Also, in the terminology one should consider, or at least be aware of, all the variables that compose the communication process.

Another notion that might be more deeply problematized is that of information. There is an approach to information which can be summarized with Bateson's words "Information is the perception of a difference". Maybe the result of a perception can be measured and counted. But the possibility of measuring it might give the illusion that it is possible to construct a scientific analysis only by reducing the problem to the measurement of the perception result. In effect this would be a wrong approach, because the reality of information is much more complex since it concerns human being s. If one enlarges the notion of information through the lens of a sociological contribution and one claims that information is also a relational concept, the measurability of information becomes complicated, since in the field of research of cross-modal analysis of Verbal and Nonverbal Communication it might be necessary to activate also the notion of e-actors and their power[9, 7]. So, looking at the problem of information from a user's point of view, it comes out that the interest of the receiver/e-actor is not simply to have the greatest possible amount of information. This means that it not true that the more information one has, the better it is, because considering only the amount of information has the consequence of conceptualizing the role of the receiver only as being a mere decoder of information and to propose a reductionist vision of the communication process. On the contrary, the amount of information which one tends to obtain is related to several aspects of the communication process. Let us focus on two of these aspects: the power of the receiver and the quality of information. In regard to the first aspect, compare, for example, reading a book and seeing a movie on TV. In the first case the only channel involved, writing, gives to the reader

information that is limited in detail, but this means that the reader can handle the information better. In this case the reader is able to exploit his/her imagination and co-operate with the writer to a great extent. In the second case, the co-operation by the audience is reduced, since the product that is consumed is formalized at a much higher level. What is at the stake in these two examples is the difference in the audience's power over the consumption of the product, which in the latter case is in a certain sense reduced by the greater amount of information. But the problem of course is not only of the power of e-actors on the product, otherwise one should not be able to understand why audiences celebrated the advent of television. The exercise of this power by the e-actor is maybe addressed in some contexts and situations by other characteristics of the product, others than the amount of information contained in it, such as, for example, its pleasantness and relaxing qualities. These are the cases in which e-actors like to consume products which require less commitment and involvement from them. This has to do with the ambiguous essence of the consumption which actually should be understood as productive labor and that often e-actors aspire to reduce to a minimum. This aspiration has been often misunderstood by scholars studying patterns and styles of TV consumption through the optics of "audiences' passivity".

Another aspect of the information process is which setting we can study the issue of information in regard to its quality, that is its efficacy. An indirect measurement of the efficacy of the communication process might be memory. In the middle and long terms, one remembers what one sees much better than what one reads [5]. This means that more detailed information is more effective than less detailed information in the memorization process.

Third, continuing our attempt to cross-fertilize the field of cross-modal analysis of Verbal and Nonverbal Communication with the main tenets of the field of ICT users' studies, we recall that the communication process should always be studied in its multiple social contexts, because it is shaped also by the social organization of relationships and so it is intelligible only in concrete situations, local practices and contexts. It is the same
concern which was expressed by de Saussure with regard to language. Meaning is not understandable if it is not situated in a broad context, which maybe is the sentence, as minimal unit of a text. Take, for example, the research carried out on audio and visual cues in interpersonal communication: their results might be fully understandable only when they will be situated in a social context. But this would imply, at the same time that we reflect on the need to bring together different methodological approaches. To what extent does it make sense to continue to study these issues only in laboratory? Does it, instead, make more sense to study them in laboratory but also in social contexts and so try to design completely different research?

Fourth, another important and recent tenet of psycho-sociological studies has been to see the fundamental role of emotion in the communication process and in the use of ICTs [8]. This approach is very important to overcome the implicit premise that the communication process is rational, without taking into account the role played by emotions in it. This is a debate, that of the electronic, mediated emotion, which is still in its infancy, although it is very vivid and ever-growing. Now it is recognized quite broadly that emotion always accompanies the process using technologies, their practices and the transformations of social organizations in which the technologies are used. This should also inspire research projects in physical or engineering studies.

Fifth, another important issue concerns the signal. If it is acceptable that for the operationalization of a research study a complex concept such as communication has

to be reduced to a simpler notion such as a signal, then later on it is always necessary to come back to the complex notion of communication. This is the only way to avoid dangerous shortcomings in the design of the research. Following the same line of reasoning, when the signal is chosen for operational reasons, it should not be seen as part of a communicative act, but rather as part of a communication process, constituted by immaterial labor and of a message which is its product and which has an economic and normative impact, affects social roles and power, the organization and structure of social relationships, and so on. In this case it would be wiser to start from the multi-dimensionality of the signal and then to declare that, given the difficulty in analyzing this multi-dimension nature, only one aspect is selected. In that way, the researcher would be more easily aware that it is possible to arrive only at a partial and limited conclusion, avoiding a metonymical conclusion (in which a part is understood and presented for all). Moreover, it would be better to consider all the variables and then to decide on a post-selection of the significant variables by means of a factor analysis. So, in this case the choice of the considered variables in the design of a research might be justified, otherwise not.

Finally, just to concluding this attempt to cross-fertilize the field of cross-modal analysis of Verbal and Nonverbal Communication with the main tenets of the field of ICT users' studies, we would propose some points coming out from the first interdisciplinary dialogue. When research on emotion is designed, it is always the case to remember that a) emotions are a continuum; b) different cultural perceptions of emotion derive from the fact that emotion have different archetypical, symbolic and metaphorical history; c) in our multicultural society more inter-cultural experiments on and studies of emotion are needed; d) one should problematize more emotions: fear is both positive and negative (relating it to different contexts).

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