Evaluation of Master's Thesis
"The Psychological Impact of Modern Communi-cation Technologies on Users"
by Stefan J.W. Marti

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This Master's Thesis covers a research topic of high current interest, because today new technologies that allow individuals to exchange information emerge almost constantly. Compared to the variety of communication technologies, the empirical psychological knowledge is still modest concerning questions like: In which situations are these technologies used, why, how, and with which consequences to the users. Stefan Marti's aim was to reduce the existing gap in research. The resulting study is a commited piece of work of a remarkable high quality, which lies on the intersection of cultural psychology, computer science, and communication sciences.

The Thesis consists of three sections: After the introduction, the first section presents communication science framework and relevant social psychological and media psychological studies. In the empirical part of the study, both the methodological strategy is explained and expounded, and the investigated media are described in detail. Ethnographic interviews are the empirical psychological basis to answer the question: Which is the main criterion for selection among different media? (The terms "communication *technologies*" and "communication *media*" are used synonymously.) In the third part Mr. Marti discusses the future of media and some possible implications for interpersonal communication. With the study there comes an extensive bibliography and several appendices containing interviews and a project draft, which could be used as a basis for an experiment to verify assumptions derived from communication theoretical models.

The *Theoretical Part (p. 7-36)* starts with a summary of models of communication theories (BAACKE, LUCKMANN, WATZLAWICK, WERSIG, etc.). Additional to these well-known concepts, a few theories are presented which usually are *not* part of communication theories: LANG's semiotic ecological approach and the model of privacy regulation presented by ALTMAN. Main focus is on the showing of studies that explore psychological impacts of communication technologies on both individual and interpersonal as well as group-related behaviour. These concepts are the basis from which the four main questions (p. 35-36) were derived.

The *Empirical Part (p. 37-153)* is devoted first to the substantiation of the methodological strategy. Considering the discrepancy between theoretical knowledge and the variety respectively "speed of evolution" of communication technologies, Mr. Marti decided to proceed not nomothetically but ethnographically, which is efficient and correct. Thereby he took the risk of investigating new methodological territories. He discusses elaborately qualitative methods of inquiry and evaluation and substantiates the method he has chosen: problem-centered interview.

Two things are typical for the selected research strategy. First: One is forced to occupy oneself with the "matter" more than Psychologists usually do. In our case, the repeated data ascertainments on the same persons lasted for two years. Second: Although the main theme of the interview can be derived initially from existing concepts, it evolves continuously during the inquiry. Eight adults were interviewed for 30 to 90 minutes; having access to a large number of communication media was essentially what they had in common. The evaluation of the interviews followed the approved procedures of qualitative content analysis. To demonstrate the data processing an example is provided by Mr. Marti.

What follows is a description of the 15 communication media that were examined. Although the explanations are very detailed, it is necessary that one has a certain amount of relevant basic knowledge; this also shows the high level of knowledge of Mr. Marti. The rather technical descriptions of the media are important because by this the quasi "objective" behaviour possibilities are described as well, and these partially determine media selection.

The psychologically most interesting part of the study follows on the pages 99-153, because here the interviews are evaluated with regard to their contribution to the question: Why is a specific medium selected to communicate? Two modes are distinguished: passive media selection (Through which media do you want to be accessible?), and active media selection (Which media do you use when and why?)

Concerning passive media selection, the following two facts attract attention: Professional users both try to evade "complete accessibility" and suspect that too many communication technologies available can lead to communication refusal. The decisions in the process of active media selection are determined by several different conditions: costs, time, importance of information, urgency for feedback messages, habits, etc. A total of 71 "rules for media selection" was extracted from the interviews. A *General Criterion for Media Separation* is produced, which makes it possible to separate media into two groups: on one side the verbal-vocal, realtime-interactive, and non-time-buffered media like Telephone, Intercom, and face-to-face communication; on the other side the text-based, asynchronous, and time-buffering media like Letter, Telefax, and E-mail. Then the media separation is discussed expertly from the point of view of the explained communication theories. Here the specific value of an ethnographic study emerges. The confrontation of empirically distilled dimensions

with ordering criteria found in theories shows, that the existing classes have certain problems, because they do not orientate themselves from the daily communication. Nevertheless, the newly postulated dimension meets generally quite well with the dimension *Social Presence*. Two media (Telephone Answering Machine and Online Chatting) are exceptions because they cannot be assigned to one or another pole. Now Mr. Marti can show why these media both occupy exceptional positions within the media and can lead to little-known regulations of interpersonal communication. The Telephone Answering Machine is a special case because it is asynchronous and timebuffering, but nevertheless on a verbal-vocal basis! In contrast to this, Online Chatting is an exceptional medium because it is realtime-interactive, non-timebuffered, but nevertheless text-based! Carrying out further empirical research on the communication behaviour of persons using these two media would be not only of very high psychological interest, but also of great practical use for the manufacturer of such devices.

With the concluding *outlook* (p. 154-180) Mr. Marti takes up a few prospective communication technologies and organizational modes of the future. On the basis of the theoretically and empirically worked out knowledge about media, it is possible to assess the phenomena and effects of these technologies (videophone, fax–computer compound, telephone–computer compound, Virtual Desk, Private Eye, and other recent computer developments) if applied broadly.

Mr. Marti has succeeded in working on a psychologically quite "uncultivated" area in a manner that is rare and not often dared in empirical Psychology. It is not astonishing that this meticulous large-scale study has produced a huge amount of rich data. The way that Mr. Marti carefully handles these "amounts of data" shows that he not only knows communication media very well but also distinguishes himself as a commited researcher. The reason for a few desired, but not yet completed reflections from the data to the theoretical concepts lies within the imperfections of these concepts, and not in an insufficiency of the researcher.

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