IMAG(IN)ING, a fresh look at design, presentation and communication

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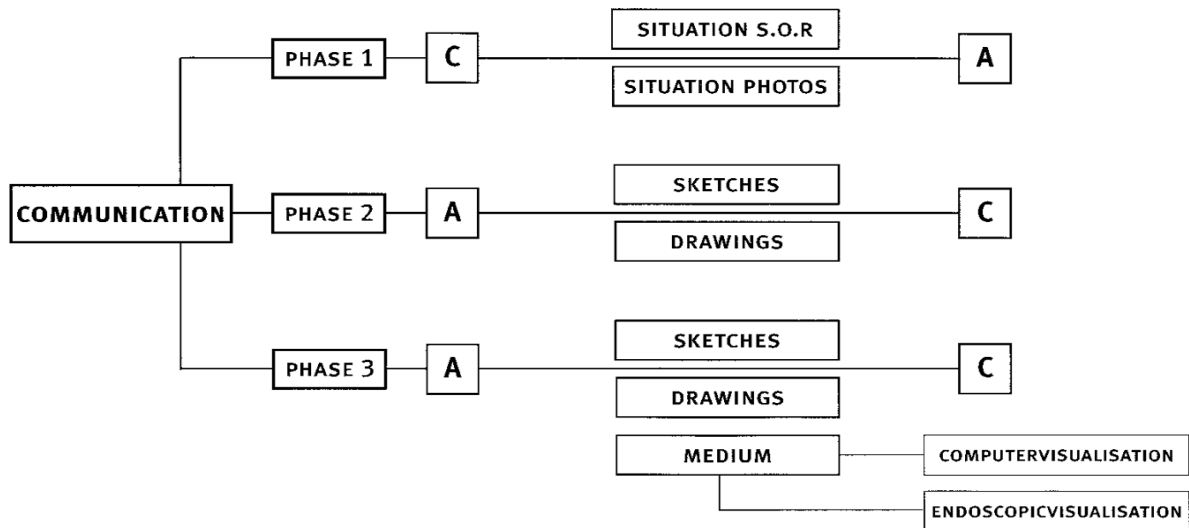
Since we met eachother for the first time in Tampere in 1993 we are looking back now for almost 7 years of international research on communication in the design process, on more ad-vanced methods for simulation on visualisation of architectural and urban design and on developments of environmental be-haviour studies. It is very important that we, as specialists in the field of environmental simulation and visualisation take the op-portunity to bring research activities to the state of the Art with regard to the international level of research, especially in the circle of EAEA members. Four members of the EAEA are pre-paring an EU-research application under the fifth framework programme with the title "ENERGY, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT". Our paper is in Brussels now and we hope it will be approved. We gave our book the title "IMAG(IN)ING A FRESH LOOK AT DESIGN, PRESENTATION AND COMMUNICATION.

  The project focuses on the use of specific imaging media in the phase from the first sketches to the finished sketch design. We also considered the crucial role of verbal communication in the contact between the architect and the client. For the regularity's sake I give you our primary objective of the present study: *To obtain in sight into the effect and utility of endoscope and computer techniques as means of presentation of the sketch design and of communication between the designer and the client.*

Our second objective is as follows:*To gain experience in the improvement adaptation and testing of this tools for the pur-poses of teaching in communication techniques and for subsequent research, both inside and outside the faculty.*

The two hypotheses we tested in this study are:

1. Distortions (deviations from expectations) occur in the information flow between the designer (architect) and the client such that there are differences between the ideas the client wishes to convey and the image as conceived by the architect. I specify:

a. distortions due to verbal communication between the parties

b. distortions due to the visualisation media used

c. the visualisation medium used will have an effect on design decisions.

2. The kind of distortion occurring will vary according to the visualisation medium used (endoscope or computer).

Diagram:

COMMUNICATION

PHASE 1 — C — SITUATION S.O.R / SITUATION PHOTOS — A

PHASE 2 — A — SKETCHES / DRAWINGS — C

PHASE 3 — A — SKETCHES / DRAWINGS — C

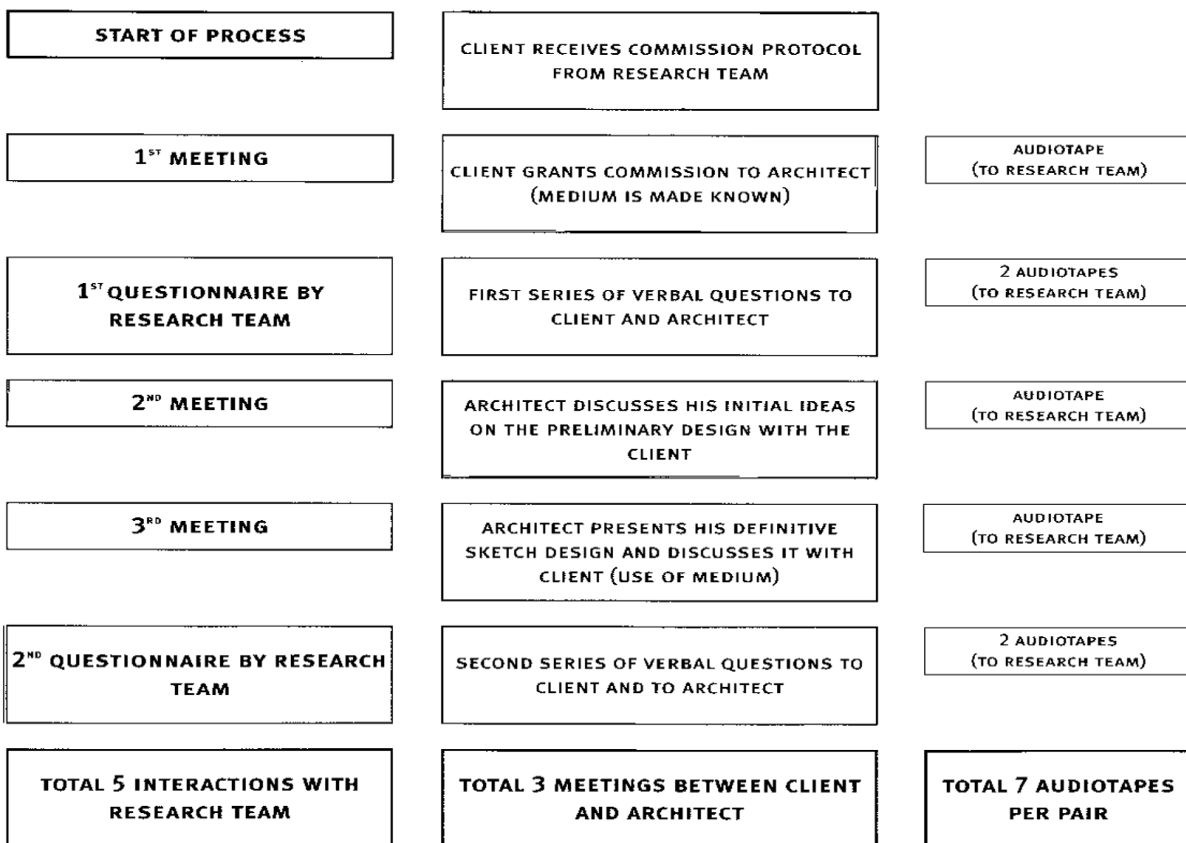MEDIUM — COMPUTERVISUALISATION / ENDOSCOPICVISUALISATION

Explanation of the schedule

Our researchplan contains three phases:

At the f*irst design stage*, the client informs the architect about the project. He makes an audio recording of the conversation and delivers it to the research team immediately afterwards.In the *second meeting* the architect informs the client of the progress made and presents his prelimi-nary design. The conversation is taped and handed to the researchteam. *The final meeting* marks the stage in which the client is able to view the final presentation of the finished provisio-nal design. The rules of plans mentioned that the architect must for this purpose use the presen-tation medium (endoscopic or computer visualisation) assigned by the research team before the design process. Once again the explanation and commentary given in this presentation are recorded on audiotape and handed over to the research team.

PLAN OF RESEARCH PROJECT

A total of 18 volunteers, consisting of 9 clients and 9 architects volunteered to take part. They were grouped into 9 pairs, consisting each of one architect and one client. The participants of each pair were explicitly asked to simulate an interaction between two disciplines in which the client formally briefs

the architect on a building project. We selected a site in the city centre of Delft, bordering partly on a development of quite new houses and partly on an area of older buildings. The participants were free to place the buildings to be designed on this site on any desired lay-out, subject to certain access requirements. A 1:1000 cadastral map of the location showed which of the excisting houses were to make way for the projected development. The rules of play included instructions regarding the representations of plasticity in the final presen-tation. Also the client gave the architect the design brief in accordance with rules of play, which were identical for all participants. It was the protocol for the first meeting existing: schedule of requirements, situation, boundaries of design-site, building height, additional information, required final product. That means: besides groundplan and cross-sections

START OF PROCESS	CLIENT RECEIVES COMMISSION PROTOCOL FROM RESEARCH TEAM	
1ST MEETING	CLIENT GRANTS COMMISSION TO ARCHITECT (MEDIUM IS MADE KNOWN)	AUDIOTAPE (TO RESEARCH TEAM)
1ST QUESTIONNAIRE BY RESEARCH TEAM	FIRST SERIES OF VERBAL QUESTIONS TO CLIENT AND ARCHITECT	2 AUDIOTAPES (TO RESEARCH TEAM)
2ND MEETING	ARCHITECT DISCUSSES HIS INITIAL IDEAS ON THE PRELIMINARY DESIGN WITH THE CLIENT	AUDIOTAPE (TO RESEARCH TEAM)
3RD MEETING	ARCHITECT PRESENTS HIS DEFINITIVE SKETCH DESIGN AND DISCUSSES IT WITH CLIENT (USE OF MEDIUM)	AUDIOTAPE (TO RESEARCH TEAM)
2ND QUESTIONNAIRE BY RESEARCH TEAM	SECOND SERIES OF VERBAL QUESTIONS TO CLIENT AND TO ARCHITECT	2 AUDIOTAPES (TO RESEARCH TEAM)
TOTAL 5 INTERACTIONS WITH RESEARCH TEAM	TOTAL 3 MEETINGS BETWEEN CLIENT AND ARCHITECT	TOTAL 7 AUDIOTAPES PER PAIR

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an eye-height view of the design in a short video presentation: an endoscopic exploration of a scale model 1:200 or computer-rendered images.

Which ever medium was used, the representation must include details such as windows, wall surfaces, corner solutions, roofshapes, access forms and coloration.I give you a short explanation now about the OPERATING PROCEDURE OF MEETINGS between client and architect with questionnaires per pair.

The nine pairs produced nine different designs for projects of aprox. 60 dwellings. In our study you'll find a synopsis of each case to compare the impressions of the architect to those of the client.

Let us also summarise the working material which has been made in each design process:

1. Verbal Communication at the briefing
2. Responses to the first oral questionnaire to the client
3. Responses to the first oral questionnaire to the architect
4. Communication between the client and the architect during the interim presentation of the preliminary sketch design
5. The architect's ideas about the preliminary design in the middle phase
6. Communication between the client and the architect during the final presentation of the final sketch design.
7. Drawings (A3) and an endoscopic or computer visualisation of the definitive provisional design
8. Responses to the second oral questionnaire to the client
9. Responses to the second oral questionnaire to the architect.

Up till now I explained to you our objective, the hypotheses, the schedule, the plan, the chosen site and operating procedures, the questionnaires and the amount of working material we could expect from nine pairs.

For the verbal part of our study I contacted prof. Verkuijl of the University of Utrecht. We appointed a research assistant who had been recommended by three members of the Sub Faculty of Applied Linguistics to carry out an interactional analysis study into the oral communications between each client-architect pair on the basis of the conversations recorded on audio tape. The conclusions and recommendations of this study form part of the findings and conclusions of this research project as a whole.

At least two months were needed for each project to complete, included the oral questionnaires, separately to the architect and the client. In our completed study you'll find a synopsis of each case to compare the impressions of the architect to those of the client. The visual design results, the questionnaires and the discussions per pair on the audiotapes gave us

reliable information to do so. We also made tables containing an overview of the research results. The opinions of the respective client and architect are arranged for comparison pair by pair. In chapter 5 we came to our findings per case. Each numbered case, finally produced with endoscope or computer medium gives a short information with regard to verbal communication, to the media and the presentation and with regard to the media and the design process.The first design result is discussed in an intermediate consultation between the two parties and the communication process concludes with the architect's presentation of the final sketch design to the client. This mutual transfer of information is partly visual, using sketches, models, drawings and written information, and partly verbal, arising in the personal contact between the client and the architect. We recognise several variables within this process, i.e. the visual plays a part as well as the verbal.

'Human communication is essentially symbolic in character…' Nauta says.

But the extent to which this is also true for the visual communication media is a difficult question to answer within the scope of the present research. As with verbal communication, we can no more than touch on such problem areas as the multiple functions that an image may possess ('pictures, symbols and signs') (Arnheim '69), the part played in this by perception and whether or not all this is wholly or partially true for the techniques studied here as opposed to the traditional two-dimensional media.Then we can attempt to determine the significance of the media studied in this research project. How successful was the attempt to visualise an architectural environment at eye height, 'what a place will be like when experienced' (Appleyard).

The client and architect communicate verbally in the whole course of the project. The client makes his requirements known and the architect explains his designconcept. Appleyard says: "Language, the most common form of communication, is useful for describing the functional and social aspects of projects and general environmental impacts, but is only an indirect mode of describing their visual appearance. Language describes environment and projects in terms of categories and concepts, which evoke stereotypical images".The communication process in our study avails itself of images as well as of words. As already stated before, several variables can be identified within this process: besides the 'visual' (the media in our case), the 'verbal' plays also an important part.To evaluate the role of the media more clearly, we need to submit the verbal variable to some analysis. As for the visual media, we can divide the process into two parts: the media in interaction with the designer himself and the media as means of communications with
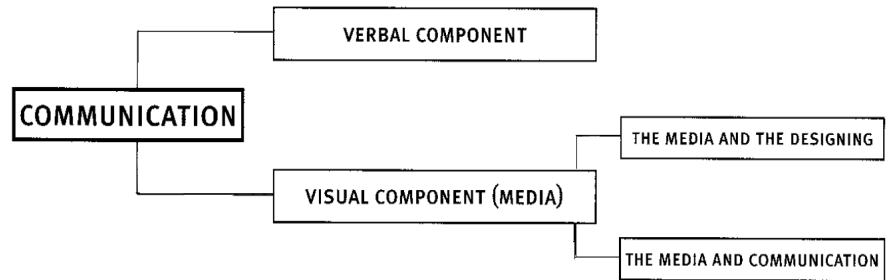
others, i.e. the client. This can be represented diagrammatically.

Listening to Korswagen we could say:

The communicative act may be considered successful for the sender if the recipient proves to have received and understood the message correctly and responds appropriately to the communicative objective (…). The sender uses both verbal and non-verbal signs and symbols to code his message. A fundamental precondition for successful communication is of course that he selects signs, symbols and combinations of these whose meaning is known to the receiver. In other words, the sender and recipient must both ascribe the same semantic value to the message.

According to the diagram Schulz von Thun, full communication only takes place when the sender obtains information from the recipient's response about the way his message has been received. Four psychologically important aspects play a part here simultaneously: the informative, the relational, the expressive and the directive aspects.The recipient can only respond consciously to the four aspects of a message if he realises what

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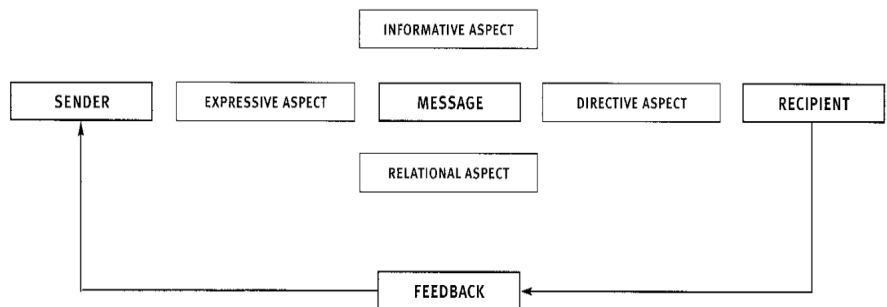
information each of them conveys.

CONCLUSIONS AND RECOMMENDATIONS

The verbal component and the communication process
As stated before, analytical subsidiary study of client/architect communications in four of the cases was commissioned in order to verify the visual media research results to some extent and additionally to check the usability of the conversations recorded on audio tape. Working hypothesis 1.a was simultaneously tested. It may be stated in this connection that there was indeed evidence of distortion in the verbal communication between the client and the architect in a number of cases. In the assessment of the role of the visualisation media concerned, these had scarcely any influence on these distortions. In the subsidiary study report of the research assistant who carried out the interactional analysis study, the following question was addressed:
What factors of the client/architect interaction contribute to optimal verbal information transfer between the two parties?
I give you the headlines of the pages 64 en 65 in our book:The material made available was suitable for the successful completion of this research. Condensed transcripts of the tapes were used to select four client/architect pairs for the performance of an interactional analysis study. Two pairs were chosen in which the architect was to present the design using computer visualisation, and two were chosen in which the architect was to use endoscopic visualisation. In brief, it may be stated that the interactional problems encountered were caused by different views and expectations on the part of the client and the architect. These expectations were present in the thinking of the person involved but not explicitly revealed to the other member of the pair. Hints of these expectations were found in the recorded conversations but they were too small to be picked up by the conversation partner. It was moreover only possible to detect these indications because the specialist concerned was conducting a conversational analysis and was this in a position to scrutinise every word.The recommendations that emerge from the analysis relate to the mutual alignment of thinking, expectations and requirements between clients and architects. Both parties have to decide what is important in advance.Unambiguous agreements must also be made about future meetings, if disappointments are to be averted. The main purpose of the following meeting must be formulated explicitly.
Tackle the briefing one point at a time.

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If later misunderstandings and problems are to be avoided, it is important that both the client and the architect first make it clear to themselves what they wish to know and what they wish to tell. Make use of clear argumentation for the options taken It is therefore very important that the architect pays considerable attention not only to the presentation of the design and the techniques used but also to the verbal presentation that accompanies those techniques.

Self-awareness on the part of the architect is very important. During the design process the architect must continually consider questions such as 'why am I doing it like this?, 'why place this there and not there?', 'why deviate here from what the client had in mind? etc. continually considers questions such as these, it will be easier to argue for the design.

THE VISUAL COMPONENT OF THE COMMUNICATION PROCESS

In chapter 3 of our book we have divided this component into two areas. The medium and designing. For example, how does an architect communicate with himself? The medium and the presentation. What visual means does the architect deploy to transfer information in a convincing manner? Again I give the following conclusions and recommendations here in headlines. Detailed information you'll find in the book in chapter 6.Study of the cases gave rise to the following conclusions and recommendations. Most clients stated the design was more comprehensible to them, that use of the medium made a better evaluation possible or that doubts about (parts of) the design were removed thanks to use of the media. There were two cases where a conclusive choice of design variant was made with the aid of the presentation medium concerned. One client thought that the medium was considerably more useful when introduced early in the design process: 'From drawings or a scale model, we, as professionals, might well have expected or experienced to get the same idea, if from different angles, but not so concretely that you could say we saw the same thing and now we can discuss it. A re commendation for clients is to evaluate the design on the additional basis of a 3D model with which, for both media, any desired viewpoint can be taken, so as to avoid everything being 'fixed' in advance. Two architects and one client stress the advantages of both media with respect to movement at eye height.A geometrically taut sketch model with pasted-on black and white drawings of facade patterns in accurate proportions tolerated the further addition of colour (i.e. by pieces of coloured transparent plastic) less well than an equally schematic model which has been given a mere suggestion of texture and colour by simple means (i.e.

gouache paint or coloured pencils).Thus a simple approach with a single technique gives better results than more elaborate detailing such as some clients supposed (which would in any case be more time-consuming).

There was no significant difference in the time invested in this process by the architect: slightly less than three weeks for scale model/endoscope and slightly over three weeks for computer visualisation. It is needed to put the whole picture across in an engaging and effective way. It must be decided in advance for whom the presentation is intended. Like a film, a presentation should make use of a storyboard. When presenting a design, it is critically important to show how it interacts with the intended design context. Computer rendering systems make it possible to model more aspects (light sources, textures) at an earlier stage, thereby confronting the designer with the outcome of his design decisions earlier. The use of CAD programs is also becoming more and more intuitive. The consequences of this will apply not only to the 2D of 3D work itself, but also to the time that has to be invested in the presentations.Some remarks, as a short synopsis of my lecture.Rapid developments in the visual media contribute to an earlier elaboration of sketch designs and enable them to be presented for the purposes of early decision-making. We therefore consciously concentrated on the sketch phase of the design process in the present research project. There exists a need for greater insight into the use of media during the sketching phase and in an evaluation of their role in the communication between the designer and the client. This led to the main objective of our research. Although all the working hypotheses were confirmed and the conclusions emerging from the research project merit further consideration for application in professional practice, in further research and in education, it did not yield an unequivocal choice of one medium or the other. That was in any case not consistent with the main aim of our research. As regards the verbal component, the Applied Linguistics Department of the Faculty of Language and Literature, Utrecht, made a detailed analysis of a number of cases. Extracts from this interactional research are reproduced in this report. The audio tapes studied for this purpose and the transcriptions made of them is available for educational and follow-up research purposes. Thank you for your attention.