more the client toward a reconstruction of his environment and himself which will help him to understand and use it. By far the most likely way to effect these changes will be by various methods of communication.

The psychologist who is interested in architecture will do a great deal that parallels the architect’s activity, as I have been insisting all along. Communication is equally crucial to his aims, whether these are of enabling particular clients of his own to achieve a more viable reconstruction of themselves in the environment when they have a particular problem, or whether it is in attaining a more general understanding of the constructs of individuals with a view to giving both architects and everyone else some hypotheses by which they can orientate themselves to the future. Unless the psychologist’s research, if that is what he calls his activity, is done within the framework of these others’ conceptual systems, or unless he sees just how it falls outside and what reconstruction he needs to encourage to make his work assimilable, he is operating in a vacuum.

A redundant term

I hope that by now it will be understood why I did not want to give a paper based on hard results. I do not despise them and they are not out of place in our area of interest. But because architects cannot afford to be technologists, the scientists here who are interested in psychological processes certainly cannot. It seemed to me so important at this time to try to understand what we are doing in a totalitarian way that I did not dare weigh you down with the fragmentary rocks of established canon with which I was urged to anchor your construct systems. I am not trying to subvert your established ideas of science or those that you may think temporarily appropriate at our current stage of the game. I have tried to offer one approach of sufficient generality that the similarities between architects, psychologists and all other men are emphasised. I hope I have avoided applying psychology to architecture, and that I have done my business of offering a construction of them that might enable the two to work together and that might make the term “architectural psychology” redundant.

2 Should we treat building users as subjects or objects?

David V. Canter

Abstract: The various attractions of carrying out research in the field of overlap between architecture and psychology and the different assumptions on which these attractions are based are described. These different assumptions are shown to give rise to different approaches to both professional roles and attitudes towards the users of buildings. These approaches are specified as either treating people as subjects, whose experience is of interest, or as objects, whose behaviour is of interest. Research carried out into seat selection in seminar rooms and into individual differences in response to the physical environment is then described to illustrate the importance of combining both approaches.

Research motivations

One of the attractions of the realm of architecture to the psychologist is possibly the fact that it entails an involvement with real world decision making. At times, designing buildings must appear to psychologists like the experiments they dream about. By traditional research standards the investigation runs for ever, the number of subjects involved is infinite and the resources for building the apparatus magnificent. The possibility is provided of influencing and observing something that takes place, life-size, outside the constraints of the laboratory. The architectural psychologist is a person whose research motives are different from many of his academic colleagues. This very difference has probably led him to take an interest in problems other than those usually considered central to psychology. It should therefore be possible to learn much about the problems, hypotheses and results, of which architectural psychology at present exists, by examining the types of motivation which the research workers in this field have.

The psychological architect (for want of a more apt term) is often attracted to this field by the distant possibility of producing buildings that influence people or can be used by people in the way the architect really intended. He is looking for descriptive information that will enable him to produce the subjective and objective effects which he wants. One way in which architects sometimes express this need is by asking when psychologists will have their volume of ‘specifications’ ready. This invaluable document would contain lists of all the sizes, shapes and relationships possible in buildings and next to each would be lists of responses that would be products by various sub-groups of the population (classified throughout according to N.B.)

Human motivations

Architectural psychologists and psychological architects are both motivated by the desire to understand the way in which buildings affect people. Underlying this desire are assumptions concerned with what makes people do things. Both groups assume that something determines behaviour. The differences of opinion that do exist with regard to this assumption cut across both architects and psychologists. These differences may be summarized by saying that some research workers seem to think of people pulling and others think of them as being pushed. That is to say some theoretical formulations seem to develop from the idea that people are motivated by forces either deep inside them or completely external to them, but always pushing them around and difficult to control. Other theories see people trying to get to grips with their environments, trying to understand and organize them, pulling them into an unnameable shape.

Both the ‘push’ and the ‘pull’ theorists are led into formulations of human behaviour which are directly influenced by their basic assumptions. They also take up radically different attitudes towards their experimental material, namely people. These assumptions consequently have a far-reaching effect on the sort of problems they undertake to solve and the methods they see as appropriate for solving them.

The attitudes of different environmental scientists (if you like) towards the people who provide experimental data for them is, I think, the most important concomitant of the various underlying assumptions. The ‘push’ theorists look at their subjects from the outside, so much so that it would be more accurate to call their subjects objects. [Chamber's Dictionary definition: Subject — a thing existing
independently, the mind regarded as the thinking power (opps. to the object about which it thinks, etc.)] The research carried out by these theorists is peopled with unspackling mechanisms whose internal processes can only be inferred by physical actions. The objects of their research are not recognizable as people like the ones you and I know, rather they are complex primates impelled by basic (sometimes obscure) drives. They interact with one another by means of simple signals or expressions and on the basis of abstract spatial rules derived from innate needs. Needless to say, it is easier for these theorists to have animals as the objects of their studies rather than actual people and it is certainly easier for them to derive their detailed theoretical formulations from work carried out with animals or from laboratory objects which are required to perform simple, and often meaningless, tasks.

The "pull" theorists, on the other hand, use people very much as the subjects of their experiments. These subjects are often remarkably verbose and are assumed to know more or less what they require of their environment. They are aware to some degree of the ways in which they interact with the physical environment and are constantly desiring to modify it and create it to be in their own image. These subjects, then, are active, purposeful organisms. They know what they want and will welcome any opportunity that helps them to get it. As a consequence, the best way of studying these subjects, and of finding out the proper environment with which to provide them, is to ask them.

The differences between these two approaches are best highlighted by the conflicts which exist between them. When the first group of theorists present information about the objects of their research the second group refuse to recognize these objects as people and insist that their humanity has been drained from them. Yet when the second group give details of the responses of their subjects the push men insist that these responses are inevitably invalid as no subject can see himself objectively. Even if he could be would be trying to infer hidden impulses behind the investigator's actions and so would modify his own responses in order to push the investigator into reacting to him in a satisfying way.

Professional roles
I said at the start that one of the main attractions of architectural psychology to members of both the contributing professions was its potential for affecting behaviour or for making decisions of importance to many people. This attraction may be considered a political awareness of, and an interest in, society at large. Consequently, the two sets of assumptions about people are likely to give rise to professional roles which have different political biases. If one thinks of a client or a building user as an object then it is likely that one knows best and, as a consequence, the most appropriate approach to take is the authoritarian one. This is the approach which most professions take to the recipients of their services. I have not used this terminology to indicate an unfavourable attitude towards this approach. There are many occasions on which it is a very important part of a professional role to persuade or influence the client to behave in certain ways. Considering the user as a subject leads to what might be called a democratic approach to the professional role. The aim of professional contact when this role is taken often is to find out what the user or client requires and to set a process in motion which will enable him to get it. The job of the environmental scientist then becomes one of a communication channel. He has to find out as accurately as possible what it is that the people want, perhaps interpret this and pass it on to the designer.

I hope it is obvious by now that the latter set of orientations underlies user requirement studies (which were, interestingly enough, developed by government agencies) and the former set gives rise to many academic pourings such as those on territoriality or on stimulus-response theories for design.

Research problems
The series of dichotomies described above are, of course, theoretical approximations to what actually exists. Few individuals always sit on one side of the fence and never venture next door. In fact the fence struggles across such difficult terrain that many people spend as much time, possibly unwittingly, on one side as on the other. I am no exception. Yet I think that an awareness of these distinctions helps us to locate central research problems and also shows us situations in which one approach can in fact contribute towards the solution of problems posed by the other. In order to illustrate the difficulties which arise by staying always on one side, I propose to deal with two sets of studies I have carried out and to draw from the results of these an approach which combines both of the above.

Seat selection
One theory that treats people very much as objects is the one that explains the distance which people keep from one another in terms of territoriality or personal space. This is thought (by Hall [9.1] for instance), to be a possibly innate mechanism and is certainly considered to be analogous to phenomena observed in studies of animals. Fields or bubbles can be postulated as existing around people and certain behaviour can be interpreted as an attempt to reduce the possibility of a bubble being pierced or a field entered. Some fascinating research exploring these ideas has been carried out by Sommer [9.2] and he has shown that in many specific situations behaviour can be observed which is in accordance with the assumptions of a 'bubble' or a theory of 'personal space' as Sommer calls it.

The advantages of this approach, if the details could only be finalized, to the authoritarian architect are, of course, tremendous. If people do indeed behave according to relatively simple rules that push people about below the level of awareness of those people then it should be possible to design spaces that would take advantage of these rules. At Strathclyde we were interested in one space in particular - a seminar room. We were interested in one interpersonal distance in particular, that between students and tutor. How could we design seminar rooms that could optimize this distance. Our interests in this developed from the observation that students will frequently sit at the back of a room when there are seats available at the front. We wondered whether this indicated the operation of 'personal space' and an attempt being made to optimize some distance from the lecturer or the back walls of the room.

We examined this problem in two ways, by questionnaire and by observation. I will only deal with the observation results. The questionnaires corroborated these results very closely.
A lecture room in the School of Architecture building was selected and in the first case the chairs in the room were arranged in a semi-circle as shown in Figure 2.1. Groups of eight students were asked to go to this lecture theatre to take part in an experiment. When they entered the room a lecturer called them to him and gave them questionnaires. They were then told to sit down and complete the questionnaires. Note was made by the lecturer of the seats the students occupied.

Two conditions were introduced into this situation. In one the lecturer was half a metre or so from the students as shown in Figure 2.1. In the other case the lecturer was some three metres from the front row.

Three groups of students were used in each condition. Analyses were carried out to see whether or not the rows or angle of seats occupied in the two conditions were any different. No statistically significant differences could be found. However, there was a clear pattern in both conditions. As illustrated in Figure 2.1, there is a tendency for students to sit to either side of the centre of the semicircle. This suggests that no matter what the initial position of the tutor, people do not wish to sit central to this line of view.

One of the difficulties of the authoritarian approach to people is apparent in this result. People are not so easily manipulated but tend to interact with the surroundings. The activities in which they are engaged also confuses this interaction.

The second case which we tried consisted of arranging the furniture so that it formed a rectangle as illustrated in Figure 2.2. The same two conditions were introduced. The distance of the tutor was varied. Figure 2.2 shows the seats chosen by the students when the tutor was near to the front row and Figure 2.3 shows the position in which the students sat when he was further away. Analyses of variance show these two sets of seating preferences to be significantly different from one another.

It is apparent in the above study that the position in which earlier students sit reduces the number of seat choices available for later students. Consequently, there is interaction between the users as well as between the users and their environment. One way of obviating this complication in this particular study was to give the students questionnaires with the seat pattern on them and ask them on which seat they would prefer to sit. This, in fact, was done and Figures 2.4 and 2.5 facilitate the comparison of the two sets of observations. It is clear from these figures that there is a great similarity between the pattern of preferences in the two modes of data collection.

![Diagram showing seat selection in rectangular layout](image)

Fig. 2.2 Frequency of seat selection in rectangular furniture layout in three sessions when tutor was "near"
The use of a questionnaire in this situation is really one stage towards asking the student what he thinks of the room, where he thinks he would like to sit in the room and the way in which he thinks the room, or his position in the room, might affect him. This information about the student's thoughts and feelings is very important and without it a full understanding of the mechanisms being studied could not be achieved. Using a questionnaire is one stage towards getting the user to set up hypotheses about the effect of the physical environment, and to explain his interaction with it. In other words, it is getting the subject to take over a considerable portion of the role of the experimenter. All that the experimenter does is observe the subject's estimates of the results of a theoretical formulation of which the experimenter has no clear description. This is really the essence of the democratic approach. The investigator does not presume to understand or to hypothesize the nature of the mechanisms by which the subject deals with the physical environment, but rather to get the subject to show how satisfied he is with the functioning of the environment in which he is.

With the results of this experiment on seat selection it is very difficult to give an explanation in purely objective terms. An idea such as that of personal space is difficult to apply unless some modification is produced in the shape of that space by furniture layout. This modification would need to be quite complex if it were to explain the differential effects of the tutor's position with the different layouts. Any such modification would have to take into account the interpretation of the situation by the subject.

If we need to take this interpretation into account, why not start with it? If we do, a much less complex picture emerges, as follows. On entering the room the furniture layout informs the subjects of the nature of the activity in which they are to take part. If they interpret it as a formal activity then they attempt to optimize their distance from the tutor. If they

![Graph showing questionnaire results](image1)

![Graph showing results from observations](image2)

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**Fig. 2.3** Frequency of seat selection in rectangular furniture layout in three sessions when tutor was 'far'

**Fig. 2.4** Questionnaire results

**Fig. 2.5** Results from observations
see it as an informal activity then distance from the tutor is irrelevant and other factors exert an influence. At present we only have tangential evidence for the various assumptions within this argument. Firstly, studies reported by Canter [9,3], Canter and Wauks [3,1] and by Woolf in the present volume indicate the influence of furniture layout on the interpretation of what takes place within a room. Second, Sommer [9,2] has shown that the amount of tutor/student interaction in which a student takes part relates quite closely to the position within which the student sits, in a rectangular layout of furniture. It seems likely, therefore, that the degree to which students decide to participate in a seminar relates to where they position themselves at the beginning of it, and that this decision relates to a complex cognitive process based on trying to predict the type of seminar it will be.

Individual differences

It follows that the two approaches to research I have described are complementary. Without observations of people as objects and of what they actually do it is difficult to predict how they will behave in specific situations. On the other hand without an understanding of how they feel and think about the situation and how they understand the workings of the environment it is difficult for the research worker to develop a sophisticated enough theory to deal with the majority of day to day contingencies. The investigator can enter this cycle at any point but it is clear that an understanding of the subjects' cognitions and hence of their verbal responses to the physical environment would be of great value.

The great problem, however, in trying to study peoples' reactions to the world about them is deciding which people to study. Does one select people in terms of their background, experience, age, sex, personality, or some combination of all of these, or does one select people on the basis of difference in their response to the environment? At Strathclyde we have been exploring the latter possibility because the little research which has been carried out with the former possibilities has been notoriously unsuccessful in facilitating the understanding of people's satisfaction with, or interpretation of, the environment in which they work. It will be seen that what we have attempted to do is to select by some means a group of subjects who differ in a known way from others in the population in terms of their response to the physical environment. By studying these people we hope to understand more fully the way the environment affects people and also to increase the efficiency of our research by getting rid of one of the main sources of error variance in our studies, that due to individual differences. To do this we must treat our subjects as objects and try to classify the structure of their verbal responses.

The aspect of response to the physical environment with which we have been concerned has been the degree to which the subject is able to distinguish between different parts of the physical environment and also the degree to which he is able to distinguish between different ways of describing the physical environment.

We feel that the degree of sophistication which a person has in his concepts, descriptions and interpretations of the physical environment is likely to relate to his satisfaction with that environment, although this relationship will probably be very complex. Furthermore, we hypothesize that the sophistication of this differentiation will relate to his reliability as a subject.

We have attempted to measure this aspect of cognition in a number of ways. I think the idea behind it becomes clearer when one examines the techniques used for measuring it.
One of the first techniques I used was taken from Sherif and Sherif [2.1]. Teachers were presented with 44 photographs of different types of classroom arrangement. These photographs were in fact models that we had prepared specially. An example is given in Figure 2.6. The teacher was required to sort the photographs into as many piles as he wanted in terms of the degree to which they provided a satisfactory teaching environment. Having done this the teacher was then asked which of the piles contained classrooms that were acceptable to him and which contained those that were unacceptable. This gave a number of cards remaining in a neutral category. The idea was that the less sophisticated a teacher was in discriminating between classrooms the more likely he was to leave classrooms in the neutral category. Teachers with a high degree of discriminating ability and with a sophisticated way of dealing with classrooms would be able to decide about every classroom as to whether it was acceptable or unacceptable.

A week or so after this task was completed by the teachers I got them to complete repertory grids dealing with classrooms (see Bannister and Mair [1.3]). They themselves generated the elements (or places) for the grid in answer to my queries about a range of places in which they could conceive of teaching. The constructs of the grid (or descriptions of places) were elicited by the method of triads and by discussion with the teachers about the similarities and differences between the teaching places they had listed for me. The teacher was then asked to rank each of the teaching places on each of the descriptions of those places in turn.

The particular property of this set of rankings in which I was interested was the similarity between the different descriptions which the teachers had used. In other words, did

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Group repertory grid used with first-year architecture students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>name</strong></td>
<td>Below is a list of places in which you might study. You are to put this list in rank order on each of the aspects given</td>
</tr>
<tr>
<td>Privacy (rank 1 for a lot)</td>
<td>Your living room at home</td>
</tr>
<tr>
<td>Heating and ventilation (rank 1 for a lot)</td>
<td>Your desk in the study</td>
</tr>
<tr>
<td>Control over room (rank 1 for a lot)</td>
<td>A study at home</td>
</tr>
<tr>
<td>Distance from lectures (rank 1 for a little)</td>
<td>A study at school</td>
</tr>
<tr>
<td>Availability of references (rank 1 for a lot)</td>
<td>A study place</td>
</tr>
<tr>
<td>Amount of distractions (rank 1 for a little)</td>
<td>Where do you usually study?</td>
</tr>
<tr>
<td>Availability of meals (rank 1 for easy to get)</td>
<td></td>
</tr>
<tr>
<td>Overall preference (rank 1 for prefer most)</td>
<td></td>
</tr>
<tr>
<td>Friendliness of environment (rank 1 for very friendly)</td>
<td></td>
</tr>
<tr>
<td>Adequate furniture (rank 1 for very adequate)</td>
<td></td>
</tr>
<tr>
<td>Lighting (rank 1 for good)</td>
<td></td>
</tr>
<tr>
<td>Ease of communication with others (rank 1 for easy)</td>
<td></td>
</tr>
</tbody>
</table>
all the classrooms fall into the same rank order on each construct or in a completely different rank order? The more similar the rank orders the greater the similarity between the different constructs in the way that they were used by the teacher. I would expect that a teacher who was able to differentiate between many different aspects of the environment would place the rooms in a different order on each description. In order to measure this property of the individual I calculated the correlation between every construct and every other construct. From this matrix of correlations I added together the highest one for each construct and took the mean of these correlations as my measure of ability to discriminate between constructs.

The higher the mean correlation the less able is a person, or the less prepared, to distinguish between different constructs. I would expect there to be a relationship between this mean and the number of items in the neutral category found earlier, because both measure the same thing, sophistication of response to the physical environment. The number in the neutral category deals with discrimination of places, the mean correlation with discrimination of descriptions. Figure 2.7 shows the relationship found. It approaches a rank order correlation of unity. Thus even with the very small number of subjects involved there is support for the suggestion that sophistication of response to the physical environment is an enduring aspect of the individual which is consistent over time even when measured by two quite different techniques.

A further check of this consistency was provided in another study which we carried out with our first-year students. The students completed the standard repertory grid shown in Table 1. This deals with their ranking of the various places which they might use for studying on a series of descriptions of those places. Instead of looking at the average correlation as we had done previously, we completed a principal components analysis for each grid for each student, using Patrick Slater's programme [2.2]. It occurred to me that a more sophisticated version of the average correlation is probably provided by the percentage of the variance taken up by the principal component in the analysis. Bannister and Mair [1.3] refers to this percentage as an estimate of an individual's 'cognitive complexity'. His definition of cognitive complexity relates closely to the above description of sophistication (see Canter et al. [10.2] for a further discussion of this point).

Two months prior to the completion of the grids the students were asked to rate a number of drawings on ten bipolar adjectival scales. The assumption was that the more discriminating the students the wider range of ratings they would give. A student who could not distinguish well between various drawings would say they were all either good or bad. In order to measure this degree of 'spread' of the ratings we used a technique developed by M'Comisky (see Canter et al. [10.2]) which is essentially a non-parametric measure of variance.

A test of the consistency of the variable of cognitive complexity is provided by the correlation between the percentage of the variance taken up by the principal component and the 'spread' score. In our case with 28 subjects and a gap of over two months, including the Christmas vacation, between the administration of the two quite separate tests, we obtained a product-moment correlation of 0.40. This is significant at the 2.5% level. Whatever this attribute of cognitive complexity is, it would seem to be moderately consistent and relevant to a wide range of ways or recording responses to the physical environment.

Having established some consistent variable which relates to a person's way of thinking about the physical world, in other words, having gone some way towards categorizing the 'objects' from which we elicit 'subjective' reactions, the next stage is to see in what way this variable relates to a person's satisfaction with certain aspects of that world.

In order to do this we used the data we had collected from the repertory grids of the students mentioned above. What we did was to estimate the degree of satisfaction of the student with his study-bedroom. On the grids we had given the students, one of the elements to be ranked was an ideal study place. To find out how satisfied the student was with the place

![Fig.2.7 Relationship between 'own categories procedure', and 'cognitive complexity'.](image1.png)

![Fig.2.8 Relationship between 'cognitive complexity' and 'satisfaction'.](image2.png)
in which he studied at the moment we needed to find out the
degree to which it related to his ideal. The statistics of doing
this are a little intricate, but all that it amounts to is the
comparison of the profile of rankings on the study-bedroom
with the profile of rankings on the ideal. We took it that the
more similar these profiles were the more satisfied students
were with their study-bedroom. Figure 2.8 shows the
scattergram for the relationship between the student’s spread
scores calculated as described above, against degree of
similarity of the two profiles just mentioned. It will be seen
from this figure that as the student’s spread scores increase,
that is, as his degree of ability to discriminate increases, so the
variance between the students decreases. This idea is
represented schematically by means of the triangle drawn over
the points in Figure 2.8. The difference in variance between
the top half and the bottom half of Figure 2.8 is significant at
the 5% level when tested with an F test. The means for the
two halves are not significantly different.

A feasible explanation for Figure 2.8 would seem to me to be
along the following lines: the more able an individual is to
discriminate between different aspects of the environment, the
more likely is he to have a number of different ways of
assessing the environment he inhabits at the moment.

Consequently, when he makes a judgement about, say, his
study-bedroom, he brings to bear many different viewpoints.
This leads to his decision about the room being closer to the
average for the population. On the other hand, a person with
low abilities to discriminate would only use one or two aspects
on which to base his judgement and consequently would be
more likely to have an extreme judgement than his more
cognitively complex fellows. If this relationship was validated
by future studies its value would be quite considerable in
practical terms because it provides the possibility of selecting
individuals whose response is more in accord with that of their
peers, is more likely to be typical of the population at large
and is probably more consistent or reliable than average. Our
eventual hope is that we will be able to 'objectively' select
individuals that will give us valid subjective responses and
further that we will need fewer subjects. This relationship is
probably of more value at present for theoretical reasons in
that it is the beginning of an insight into the way in which
people deal with the physical world. Subsequent studies have
helped clarify the relationship between cognitive complexity
and satisfaction with the physical environment. They have
shown that in some cases the relationship is a linear one, such
that more cognitively complex people are more satisfied with a
particular aspect. They have also indicated that the building
form itself possibly influences the level of complexity of the
user with regard to responses to particular aspects of the
environment.

Subjects or objects?
In conclusion, it can be said that an understanding of the
interaction of people and buildings and a furthering of the
various roles of the environmental scientist cannot be fostered
by treating people solely as objects. Information concerning
their own thoughts and feelings about the environment is
essential whether the designer finds himself in an authoritarian
or a democratic relationship with his client. Further, it can be
suggested that architectural psychologists and designers should
not be afraid of looking at clients and building users from an
external viewpoint. This is the case particularly with regard to
the selection of respondents.

It is only by building up an understanding of the
interaction between the set of assumptions which deal with
people as subjects (who experience) and that set which deals
with them as objects (who at) that we can hope to turn
architecture into a science with firm roots in psychology and
to turn psychology into a science which is of relevance to the
everyday world.

3 Do we need a theory?

Terence R. Lee

Abstract: The requirements of a theory dealing with the
relationships between people and buildings are presented. It is
then proposed that objects are mentally coded in terms of
where they are and that this coding leads to the formation of
schemata or mental maps which relate things to places. Results
of studies of mental maps of neighbourhoods, of distances
people travel to shop and of the effects of the length of a
child’s journey to school on his social adjustment are presented as
evidence in favour of the mental map theory.

It is an intriguing paradox of environmental psychology that
its main activity should be to study certain phenomena in the
human psyche which bear a close resemblance to scientific
theories and that in order to do so it needs to construct
scientific theories.

The cerebral phenomena to which I refer are the
extensive, organized structures of knowledge which each of us
builds up during a lifetime about the locations of familiar
objects in space. This spatial knowledge is like a theory
because it is connected together with a large number of general
unifying principles such as 'here/there'; 'north/south';
'up/down'; 'port/starboard' and an infinite number of
pinemoral connections represented by such knowledge as that
eggs are frequently to be located in the vicinity of bacon,
chimney pots on the top of buildings and beer in public
houses. These connections, both general and particular, can be
used to make predictions.

It is almost as self-evident to me that we need a scientific
theory about spatial orientation as it must be to that mythical
man in the street that he needs to know where things are if he
is to find his way about. The scientist with a theory can move
about more rapidly reaching goals which serve as landmarks
for future exploration. He can make predictions about
unfamiliar areas and follow them through to discovery and
confirmation. He does not get lost in the woods because of the
inordinate number of trees. However, it is because some
psychologists might be content to solve one problem (or make
one journey?) at a time and in isolation that I am about to
embark on this piece of advocacy.

It is addressed to environmental as distinct from
architectural psychologists because in my view the emergent
laws of the former will be inclusive of the latter. The most
orderly delineation of the field would seem to comprise the
changes wrought in human behaviour by man’s deliberate
manipulation of his own environment.

You will have detected already that I shall be presenting a
personal point of view. Indeed, there is not much to build

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