Architects and Psychology

Notes on a Diachronic Psychology

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Summary

Psychologists are increasingly involved with environmental design matters. Research is pursued in two main directions: On the one hand, experimental research, in perception for example, which assumes that design can gradually become a building science and that psychology might contribute to giving architecture solid scientific foundations. On the other hand, research in environmental psychology is concerned with the definition of psychological standards that might complement existing standards for building materials and construction.

However, it is obvious that many architects do not feel concerned about these contributions from psychologists, which have been interpreted as an additional restriction upon the creative freedom of the architect. In this paper a third direction for psychological research is suggested, which originates from the observation that the architect implicitly uses psychological notions in his design practice. Thus, it is legitimate for psychologists to explore the possibility of providing the architect with knowledge that is of this type, while being thorough and explicit. A "diachronic" psychology that enriches psychological concepts with a historical dimension offers knowledge that can be integrated in the creative practice of the designer. An example, from an ongoing research project, illustrates this approach.

Résumé

On sait l'intérêt que portent les psychologues à l'architecture. Les recherches actuelles dans ce domaine s'orientent dans deux directions principales. D'une part, la psychologie expérimentale et ses travaux sur la perception pour lesquels l'architecture est destinée à devenir une science de la construction (*building science*). La psychologie contribuerait alors à donner à l'architecture des bases scientifiques. D'autre part, la psychologie de l'environnement qui est à la recherche de normes psychologiques dont l'importance soit comparable à d'autres normes de construction.

Toutefois, il est presque trivial de constater que de nombreux architectes font la sourde oreille à ce double discours des psychologues. Ceux-là ne peuvent qu'y déceler une restriction supplémentaire de leurs liber-

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tés, déjà fort restreintes par ailleurs, dans leur activité créatrice. On suggère ici une troisième voie qui part du constat que l'architecte emploie couramment dans sa pratique des notions psychologiques. Dès lors, on s'interrogera, en tant que psychologue, sur les possibilités de fournir à l'architecte des connaissances psychologiques lui permettant d'affiner et d'approfondir celles qu'il emprunte déjà spontanément. Une psychologie diachronique est en mesure d'offrir des connaissances qui s'intègrent dans la pratique créative de l'architecte. Un exemple, tiré d'une recherche en cours, sert d'illustration à cette approche.

1. Introduction

This paper discusses the relationship between architects and psychology, with an emphasis upon the integration of psychological knowledge into architectural practice[1]. It is suggested that every architectural design project contains, at least implicitly, psychological notions.

Architecture is broadly defined as the activity whereby professionals propose built forms for specific human activities. Considerations about human behaviour and about the meaning of built forms that are put to use by the architect in his design activity are the psychological component of a project. Within this framework the architect's use of psychological knowledge will be discussed.

An introductory comment is necessary. During the 1960's research activity within the field of *building science* became very active. For studies on acoustical isolation and lighting conditions even psychologists were called upon (e.g. Canter, 1970). Thus, it became apparent for some researchers that experimental psychology could be connected to architectural practice *via* studies in perception. By this approach architecture is intended to become more and more a *building science* – as positive science is defined today – and experimental psychology is thought to make a contribution to this approach.

However, such a perspective only reflects the view of some designers. For others, architecture remains the search for creative synthesis whereby the *quality* of space is not reducible to conditions of lighting and isolation. In this article we will not examine how experimental psychology might contribute to a more scientific architecture grounded on *building science*. As opposed to this view we will discuss the integration of psychological knowledge – about behaviour and the meaning of space – within a less strict definition of architecture.

Since 1970, environmental psychology[2] has established itself as a specific domain of investigation, its objective being the study of behav-

[1] This research is funded by the Swiss National Science Foundation (Grant allocated to Professors P. von Meiss and R. Droz). A first French version of this article was discussed at the colloquium "Towards a social psychology of the environment", Maison des Sciences de l'Homme, Paris, June 24 to 26, 1981. The author is particularly indebted to R. Lawrence for his suggestions.

[2] Three contemporary texts published in 1970 "made" the term environmental psychology: Craik (1970), Proshansky, Ittelson & Rivlin (1970), and Wohlwill (1970).

iour in relation to the built environment, and the meaning of human spaces for people.

Psychologists within this field do care for the applicability of their research. However, it is rare to find explicit statements on this subject. The most frequent formulation is in terms of "planning recommendations" (e.g. among recent publications Canter & Canter, 1979; Canter, 1980; Moore *et al*, 1979). In more concrete terms such proposals are concerned with conditions that should be respected in architectural projects. Thus, it might be said that environmental psychology seeks to condition the designer's task by resorting to standards that can be derived from research work. This approach seeks an articulation between psychology and architecture by instrumental guidelines that the architect would respect in his design activity. In this sense environmental psychology, although it offers applicable results – as does research on human perception – yet does not propose to the architect a creative use of psychological knowledge; on the contrary, it limits the designers' freedom in interpreting data.

Undoubtedly, here lies one reason for the reticence of many designers to integrate explicitly and spontaneously within their projects knowledge that would stem in particular from environmental psychologists. The psychological knowledge that is offered to the designer does not fit creative synthesis. It cannot be inserted into a project without further limiting already restricted possibilites. In the following sections of this article an integration of psychology into designers' practice through a different approach is suggested. Specifically, by examining how the architect *sua sponte* uses psychological knowledge, it will be shown that an understanding of this approach offers a link between psychological research results and design activity, a link which is both explicit and non-restrictive.

This view is not intended as a substitute for that of environmental psychology. However, on the basis of the preceding discussion, it seems legitimate to propose an articulation between architecture and psychology which is not only situated beyond the designer's creative practice at the level of normative design criteria, but also aims at supporting the architect in his creative task[3].

1.1 Design, history and psychology

A design project is the expression of a larger cultural project, rooted in history. Thus, it is anchored in society and in time. Many architects do emphasize the importance of this dimension for their work. These designers also mention psychological elements that critically contribute to the success of a project.

[3] In a psychological perspective it would be possible to discuss the question of standards from a completely different viewpoint: the normative influence of space on the user's behaviour. However, this will not be attempted here.

However, such considerations about time do only allow for a broad definition of the project within an historical context, whereas psychology is limited to punctual remarks on the "well-being" and its "meaning", in a specific context. In our opinion, a connection between psychological and diachronic considerations deserves particular attention by psychologists.

There are obviously different ways for approaching a diachronic psychology and there is at least one approach that can offer an integration into the creative phase of an architectural project.

Like a design project, behaviour might be considered by its indebtedness to history or, to put it in other words, as the result of the internalization by the individual of activities that are socially rooted and have a historical development (Vygotsky, 1978, 56-57). Thus, behaviour and meaning of built forms are to be understood in their relationship to time: this is how they are endowed with sense. Psychologically speaking, it is the transformation of interpersonal processes into intrapersonal ones, by an internal reconstruction of an activity that is originally taking place in the outside world.

Thus, the aim is to know, on the one hand, the *corpus* of social activities and uses of space that serve as reference in a specific context, and, on the other hand, their dialectical relationship with a person's behaviour through time. Thus past and present illuminate each other.

By this approach, it can be objected that the psychologist is reducing the diachronic dimension barely to the past that is to be found in the present or, in the best case, to a life-span investigation, whereas the architect is concerned with history in a broader sense. Even if this is admitted, it should be noted that an enquiry about the presence of the past in current behaviour and in particular, of the dialectics between past and present, is a parallel to the considerations of a designer about the insertion of a design project in a site, which has been considered in terms of its history. And this is the only more specific use of the historical dimension in an architectural project.

To this extent, the meaning that is given to diachronic psychology in this article is useful for the architect: it allows him to turn some psychological knowledge – currently used implicitly in design – into an explicit component of the architectural design process.

Within such an approach the designer will deal in a more critical and detailed manner with psychological knowledge. This is the more general hypothesis of this article.

At this stage of our own research, the ensuing discussion has a more programmatic than demonstrative character. However, we will stress the impact that this type of psychological research might have by illustrating the following points:

– the architect is concerned about psychological knowledge that is useful for the success of a design;

– the temporal dimension is recognized as important for architecture by the designer himself;

– by situating psychological considerations within a diachronic

perspective, a link between two series of preoccupations that are specific to the architect in the creative stage of his work is achieved;

– an example from our work in progress allows a hypothesis about how, at this point, psychological knowledge can be made to serve the architect's needs more explicitly.

2. Architects and Psychology

In architecture there is a fundamental question about the use of space and its meaning. In their publications throughout history architects have made explicit assertions about the influence built forms have on behaviour. Some architects have also considered the well-being of inhabitants.

"S'agirait-il, par exemple, d'un hôpital, (...) l'architecte vraiment digne de ce titre, considérant qu'un tel édifice a pour objet le soulagement de l'humanité souffrante, objet du plus grand comme du plus noble intérêt, s'attacherait à le traiter avec toute la dignité et même tout l'agrément dont il serait susceptible, afin que l'amour-propre blessé, la crainte d'une misère plus grande que celle que l'on éprouverait, n'éloignassent pas de cet asyle les infortunés que le besoin de secours y appelle: il ne craindrait pas d'employer des colonnes pour former de vastes portiques, qui faciliteraient et accéléreraient le service des diverses salles isolées, et destinées au traitement des différentes maladies; il croirait devoir embellir ce séjour par de superbes plantations, embellies elles-mêmes par des eaux jaillissantes, objets dont l'aspect agréable influerait efficacement sur le succès du traitement et la promptitude de la guérison. S'agirait-il d'une prison, d'un de ces édifices destinés au maintien de la tranquillité publique? Considérant que l'on peut être détenu sans cependant être coupable, que quand même on le serait, on ne doit être puni qu'après avoir été jugé; la salubrité et la sûreté bien établies d'abord, l'architecte ne s'occuperait plus qu'à rendre un tel lieu supportable par tous les moyens possibles, loin de chercher à le rendre horrible par le spectacle ridicule de colonnes enchaînées, entassées, incarcérées en quelque sorte dans les murs, etc."

(Durand, 1819, 98)

Durand, a famous architect and professor at the Paris *Ecole Polytechnique*, suggested the *use* of a building as the basis for all architectural projects. His approach was in direct opposition to the Beaux-Arts tradition which upheld architecture as pure imitation of ancient forms or as a search for visual pleasure.

"Selon la plupart des architectes, l'architecture est moins l'art de faire des édifices utiles, que celui de les décorer. Son but principal est de plaire aux yeux, et par-là d'exciter en nous des sensations agréables: ce à quoi, ainsi que les autres arts, elle ne peut parvenir que par l'imitation."

(Durand, 1819, 8)

According to Durand, the work of the architect consists in interpreting the use of space by searching for harmonious forms. It is this interpretation of the use of space that brings the architect face to face with psychological considerations: they are dependent on the common sense of the designer – as in the examples of the hospital and prison mentioned by Durand. Beauty will automatically follow.

Today it is customary to hear that such a priority for the use of space, which goes beyond purely functional criteria, must result in *quality*

of space, or place – as for instance is suggested by van Eyck (1976, 40):

"If space allows people to be 'alive' in it, it will 'become' place. Conversely, if we succeed in allowing construction, form, or material to 'become' place – an act of poetry and magic – people will know they are alive there and consequently appreciate 'space' as such."

Van Eyck employs poetry and magic as catalysts for the design of space where man can feel comfortable. The psychological component, although present, remains implicit: the architect is the poetic creator of forms that communicate with people. Among the architects who have developed this reflection on the *quality* of space, Christopher Alexander ought to be mentioned. Although his search for a pattern language (Alexander *et al.*, 1977) leads to architecture without architects – or, in other words, although he considers himself the last of the architects – it is as a professional designer, concerned about the suitability of buildings to behavioural needs, that he is relevant to this study.

Alexander assumes that designers make use of a system of rules that they have gradually acquired. The rules are what he calls a pattern language :

"When a person is faced with an act of design, what he does is governed entirely by the pattern language which he has in his mind at that moment. Of course, the pattern languages in each mind are evolving all the time, as each person's experience grows".

(Alexander, 1979, 203)

This is an explicit statement about architectural design being a part of a cultural project. The aim is to find a reliable pattern language that will yield successful results. For Alexander, behaviour and space are reciprocally tied together:

"The action and space are indivisible. The action is supported by this kind of space. The space supports this kind of action. The two form a unit, a pattern of events in space."

(Alexander, 1979, 70)

References to psychology – to behaviour and meaning of space – are pervasive in Alexander's work. A pattern language can answer the quest for qualities that are inherent in those buildings and places where "we feel ourselves, where we feel alive". There is a "quality without a name" (Alexander, 1979, 19-156) that serves as the main criterion for a universal pattern language. Alexander attempts to describe this quality that cannot be defined: he discusses terms such as "alive", "whole", "comfortable", "free", "exact", "egoless", and "eternal" with respect to behaviour and meaning of forms. Such words can help us "feel" and "see" the quality of space – without capturing it exhaustively. Alexander pretends that the patterns he has defined reach a universal depth beyond time and culture – the dimension of building that has always existed and that exists somewhere inside all of us:

"The more we learn to use this method, the more we find that what it does is not so much to teach us processes we did not know before, but rather opens up a process in us, which was part of us already. (...) And that is why the timeless way is, in the end, a timeless one."

(Alexander, 1979, 13)

The work of Alexander consists in the definition of these patterns that will enable everyone to become a creator of places responding to "*the quality without a name*". What Alexander proposes for every pattern, either at the urban or at the domestic scale ("country towns", "four-story limit", "identifiable neighbourhood" – and then "alcoves", "cooking layout", "windows overlooking life", "corner doors") illustrates how far considerations by designers about the *quality* of spaces may be extended. It is noteworthy that they rely basically on the designer's own good feeling and have thus a personal flavour that is reflected in the architect's ability to establish a relation between space and what is felt inside it.

3. Architects and Time

A few quotations of well-known architects will serve to recall that the temporal dimension is a preoccupation that makes explicit the relation with the cultural project of which all of us are a part. Personalities as different as Aalto (for whom the continuity between nature and man is central), Wright (for whom an organic architecture is based on the relationship between site and building), and van Eyck (who insists on the fundamental importance of the experience of space), recognize this articulation:

"I suppose one can say without reserve that it is precisely the authority of the past that is the main criterion for our work today."

(Aalto, 1978, 1)

"Architecture is that great living spirit which from generation to generation, from age to age, proceeds, persists, creates, according to the nature of man, and his circumstances as they both change. That really is architecture."

(Wright, 1939, 44)

"Places remembered and places anticipated dovetail in the temporal span of the present. They constitute the real perspective of space."

(van Eyck, 1976, 3)

The importance of the cultural heritage is also recognized by Alexander, although he places the pattern language beyond time:

"The total pattern, space and events together, is an element of people's culture. It is invented by culture, transmitted by culture, and merely anchored in space".

(Alexander, 1979, 92)

Without making this list of quotations longer and without pretending that they are representative of the thinking of the architectural profession, it is apparent that well-known architects do care to adapt to the changing conditions of society. The creative designer will try to recognize these conditions and to produce an original synthesis.

These are rather general statements. However, as we mentioned above, diachronic considerations are explicitly put to use in site analysis when there is an attempt to insert the project in an existing context.

We disregard more menial sources of "temporal" information or inspiration. In this respect it is appropriate to recall the criticism of imitation formulated by Durand to those nineteenth-century architects only concerned with decoration (see above).

Finally, it is noteworthy that the concern of the designer with time might have nothing to do with the enduring value of his project, but only with the possibility of situating it within a historical context. The future will then settle the matter of duration.

The temptation for the psychologist (which will be considered in the following pages) is to propose an explicit connection between a temporal perspective and psychological considerations about behaviour and meaning of different spaces.

The resulting observations can then be integrated into a project, in the same way as historical considerations about the site.

4. Diachronic Psychology

Having emphasized the importance that some architects give to psychology – as we have defined it – as well as to time, the approach we are advocating is a simultaneous and specific recognition of these two components – user and time – that are already essential in the creative process of architecture.

It is noteworthy that with respect to environmental psychology, and even more generally, a diachronic perspective is by no means a novelty. This orientation has become increasingly important during recent years. Thus, Proshansky *et al.* (1976) estimate that life-span studies are by now an explicit concern of environmental psychologists. The section published in this same reader by Proshansky *et al.*, called "Developmental Studies", and the more recent conference proceedings from the Environmental Design Research Association (Seidel & Danford, 1979; Stough & Wandersman, 1980) give examples of current research in this field.

Nevertheless, the majority of this work is dominated by what we have called a search for *standards*, or by research whereby the perspective is strictly psychological without a link with the practice of architecture.

Forms of behaviour and meaning of space are tied to history. They are the product of accumulated and concerted human efforts. By studying them within a temporal framework it is possible to understand how these are transmitted and how the individual takes possession or internalizes them. In this perspective, the problem of *quality* of space assumes a precise meaning, which is the product of social history. On a more individual level, of direct concern to the psychologist, this might be demonstrated by the relationship in time between the person and the person's environment.

A way of studying this relationship is to look for connections between individual biographies and factors preforming current practices – in other terms the "cultural models" (Haumont, 1968).

For the architect this might result in:

– an understanding of the user in a historical trajectory, which at that point can be compared with the evolution of other data that are more strictly speaking architectural (urban tissue, morphology, etc.);

– an understanding of the more stable and the more changing aspects of the relationship between user and space;

– an understanding of the evolution in the meaning of the built environment and thus of the type of psychological investment that occurs at different stages of the life cycle.

Such knowledge has its place only in a temporal *continuum* indicating a direction and not definitive results.

Now, the architect can conceive his project within a cultural frame, taking care to insert his design into an existing built environment and a socio-cultural context which has a specific history. In this way, the psychology that we are discussing is dependent on history.

The architect can then make a synthesis of all his data that concern the built environment as well as formal criteria and considerations on behaviour and meanings. This synthesis becomes his design project.

Thus, the difference as compared to the approach set forth by psychologists who are tenants of *building science* is clear. It is no longer the search for the solution to a specific problem, e.g., the question of the determination of the satisfactory combination between the thickness of a wall, materials and acoustic isolation.

In our diachronic approach, psychological knowledge, as well as data about the site, are intended to enable the architect to situate his project with respect to the history of which it is part. It is on such data that the designer exercises his activity of creative synthesis, and here the access to explicit psychological knowledge can only be profitable.

5. A Case History

In order not to end this article on a purely programmatic tone, we will present an example drawn from a study with a diachronic psychological approach as defined herein.

Reference is made to an ongoing research project [4] where it is anticipated that some findings can serve as information directly relevant for the architect.

We have followed different phases of the existence of a housing cooperative. It was founded to give participants access to the ownership of their dwelling and, at the same time, the possibility of planning the

[4] The title of the project is: "The Socio-cultural and Temporal Meaning of the Built Environment: a Case Study of Domestic Space". (R. Lawrence, K. Noschis – see note 1). See also Lawrence, 1980.

individual houses themselves. The architects responsible for the project left a great freedom of decision to the future dwellers. They determined a structural grid in which each family could choose the desired space according to their economical resources and, moreover, distribute this space over one or several levels and plan it according to their wishes.

After having prepared a first plan in cooperation with the architects, these families could "test" and improve their dwelling in a spatial simulator which permits full-scale simulation of man-made space. The material used consists of plastic-blocks that can be moved, assembled and manipulated without difficulty[5].

During this simulation, and by successive steps, the dwellings acquire their final shape. Thus, the future inhabitants experienced their spaces from inside and could also test – as everyone did – the space available for their furniture. This enabled them to change walls and openings according to their needs. The plan resulting from the simulation was to be used "such as" for the constructions.

The aim of the study that we have pursued is to understand how the user who is given the role of a designer goes about the design task, and how he projects and reflects his way of living and his past experiences of space. From a psychological perspective this study explores the internalization of a *corpus* of knowledge and models where people have the possibility of designing their own dwelling.

The methodological choices of the study need to be mentioned:

– There is a set of data obtained by observation where the researcher does not interfere, in order to develop a "theory" based on behaviour that has not been artificially induced. This choice is even more obvious since the aim is not to control behaviour, but to understand actually occurring modes of behaviour.

– Complementary information is supplied by the people themselves, enabling us to discuss with them the plausibility of our hypotheses with respect to them. Here, we do follow Harré and Secord (1972) in their outline of an ethogenic approach – *i.e.* the discovery and identification of the generative mechanisms of behaviour. As noted by these authors, a fundamental – although traditionally neglected – source for data to understand these mechanisms is the verbal accounts of people themselves;

– There is the opportunity to reconstruct the temporal trajectory of the dwellers – in terms of spatial experiences and life-styles. Our choice is what de Waele and Harré (1977) call the construction of biographies. The aim is to build a portrait of the psychological attributes of the dwellers who are studied at different times in their life inclusive of considerations on their beliefs, accepted rules, experiences, etc. It is the fruit of a cooperative effort between the person and the researcher, in order to get to the person as a "social being" (Harré, 1979).

[5] The simulator is the Laboratory for Architectural Experimentation of the Federal Institute of Technology, Lausanne.

We now revert to the research project itself.

All the discussions during the simulation of the dwellings were recorded. These were often animated between the partners of a couple. The recordings were completed with drawings (see figs. 1-4) showing the modifications that were successively introduced. This constitutes a first series of observational data that were subdivided in episodes, for the analysis. As noted by Harré and Secord (1972, 10):

"Central to all analysis of social life is the concept of the episode. Even the powers and liabilities that people have are often dependent on the structure and meaning of the episode in which an action occurs. An episode is any sequence of happenings in which human beings engage which has some principle of unity. Episodes have a beginning and end and can usually be identified".

In the present case, episodes find their unity around problems of disposition or spatial choices that the couples have to face during the simulation of their dwelling.

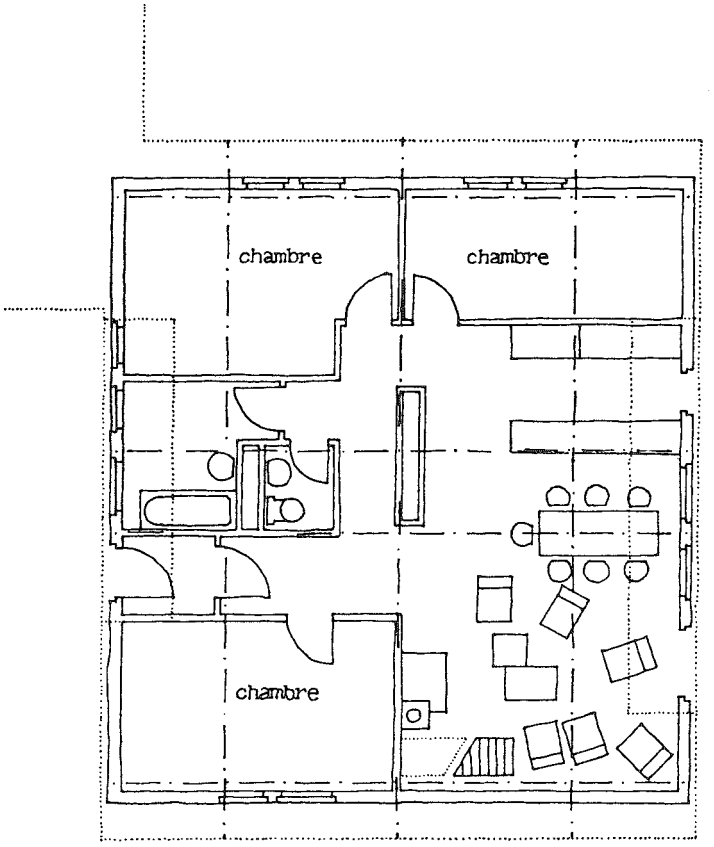

Fig. 1. Example of plan designed by the future dwellers and simulated at full-scale in the laboratory (L.A.E.). The kitchen is in direct contact with the dining and living area. The primary objective is not to isolate the person in the kitchen. (Drawing by H. Matti, architect).

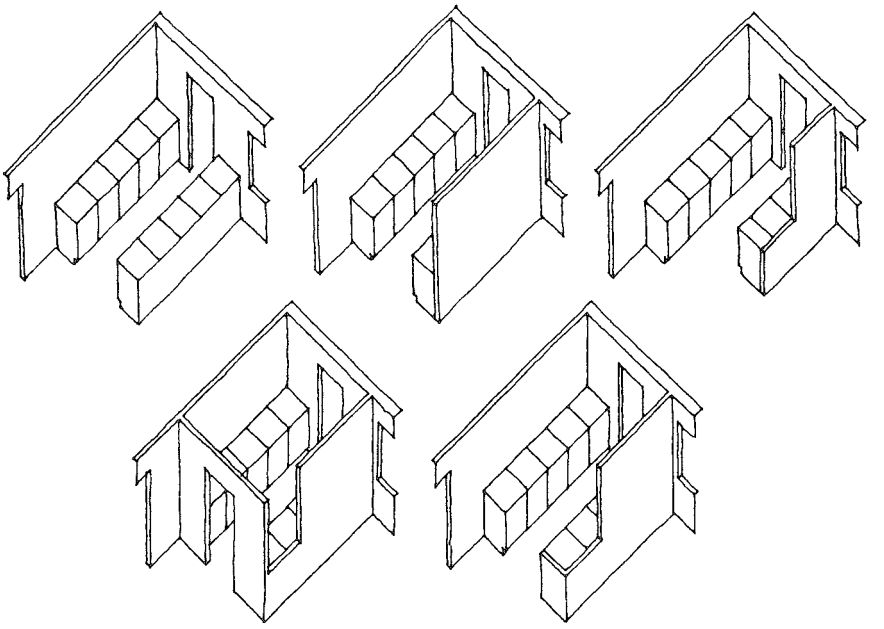

Fig. 2. Different solutions for the kitchen are tested and discussed during the family's stay in the laboratory. The possibility of "hiding dirty dishes" becomes in this particular case an important argument for changing the initial layout. Yet, the dwellers do want to keep the contact with the living area. (Drawing by H. Matti, architect).

An analysis in terms of episodes of the partners' interaction, that is the successively adopted viewpoints and modifications introduced into the plan, results in the definition of a "synchronic portrait" of the user and his approach to planning (such as "to structure the space around an activity", "start from the envelope towards the center" and other options often simultaneously in conflict).

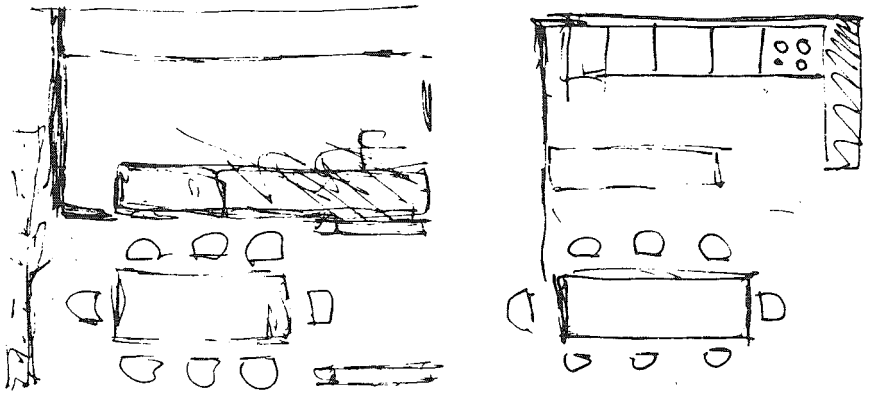

Fig. 3. Solutions sketched by one of the future dwellers in order to isolate the cooking area and yet keep the contact with the dining area. The use of drawings prior to the simulation of a new solution was only occasional in the laboratory.

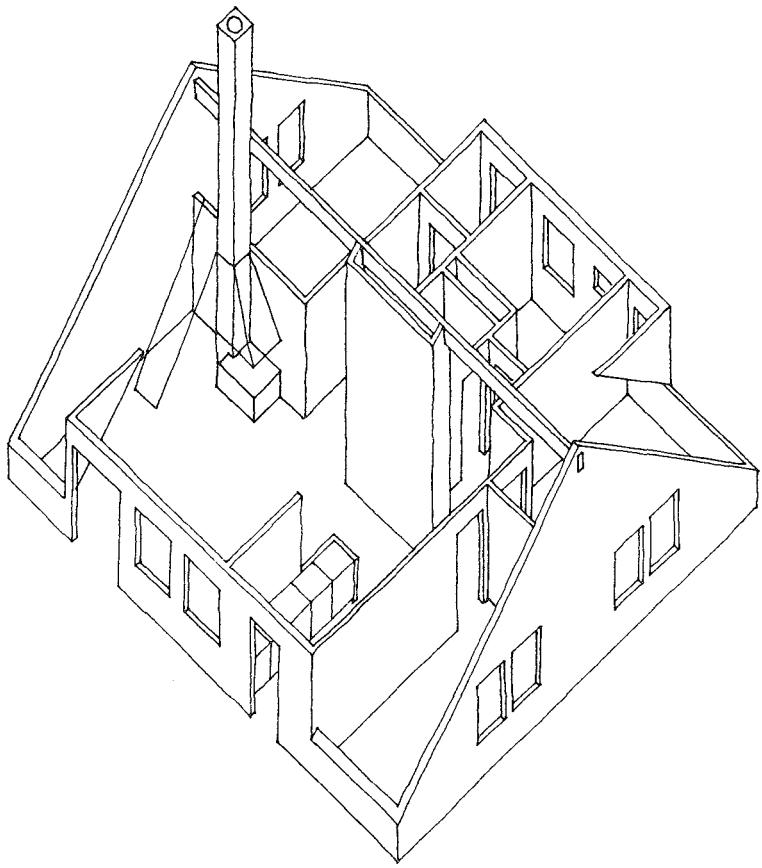

Fig. 4. The dwelling plan at the end of the simulation process. No major changes are noticeable for the kitchen that is now partially open to the living area. Although there is a separation between a corner of the kitchen and the living room, the choice of this particular solution meant for the couple that the kitchen was part of the living room furniture. Thus, they would feel it necessary to make a substantial financial effort in order to have pleasant-looking kitchen furniture. (Drawing by H. Matti, architect).

A second series of data is formed by theme interviews with the couples, asking them about what was going on during the simulation and more generally about their past – with a particular attention towards their experiences of habitat. Analysis of these data defines how the user views and has viewed the dwelling, its meaning and use, the affective value that it has, as well as a list of objects or details that are attached to it. This is the elaboration of biographies.

A combined analysis of the two series of data that have just been presented helps to understand the episodes not only in terms of synchronic portraits of the users, but also in terms of a dialectic with the "spatial past" of the dweller. Thus, the dwellings planned by the users are understood as images in life trajectories. In this sense, they are the concrete manifestations of compromises and conflicts that are inherent to them.

Therefore, concepts commonly used and specific to environmental psychology, such as "personal space", "privacy" and "proxemics" might be "historically" enriched by data that are not only in relation with momentary social relations within a delimitated space; they are a reflection of behaviour as it results from the internalization of multiple experiences such as the changing attitude to cultural models.

The population in this research project is defined by economic and sociocultural parameters. The frame of analysis that has been presented makes it possible to describe different aspects of the diachronic relations that these people associate with dwelling.

The study is of interest to the designer, particularly inasmuch as it is concerned with housing.

In order to illustrate our viewpoint and as an interim example, let us consider the attitude of the user confronted with the articulation between the cooking space, dining room and living area. Whether a kitchen is open to the living area or separated from it depends on the life-styles of the inhabitants. These are not fixed, even within the same social category. Among the (eleven) couples of our sample, different evolutions are noticeable which, in certain cases, divide even the members of the couple. Thus, one of the couples, in the early stages of the partners' shared life, aimed at the separation of the spaces according to different functions – cooking, eating and talking after dinner. Fifteen years later, this desire has been reversed with the current wish for only one large space that could contain the three of these activities. This organization of space is what the couple wanted in their new dwelling. They suggested that this solution provided a visual and auditory contact between persons involved with different tasks. During these fifteen years several modifications had taken place in the life ot the two members of the couple.

The interview shows that the respective parents of the two members of the couple had never had the means to separate neither spaces nor activities in their dwellings. Thus, during the first phase in the couple's shared life each partner reacted to the parents' situation by wanting differentiated spaces, corresponding to a model of rising social aspirations. On the other hand, in a second phase, several years of married life had been spent with everyday domestic activities. The reaction towards their preceding lifes with their parents has been bypassed and the couple is able to reactualize the parental model but on new grounds. ("I come back at night, alone or with friends and I want to see my wife who is preparing our meal, otherwise I never see her, and she is all alone"). To this life experience corresponds also a redimensioning of social aspirations and the identification with a more modern life-style ("there is no need anymore to have the dining area and places and dishes for sundays and friends in addition to the everyday ones"). Nonetheless the solution that was explored for the new dwelling is also a compromise in which the kitchen corner has to be "beautiful" ("because now it is almost a piece of furniture to be seen") and at the same time functional. The different solutions and spatial propositions of the users were a means of finding a

compromise from these difficulties during the simulation. For the husband the problem was to give value to the kitchen corner, for the wife to "hide what is dirty".

During the simulation, the dependence upon cultural models with which the couple identifies itself or from which it is dependent can be shown and makes it possible to specify the terms of the diachronic and dialectic relation to the dwelling.

Although this example might not be particularly representative, generally, this type of analysis informs the designer to what life-styles – for a given population – specific architectural solutions might provide an answer. On the whole, such research results facilitate the knowledge of how design proposals can be situated with respect to users' life trajectories.

The architect will decide about the integration of such data and consequently give preference to, say, one type of population. At least the psychologist – with his research work – will enable him to create while being acquainted with a specific dweller's diachronic relation to space.

This seems one direction of pursuing further research. It illustrates how the user projects the often contradictory desires and aspirations that inhabit him about spatial behaviour and the meaning of forms. A psychological analysis of the kind we have described gives the designer the means to state his position with respect to the user. Thus, the architect might define what is to be understood by *quality* of space in his project in terms that are relevant to the user's life course.

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