How People’s Concepts of Urban Places Relate to Their Evaluations of the Places’ Aesthetics and Microclimate

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Abstract

The objective of this study was to uncover what aspects of urban plazas and parks that are most important for users’ evaluations of places’ aesthetics and microclimate (the characteristic climate for a limited space). This was done by investigating people’s general ideas of plazas and parks (the prototypical concepts) and compare these with place users’ descriptions of four specific places. Interviews with two groups (31 and 24 persons respectively) were carried out in order to collect this information. Aspects commonly mentioned in the descriptions, but not included in the prototype, were considered salient and schema-irrelevant (perceived as outstanding but not needed as a defining attribute of the place). This part of the result was related to evaluations of aesthetics and microclimate of the specific places, as well as to subjects’ explanations of some of these evaluations. Evaluations were collected in 716 questionnaires and 1115 on-site interviews, and the explanations in the 24 persons interview concerning specific places. The results indicate that for urban places to be emotionally appreciated they have to manifest some kind of effect of contrast, i.e. they have to embrace some salient schema-irrelevant aspect outstanding enough to work as a centre of the total experience of the place. Furthermore, the results indicate that a separation between emotional and practical aspects of place experiences is needed. In view of that, for urban places to be practically useful, they have to have a prototypical character. For a plaza to be prototypical, it has to be experienced as an enclosed and mainly hard-grounded open square, with good opportunities for commerce and social life. A park has to be green and be able to house a range of activities such as relaxing, picnics and walking.
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1. Why Do You Like a Plaza?

What are the most salient and important aspects of a city plaza or a park for its everyday users? Is it form, type of ground cover, number of trees, or what activities that are possible, its function? Also, is climate important in some way? In other words, what do people best remember from plazas and parks, what is the content of people's ideas, their concepts, of these kinds of urban places? In addition, are people's preferences for plazas and parks mainly influenced by physical aspects such as if it is very open or not, the architecture of houses framing it, or natural aspects like greenery? Are symbolic, climatic and social dimensions also important for how these places are evaluated?

For architects and city planners these issues are crucial. Without insights of this kind it would be difficult to plan an urban place that would be appreciated by, and useful for, the city inhabitants. These issues will be explored in this study. Put in one sentence: How do place concepts relate to place evaluations?

2. What is a Concept?

A dictionary description of a concept can be an idea underlying a class of things, a general notion (Hornby, 1974). The issue of how concepts are attained, what they are and how they work has been exhaustively investigated. If we look at this issue from an evolutionary angle, it can be stated that humans historically have concepts of a functional reason – fundamentally to survive. Humans had to be able to somehow separate edible things from inedible things, friends from foes, possible partners from others (Lakoff & Johnson, 1999). Knowledge, or concepts, is what we use to separate these “objects” from each other. As Ashcraft (1994) put it: “Categories [or concepts] provide us with a way of classifying objects in our environment, and thereby predicting what the objects do, [and] what properties they possess”1 (p. 283).

Concepts are attained by memorising properties of specific objects encountered in our environment. In this way concepts work as organisers of instances, they provide an efficient way of organising diversity under a single rubric (Sigel, 1983). Dewey (in Sigel, 1983) put it in a more concrete way:

Concepts are formed by comparing particular objects, already perceived, with one another, and then eliminating the elements in which they disagree and retaining that which they have in common. Concepts are thus simply memoranda of identical features in objects already perceived: They are conveniences bunching together a variety of things scattered about in concrete experience. (pp. 243-244)

When people form concepts they do no not store more details than necessary in order to be able to effectively act in the world. This is explained by the notion of cognitive economy (e.g. Eysenck &

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1 In the literature, some confusion exists regarding the definitions of the terms category and concept. Sometimes they seem to be used interchangeably, sometimes not. Sigel (1983), for instance, stated both that “not all concepts are classes” (p. 244) and that “the term category, ... is another synonym for class or concept” (p. 245). In this paper, the term concept will be used denoting the knowledge needed to be able to categorise. Category will be used when the focus is on the result of object organization. Thus, you need a concept to be able to sort objects into categories.
Keane, 1995). The most economic attributes of an object to remember, are those characteristic enough to separate the object from objects in other categories and to lump it with objects in the same category. Furthermore, as Ashcraft (1994) wrote: “only nonredundant facts will be stored in memory”. Facts that can be inferred or generated from previous memories do not need to be stored specifically.

It can be inferred that similarity between objects is an important factor in concept theory. Similarity can be looked upon in different ways though. For instance, similarity can be in focus regarding the attributes of objects rather than the objects themselves. Some objects that have attributes like “have roof” and “have walls” in common are judged to be the same kind of object. This view of concept structure, called the defining attribute view, is based on ideas developed in philosophy and logic (Eysenck & Keane, 1995). Concepts are said to be defined by sets of necessary and sufficient attributes (Hahn & Chater, 1997). In this way objects can easily be categorised by checking if they possess the attributes that some concept defines. “The defining attribute theory predicts that concepts should divide up individual objects in the world into distinct classes and that the boundaries between categories should be well-defined and rigid. Similarly, the theory predicts that all members of the category are equally representative of it” (Eysenck & Keane, 1995, p. 235). This view was criticised to be applicable only to the arbitrary patterns in the laboratory experiments where this view became apparent (Rosch, in Ashcraft, 1994). Concepts in the real world must allow for fuzzy boundaries since not all objects are easily categorised. The prototype view accounts for this fuzziness.

The term prototype was introduced by Rosch (in Ashcraft, 1994) and denotes “the central, core instance of a category” (Ashcraft, p. 282). A prototype is identified via a bunch of characteristic attributes that are more or less important. There are no defining attributes that with absolute certainty can assess in which category an object belongs. An object is a typical example of a category if it shares many of the characteristic attributes of the concept, and a less typical example if it shares fewer.

This paper will use the prototype view as its main theoretical frame of reference, due to the considerable body of empirical evidence supporting it (Eysenck & Keane, 1995). Moreover, the prototype view suits best the objective of this paper since plazas and parks are not definable in clear-cut categories.

2.1 What is a Schema?

The term schema is used partly in the same way as the term concept. Their definitions overlap each other in that they can both be characterised as abstract representations of environmental regularities.

To briefly look at the history of schema theory, the idea of schema was first proposed by the philosopher Kant in the 18th century as structures used to help us perceive the world (Eysenck & Keane, 1995). However, schemas were not used within psychology when the field developed. Instead the term concept was used. But soon, as the concept theory grew in complexity, it became clear that concepts could not explain all empirical observations in the field (D’Andrade, 1995). A term was needed to include relations between objects as well as a temporal aspect to be able to explain events (in contrast to objects). The term that came into use denoting a more complex version of concept was schema (e.g. D’Andrade, 1995; Eysenck & Keane, 1995).
Eysenck and Keane defined schema as “a structured cluster of concepts; usually, it involves
generic knowledge, and may be used to represent events, sequences of events, precepts,
situations, relations, and even objects” (p. 262). However, one of the first who incorporated the
term schema into psychological research (in the 1930s) was Bartlett (Eysenck & Keane, 1995).
The experiments he conducted dealt with how people remember pictures or stories. His results indicated that:

whenever material visually presented purports to be representative of some common object, but contains certain
features which are unfamiliar in the community to which the material is introduced, these features invariably
suffer transformation in the direction of the familiar ... A pictorial representation may change all of its leading
characteristics in the direction of some schematic form already current in the group of subjects who attempt its
reproduction. (Bartlett, 1932, in Canter, 1977, p. 13)

A neurologist contemporary with Bartlett who also used the schema theory in his research found
(in Canter’s (1977) words) that cognitions in some cases:

take the form of specific images whereas in other cases they form systems, schemata, of which we may not be
fully aware and to which it may be difficult for us to attend, yet which nonetheless exert an influence over our
conceptualisations. (Canter, 1977, p. 16)

2.2 Schemas and Memory

Schemas and concepts are stored in, and when used, retrieved from, the long-term memory store
(Eysenck & Keane, 1995). This is where objects encountered several times, or very salient objects
or events, is stored. The memorability of the elements in long-term memory, i.e. how well they
can be remembered, is partly due to the distinctiveness of processing in the input situation:
“memory traces that are distinctive or unique in some way will be more readily retrieved than
memory traces that closely resemble a number of other memory traces” (Eysenck, 1979, in
Eysenck & Keane, 1995, p. 136). It can be noted here that two kinds of memories are discussed
in the quote; on the one hand separate and unique memories, and on the other hand memory for
repeated similar events (i.e. schemas). Memorability should be discussed with this division in
mind. Anyhow, it can be concluded that the way a memory trace gets stored influences how well
it can be retrieved when needed. Clark and Clark (1977) went one step further writing, “the input
situation is one of the most critical determinants of what people remember” (p. 135).

But what determines the characteristics of the input situation? In order to be easily
understood, objects encountered in situations, will be categorised. When a category is decided on,
the related schema will invite some more or less typical other objects, or aspects of the object
following with that concept. In this way schemas “tell us what is important and what things
deserve our attention” (Neuschatz, Lampinen, Preston, Hawkins & Toglia, 2002, p. 687). It is
“shown that when people have different expectations about a target event they interpret and
recall it in different ways” (Eysenck & Keane, 1995, p. 265). Thus, expectations and evoked
schemas partly determine the input situation.

Furthermore, input situations can be discussed in a learnability perspective. Different learning
situations influence memorability in different ways. Neuschatz et al. (2002) discussed two
learning situations: intentional learning situations when people are motivated to learn as much as
possible about a target, and incidental learning situations when people do not concentrate at learning but nevertheless have memories from a situation. Two more factors related to this were brought up by Baroni (2003): perceptual salience regarding physical characteristics, or spatial location of objects, and the typicality by which an object or aspect appear in a certain environment (schema-expectancy). Neuschatz et al. (2002) concluded “when more sensitive measures of memory are employed …, memory is generally more accurate for atypical items than for typical items” (p. 688). This, Neuschatz et al. argued, is because schema-expected (typical) information does not need to be explicitly stored since if retrieval becomes necessary; one can rely on the well-known schema. Regarding the atypical items, these cannot be reconstructed from underlying schemas and therefore need to be explicitly stored.

When also accounting for learning situation, Mainardi, Peron, Baroni and Zucco (1988, in Baroni, 2003) arrived at a contradicting conclusion. They concluded that “the most typical elements in respect to an activated place schema are more likely to be remembered in those conditions in which the individual relies mainly on his/her schematic knowledge of the place, such as in an incidental learning condition” (Baroni, 2003, p. 78). The same conclusion was arrived at by Friedman (1979, in Eysenck & Keane, 1995): “the … information that is remembered about an event is the difference between that event and its prototypical … representation in memory” (p. 265).

Brewer and Treyens (1981) performed an experiment where they in detail discussed schemas, learning situations and memory. They tested subjects in an incidental learning situation for memorisation of a graduate student’s office. Before the experiment the objects in the room were rated by other subjects in two dimensions: saliency and schema-expectancy (typicality). When subjects were tested on memory of the room, the results showed that recall of schema-expected items were slightly better than it were for salient items. Overall, the results suggested that “the interaction of the schemata in various aspects of the recall process produces an interesting inverted U-shaped function of the relationship of schema expectancy and recall of objects” (Brewer & Treyens, 1981, p. 229). That is, objects of very high schema-expectancy are not given in recall as much as might be expected, since the subjects assume that these are known to their audience. Nor are objects of low schema-expectancy recalled as much as might be expected. The objects that most often are recalled are the objects in-between these boundaries, the objects of medium-high schema expectancy.

Brewer and Treyens (1981) in discussions of schemas as an aid for the memory retrieval process, pointed out that in interview situations, it is important to realise ways that schemas can come into play in different interview set-ups. In interviews demanding open-end answers, schemas will matter more than in more structured interviews. Furthermore, in a dialogue, the participants’ ideas of each others schemas will, to a certain degree, influence what will be brought up (Baroni, 2003).

Emotions also have an influence on memorability. Aspects or items with a personal emotional involvement are much better remembered than aspects or items lacking this. This is called the self-reference effect (Eysenck & Keane, 1995)

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2 It is shown in recognition tests that subjects have memory of these objects, but since they are low in schema-expectancy, it is probably difficult to relate them to the schema that could facilitate their retrieval.
Regardless of which of these results researchers arrive at, it is not a bold statement to say that schemas play an important role in both content and quality of memory in naturalistic settings (e.g. Neuschatz et al., 2002).

3. Environment in Terms of Concepts

The concepts people have are derived, through cognition, from experiences in the world. Naturally, there is some kind of relation between concepts and the environment we live in. The nature of this relation is much discussed. One view within this area is the interactional view, or the representational view (e.g. Heft, 1997; Nasar, 1997). In this view, the individuals who have the concepts, and the environment, can be understood as two separate parts that interact with each other. The environment is seen as stimuli or as a source of information. Humans perceive this information and construct a mental representation of the environment from it. This theory tends to regard the perceiver as being outside the world, not in it.

As a contrast to the interactional view, or as the other end of a continuum, there is the transactional view. This view, held by many within environmental psychology, is characterised by an “emphasis on studying environment-behavior relationships as a unit [italics added], rather than separating them into supposedly distinct and self-contained components” (Bell, Greene, Fisher & Baum, 2001, p. 6). No part is understandable without the inclusion of the other. Heft (1997) made a comparison with this view and Gibson’s (1979) theory of direct perception. A point of contact lies in Gibson’s view of perception as an “exploratory activity of looking around, getting around, and looking at things” (Gibson, 1979, p. 147). The perceiver is not separated from its environment, he is in the environment and always has a specific relation to it – they are considered as one unit.

It can be noted that these two views, for clarity, is described here in a rather extreme and theoretical fashion. It is not plausible that they are used in these refined forms in research. However, environmental psychology acknowledge a lot of what is inherited in the transactional view and study environment and behaviour as one unit. Thus, with the aim not to loose valuable information in the study of this unit, an openness exists regarding what aspects that should be included in research:

The ... relationship between an urban landscape and an urban inhabitant, for example, depends not just on the individual stimuli in the landscape. It also depends on the patterning, complexity, novelty, and movement of the contents of the landscape and on the past experience of the perceiver ...; his or her ability to impose structure on the landscape; his or her auditory ... and olfactory ... associations with the landscape; and his or her personality characteristics. (Bell et al., p. 6)

3 The quote is about a relationship between environment and behaviour. In this context both behaviour and concept (and human) represent the same kind of component, a component in contrast to the environment. Since behaviours are grounded in understanding of the world, and concepts are needed for that understanding and concepts are constructed via behaviours, then, concepts and behaviours are truly connected.
3.1 Psychology of Place

In the seminal book The Psychology of Place, David Canter (1977) reviewed a number of scattered studies in the area of environmental psychology. The book covers how people make sense of and cope with their surroundings and pointed out that places are more than just physical entities. Places used by people also have a psychological dimension. How people think of places must be considered in studies of places. In addition, the range of activities that a place holds is important in an accurate definition of place. Canter wrote, “that a place is the result of relationships between actions, conceptions and physical attributes” (p. 158). Thus, to fully understand what a place is we have to know the kinds of behaviours that take place there, the physical parameters of the setting and the concepts people hold of those behaviours and that particular physical setting. The concepts and the conceptual systems in relation to places, were the focal points in The Psychology of Place. Canter wrote: “If we are to understand people’s responses to places and their actions within them, it is necessary to understand what (and how) they think” (p. 1).

Canter (1977) mentioned that places could be ordered and analysed in hierarchies. A certain place can differ in meaning depending on which levels are considered. For instance, a certain plaza can be valued differently depending on if it is considered in isolation or as part of the city where the plaza is located (i.e. the super-ordinate level of the plaza). This has to be taken into account in place analysis to avoid confusion. Also, Canter expected individual conceptual differences: “when dealing with ... aspects of environmental conceptual system, such as descriptions, we may expect many differences both in the content of the dimensions along which the description varied, and in the structure, or complexity, of those dimensions” (p. 129). As a result of this, descriptions and adjectives of environments can mean different things for different individuals, on different levels. As an optimistic conclusion of this Canter wrote: “Hopefully the day will come when it is clearly understood what are the characteristic qualities for any given place, so that design may revolve around modification of the levels of the qualities provided” (p. 113).

4 The way Canter uses the term conception is comparable to the way the term concept is used in most of the literature on cognitive psychology. In this paper the term concept is used.

4 Climate as Part of the Environment

One aspect not discussed in Canter’s (1977) The Psychology of Place is climate. Though, it is not as climate at the time had not been discussed as a factor in the behaviour-environment relationship. In the first half of the 20th century Huntington (1915, 1945, in Bell et al., 2001) already argued that a major ingredient for the growth of higher civilisations is seasonal change. “The changes could not be too severe, but regular changes should require adaptation, and as ‘necessity is the mother of invention,’ the adaptations encouraged creative solutions, which invigorated the civilization” (Bell et al., 2001, p. 177).

Later, in 1963 Olgyay presented a pioneer work when developing a systematic climatic design methodology (Westerberg, 2003). Moreover, with observation studies Gehl (1971, in Westerberg,
deviates from the climatic determinism of Huntington and Olgyay, and showed various ways climate can be important for the use of urban space. Hence, work has been done in environmental psychology with climate taken into account, but it is not until recent years some researchers have regarded climate as a dimension that is always present in the study of environment and behaviour. Knez (in press, a) wrote, “climate is a nested structure in places, it not only constitutes objectively a place but also subjectively influences the way we experience and remember a place”. Consequently, climate as an ecological variable may have significant impact on meanings people attribute to places and on emotional bonds people evolve towards places (Knez, in press, b). Therefore climate should be considered when studying place concepts.

When discussing climate some definitions of terms should be made. At first, a division between weather and climate should be done. Weather refers to relatively rapidly changing or momentary conditions. Climate refers to the average weather conditions over a longer period of time (Bell et al., 2001). Two more specific terms relevant for this study are local climate i.e. the average climate for a city or region and microclimate i.e. the characteristic climate for a limited space (Westerberg, 2003), for example an urban plaza.

5. Urban Environment

Within architectural theory, as in environmental psychology, it is acknowledged that the characteristics of an environment can, and probably will, influence individuals' behaviours and feelings toward a place. This approach states that some behaviour is probable given an individual’s attributes and the environment’s characteristics (Lang, 1987). Environments can be said to consist of a set of affordances that offers or provides the human, positively or negatively, with a range of activities (cf. Gibson, 1979). For example, a bench affords sitting. An open square affords much more, e.g.: markets, football, sunbathing etc. In sum then, Lang (1987) concluded, even if “an environment affords a particular set of behaviors, this does not mean that the behaviors will take place ... On the other hand, if the affordances are not there, the behavior cannot take place” (p. 103).

Moreover, Lang (1987) pointed out that affordances can be made up of more than physical aspects; geographic, social and cultural components can also be included. A division that is made within architectural theory is one between formal and symbolic aspects.

Formal aspects cover structural attributes such as shapes, proportions, rhythms, scale, degree of complexity, colour, illumination, shadowing effects (Lang, 1987), openness, (spaciousness, density) and order (unity, clarity) (Nasar, 1997).

Symbolic aspects are about content (Nasar, 1997). In relation to formal aspects, people associate, consciously or unconsciously, with personal values, memories, history, culture or other physical aspects. Physical structure opens up for a place to have a meaningful personal content. This contributes to people’s feelings about the environment (Lang, 1987). As Agnew (in Gustafson, 2001, p. 6) put it: “meaningful places emerge in a social context and through social relations, they are geographically located and at the same time related to their social, economic, cultural etc. surroundings”. To fully understand the important values in human-environment relationships symbolic values must be major themes in research.
6. Environmental Evaluation

It has now been dealt with how people understand their surroundings through concepts or schemas, how memory can influence attention, storing and retrieval of memories, and how the relation between people and environment can be viewed. These aspects have been more or less cognitive aspects dealing with information processing and understanding. This is just one part of the experience people have of environments, a part not explicitly dealing with whether people like an environment or not. This aspect will now be discussed; the aspect of experienced aesthetics and pleasantness.

To evaluate something is to decide if something affects you positively or negatively, to ascertain the value of something (Sparshot, 1972, in Nasar, 1997). The aim in this section is to discuss emotional evaluation in relation to cognition and concepts. There is some evidence that affect can occur independent of cognition, but there has been a widespread agreement and a large body of evidence supporting that cognition influence affect (Nasar, 1997). Kaplan and Kaplan (1989, in Nasar, 1997) pointed out that cognitive processes like categorisation and inference are related to affect. They went on, discussing environmental cognition and stated that because of the need for people to make sense of the environment and find their way around, they have to engage cognition in such situations. Therefore one might conclude that cognitive processes would be an important part of emotional evaluation in this area.

6.1 The Kaplans’ Predictor of Preference

Kaplan (in Herzog, 1992) argued that humans, because of their evolutionary history, constantly evaluate settings to predict events and prepare for effective action. Thus, in general, it holds that “settings that are readily organised spatially aid in this process and should therefore be preferred” (Herzog, 1992, p. 237). From this argument Kaplan and Kaplan (1982, in Baroni, 2003) suggested a model of environmental preference (table 1).

<table>
<thead>
<tr>
<th>Understanding</th>
<th>Exploration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>Complexity</td>
</tr>
<tr>
<td>Inferred</td>
<td>Mystery</td>
</tr>
<tr>
<td>Coherence</td>
<td>Legibility</td>
</tr>
</tbody>
</table>

Note. Adapted from Baroni (2003, p. 81).

This model of preference, or pleasantness, is based on the assumption that environments offer information to humans, who use it to create a mental model of the environment. In the model, a representational/interactional view is thus inherited.

Furthermore, the model presumes two dimensions of knowledge: understanding (the mental act of trying to make sense of an environment), and exploration (an action-related knowledge or interest of involvement). The vertical axis adds a temporal aspect. The first row marked Immediate
represents the characteristics of an environment that can be perceived immediately. The second row, Inferred, represents a need for somewhat longer scrutiny.

Each of the four intersections (coherence, mystery, legibility and complexity) in the model has something to say about affective responses to environments. Coherence concerns how well a scene “hangs together”, the ease by which an environment is understood and thereby, for instance, possible to categorise. A place that cannot easily be categorised, that does not fit any known schema, will be experienced as frustrating and cause negative affect (Baroni, 2003). Mystery concerns the property of an environment to promise more information if wandered into. If it do so, it will be preferred, since, according to Baroni (2003, p. 82), “fulfilling the wish to know is one of the most primitive and universal pleasures”. Both these factors, coherence and mystery, have been empirically supported by many studies (Herzog, 1992).

The other two, legibility and complexity, are not as well supported. Nevertheless, the model has something to say about these factors too. Legibility indicates the presence of aspects facilitating understanding if one should wander deeper into the scene; it is about the possibility to foresee how well you can orientate yourself in the environment. An environment is preferred if people think they can find their way there with ease (this aspect must be said to be closely connected with mystery). Complexity defines the richness of perceptual stimuli, the amount of variety or diversity. Complexity is positive if exploration is promoted by the richness or diversity of the setting and when it does not prejudice legibility. Herzog (1992) speculated that difficulties in defining these terms to raters in experiments, and also for the researchers themselves, could be the reason these factors lack empirical support.

6.2 Schemas and Evaluation

People’s aesthetic response can vary with expectations. For instance, if you are going to visit a new place that you know is a plaza, you have certain expectations. Maybe you expect to see an open square, some trees and a few booths from where selling takes place. These ideas of environmental items, your environmental schema, will influence your direct experience of, and your aesthetic response to, the plaza. Baroni (2003, p. 74) did a categorisation of environmental items according to their relationship with the schema (cf. the section of Schemas and Memory):

1. Schema-expected items, whose presence is expected on the basis of the activated schema, they are absolutely necessary to define an environment as an instance of a certain place schema (e.g. walls and ceiling in a house).

2. Schema-compatible items whose presence is less necessary than the schema-expected items, but are compatible with the place schema in question but not needed to define a place (e.g. markets and people on a urban plaza).

3. Schema-irrelevant items which may or may not be there, they are neither a help nor a hindrance in people’s effort to categorise a place (e.g. a litterbin in a park).

4. Schema-opposed items whose presence is in contrast with the environmental schema activated (e.g. a fishpond in a church).
When an individual enters a new environment one of the first cognitive processes that starts is the one aiming at categorising the place. This process can be seen in levels, or hierarchies (e.g. Rosch, 1977, in Nasar, 1997). For instance, if you are seated in an aeroplane in the sky and you are looking down on the landscape, you will have some expectations of what to see. You can imagine seeing lakes, cities, mountains, open fields etc. If the plane lands in a city and you go for a walk you will have some other expectations of what kinds of places you are likely to encounter, for example plazas and parks. In this way you will always have varying expectations, building on schemas, that depend on the context. So, when for example encountering an open space in a city, the first cognitive process starting will be one aiming at determining what kind of place, of the kinds expected, it is. In this process, the schema-expect items will play an important role. Maybe, in a city, it will be sufficient to establish whether the ground of the place is covered with grass or not. If it is, the place encountered is probably some kind of park. When the place is categorised as a park, you will have some further expectations of what to find in that place; for instance benches, trees, bushes (schema-compatible items). You will not be surprised if you find litterbins, asphalt lanes or fences (schema-irrelevant items). It is also possible that you will run into items that make you doubt the correctness of the activated schema. If you are walking towards an open place where you see trees and possibly water, you might imagine the place is a park. But if you discover that the ground of the place is asphalt or cobblestone when you get closer (schema-opposed items in this context) you might doubt that the place is a park and consider instead that it is a plaza.

The process described above can be characterised as a cognitive process, where schemas are involved. Nasar (1997) wrote that these schemas, or knowledge structures, “can be seen as cognitive affordances that had survival value. They offer humans a quick way to apprehend, organize, retain, retrieve, and act on complex environmental information“ (p. 167). These cognitive processes can be seen as fundamental for the success of acting in the world and it is upon these processes that the aesthetic responses are built. Nasar stated that people recognise different kinds of environments (content categories) and use inferences from this to define their evaluative criteria. Thus, “preferences may vary across ... content categories, and such categories may act as moderating variables setting the condition under which certain design characteristics are preferred” (Nasar, 1997, p. 169).

**Purcell’s Schema Discrepancy Model**

In one famous study carried out by Purcell (1986) he constructed a model of how schemas relate to affective response, The Schema Discrepancy Model. In the model, Purcell builds on ideas from the prototype view in concept theory. He maintained that our experience of the environment is prototypically organised: “for any given category of environmental experience, a prototype example(s) will exist” (p. 4).

Purcell adopted a view of affective experience of Mandler (in Purcell, 1986). Mandler proposed that affective experience requires autonomic nervous system arousal. This arousal can result from interruption or blocking of any ongoing perceptual, cognitive or action sequence. Purcell argued from this viewpoint, that an interruption of a schema-based processing of environmental experience, and where the interruption is the result of a discrepancy between
aspects of the environment and the prototype, this could lead to arousal and consequently affective response. In this line of reasoning, the processing of an environmental instance too alike the prototype of the schema will not produce affect. Therefore, affective response is related to environments’ “distance” from relevant default values of the schema prototype. This theoretical stance is supported by a experiment Purcell carried out. In it, he let subjects judge photographs of churches on 10-graded scales as being a good or bad example, and most or least preferred etc.

A summary of Purcell’s experiment was given by Baroni (2003):

The degree of pleasantness we attribute to an environment depends on how much this environment is removed from the schema we activate on the basis of our experience. If the present instance is too similar to the prototype there is not sufficient activation to arouse interest and the positive affective experience. If the present instance, instead, is too far removed from the prototype the individual’s exploratory activity is frustrated and the affective state is unpleasant. An ideal degree of discrepancy is that in which the stimulus is perceived as something new, different from what expected, but not enough to strain the individual’s cognitive process. (pp. 82-83)

6.3 Attitudes

Another aspect of people’s evaluation of places is attitudes. Attitude, as an internal state, is said to develop on the basis of overt or covert evaluative responding: “an individual does not have an attitude until he or she responds evaluative to an entity on an affective, cognitive, or behavioral basis” (Eagly & Chaiken, 1993, p. 2). Attitude was also defined as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor” (p. 1) by the same authors. An attitude may be stored as a mental representation that can be activated in the presence of the attitude object or cues related to it (Eagle & Chaiken, 1993).

Within environmental psychology one aspect of the relation between humans and the environment is expressed as sense of place, which is defined as “the meaning attached to a spatial setting by a person” (Jorgensen & Stedman, 2001, p. 233). Sense of place is not embedded in the physical setting itself, but resides in human interpretations of the setting. Jorgensen and Stedman propose that sense of place can be regarded as attitudes. In this view sense of place, or place attitude, is a “complex psychosocial structure that organizes self-referent cognitions, emotions and behavioral commitments” (Jorgensen & Stedman, 2001, p. 236). These three components can be seen as independent evaluative dimensions, and the covariation between them, on a higher level of abstraction, as a single attitude dimension.

6.4 Motivation

“Our attitudes are related to our motivations” Lang (1987, p. 105) wrote and Baroni (2003) put forth that need always underlies motivation. In relation to evaluation of environments an important issue then, is the question of why people need to visit certain places, what are their motives? Nikolopoulou and Steemers (2003) studied an outdoor urban space and showed that

23% of the population using the space as a meeting place, waiting for another person to arrive, reported dissatisfaction with the thermal environment. This amount of dissatisfaction decreases by half to 12%, for the population that have gone to the space for other reasons. (p. 98)
In the example, waiting for someone, the need is to see the other person. Their staying at that particular urban space is just an instrument to meet that need. This can be contrasted with someone who stays at a place with the motive, for example, just to sit in the sun. This aspect will influence the experience of the places. Thus, in studying people's experience of environments, a motivational aspect should be included. As Baroni (2003) stated: “human behaviour is almost totally explained on the basis of motivations” (p. 69).

To explain what motivation is, it can be said that motivation is a psychobiological state in which an individual is oriented towards reaching some kind of satisfaction for a need (Baroni, 2003). Motivation therefore determines major aspects of behaviour since it adds direction; motives direct behaviour to goals. Depending on some behaviour succeeding or not in bringing one to this goal, may certainly influence the emotions related to the setting where the behaviour takes place. Thus, as apparent from this reasoning and the section about attitudes; motivation and attitudes are related to emotions and behaviours.

6.5 Places in Contexts

People evaluate places not as isolated, but as parts of a larger whole.

Places … should always be regarded in relation to the outside world. What makes a place special … is not necessarily any intrinsic qualities of the locale itself - it may also be “the particularity of linkage to that ‘outside’ which is therefore itself part of what constitutes the place”. (Gustafson, 2001, p. 6)

Studying, for example, people’s evaluation of a plaza in a city, its’ relation to other plazas and spaces in the city must be realised and considered. People who perceive places activates a context, or a schema, and this “gives meaning to the exploration of the … objects and to the discovery of their aesthetic and functional, as well as affective and utilitarian, qualities” (Baroni, 2003, p. 73).
7. Objectives of the Study

The main objective of this study was to assess the most salient aspects of urban places in the user’s place concepts and to discuss how these aspects are related to the evaluations of these places’ aesthetics and microclimate.

The two major parts of the study, the descriptions of place concepts and the understanding of place evaluations, were divided into four parts:

1. The aim of the first part was to reveal the content of people’s concepts of urban plazas and parks in general. This was to make a sketch of the prototypical concepts users hold of these urban places possible.

2. The next step was to reveal the thoughts and memories users have of instances of urban places. Comparing aspects of these thoughts and memories (place descriptions) with aspects of the prototypical concepts will uncover the aspects of the place descriptions that are not schema-expected and salient.

3. This part was about aesthetics and microclimate. The goal was to know how users evaluate specific urban places regarding aesthetics and microclimate, and to investigate some users’ explanations of why they evaluated as they did.

4. Looking at the results from section one to three, an understanding of the relation between, on the one hand, the prototypical concepts and the descriptions of urban places (and differences between them) and on the other hand, aesthetic and microclimatic evaluation, can be attained. This understanding was supposed to illustrate how certain aspects of urban places can influence evaluative dimensions.
8. Methods

The study involved a mixture of quantitative and qualitative methods comprised of four parts: a prototype interview, a place interview, a questionnaire and two on-site interviews. The prototype interview and the place interview made up the basis of the study. The results of these interviews were analysed mainly in a qualitative fashion not aiming at statistical generalisations, but to find analytical categories which in different perspectives could shed light on how people think of and evaluate aesthetics and microclimate of urban places. The evaluations were collected in the questionnaire and the on-site interviews. They were analysed statistically in a quantitative fashion.

Regarding the place interview, the questionnaire and the on-site interviews, four specific urban places in the central parts of Gothenburg, Sweden, were investigated: three plazas (Jussi Björlings Plats, Kronhusbodarna and Gustav Adolfs Torg) and one park (Floras Kulle in Kungsparken)\(^5\).

Jussi Björlings Plats (figure 1) is a newly built plaza just beside the city’s much-discussed new opera house. It is cobbled, has some trees on one side to frame it and is located beside Gothenburg’s large river and the port.

Kronhusbodarna (figure 2) is an ancient, cobbled courtyard surrounded by some of Gothenburg’s oldest buildings. The houses frame the plaza tightly and no streets or pavements are adjacent to it. The plaza is central but lies a stone’s throw away from the main streets. No trees exist on the plaza. Outdoors, it is partly furnished by tables from a café.

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\(^5\) A question can be raised regarding the a priori categorisation of the places as either plazas or parks. It is not investigated whether people perceive the places as plazas or parks. Though, a preliminary study shows that plazas and parks seem to be the only urban places people have a clear apprehension of.
Gustav Adolfs Torg (figure 3) is a plaza in the centre of Gothenburg, also surrounded by old buildings. It is an open, plane and cobbled square with a few trees along the short side and some flower arrangements in large pots. A large statue of a Swedish King is placed in the middle of the plaza. Institutions such as the Courthouse and the City Hall surround the plaza.

The park, Floras Kulle (figure 4), is a part of a larger park and is located just outside the canal that limits the very centre of the city. It has rather large lawns, many trees, a few paths as well as a smaller statue.
The three plazas were chosen for their different physical characteristics and following from that, the differences in experience people supposedly have of them. The park was included in the study for a partially specific reason. Besides being a common urban place and consequently of interest of the study, a park expectedly generates interview and questionnaire responses dissimilar from those plazas generate. As such, the park functioned as a frame of reference regarding the differences that were found between the responses for each plaza.

All the subjects and interviewees participated voluntarily and without economical compensation.

8.1 Prototype Interview

The objective of this interview was to uncover the properties people imagine that plazas and parks have in general; i.e. the prototypes of the concepts people hold of these urban places.

Interviewees

From a group of people that in a questionnaire about perception of aesthetics and microclimate of the four places that had been sent out earlier (described below) had agreed to be contacted for further questions 31 persons were randomly chosen, but with the aim to balance gender and age. 13 were males and 18 were females. Their ages ranged from 20 to 64 with a mean age of 41 (median 42).

Interview Procedure

The persons were interviewed on telephone and each interview lasted for about two or three minutes. The interview was structured and the questions were as follows:

1. If I ask you to think of a plaza in a city in general, what do you associate with such a place? What do you think when you think of a plaza?

2. If I ask you to think of a park in a city in general, what do you associate with such a place? What do you think when you think of a park?

The order of park and plaza were altered between the interviews. The interviewee was asked at the end of the interview if he or she had had some specific place in mind when answering the
questions. This was to ensure that they had followed the instructions to think of a place in general.

This interview was planned in line with priming theories stating that the mention of a category name will activate the prototype of that category and also the typical members or aspects related to the prototype (e.g. Ashcraft, 1994). The interview questions thus functioned as retrieval cues for properties related to prototypical members of plazas and parks.

Interview Analysis
The answers from the interviews were divided in semantically coherent units. That is, if an interviewee said “selling of flowers”, this was considered as one unit and the main semantic content was a commercial one, the selling of something. Other examples of units are “flowers”, “market”, “salesmen selling fish” and “no traffic nearby”.

To structure the units categories were created with the focus to shed light on the natural variation in the data (the set of units) and to avoid imposing theory driven categories (Patton, 1990, on inductive analysis). The categories were created to fit the data from both the park and the plaza question, and also the data from the place descriptions of specific places in the place interview (described below). The categories evolved and were refined in discussions with two colleagues separately.

Discussion of Prototype Interview
The situations in which the interviewees encoded knowledge about the urban places (i.e. when they have visited the places) are incidental learning situations. They have (presumably) not concentrated on learning as much as possible about the places. In such a situation Mainardi et al. (1988 in Baroni, 2003) foresee that the typical elements will be better remembered than the atypical, less schema-expected elements. Generally then, when asking people of place memories, the most typical elements would be the easiest to retrieve. Furthermore, in this interview, the situation demanded of the interviewees not to think of a specific place, but instead to think of a place in general. Most likely this led to that the interviewees relied on their plaza and park schemas. Unique and salient aspects (which are not schema-expected and only found at certain places) were probably not reported since they do not capture the gist of places in general, and they are not included in the schemas. Thus, it can be argued that the prototype interview produced a good approximation of the prototypical concepts of plazas and parks.

8.2 Place Interview
The place interview had two main purposes. One purpose was to reveal the properties that the interviewees’ mean that these four urban places have, in other words, finding the aspects people associate with the places and from this create descriptions of the places. The second purpose was to have the interviewees explain their reported aesthetic and microclimatic responses from the questionnaire.

This interview was the groundwork of the study. The reason to use verbal reports and open-ended questions was that this method is more ecologically valid compared to other ways of gathering information in this context (Baroni, 2003).
Interviewees

24 persons (10 males and 14 females) that had taken part in the questionnaire and were positive to further questions were picked out for this interview. The people included in the prototype interview were not included in this interview. Interviewees’ ages ranged from 26 to 70 with a mean age of 42 (median 39). They only answered questions for the places that they were familiar with.

The interviewees were chosen not only with gender and age in mind. How they had rated the places in the questionnaire regarding aesthetics and microclimate was also considered. Both people with positive and people with negative experience of the aesthetics and the microclimate of the places were included. The purpose of this was not to draw a statistically representative sample, but to obtain a wide variation in the responses.

Interview Procedure

The interviews were made by telephone and lasted approximately 15 to 20 minutes. The interview was structured and the three main questions that were used for each of the four places were:

1. What do you think when you think of (name of place)? What do you associate with that place?

2. You answered in the questionnaire that you find the place (ugly-beautiful). What do you think it is that makes the place (ugly-beautiful)?

3. You answered in the questionnaire that you find the place’s climate (unpleasant-pleasant). What do you think it is that makes the place’s climate (unpleasant-pleasant)?

As an explicitly stated starting point for question number two and three were the interviewees’ questionnaire answers regarding aesthetics and microclimate. The order that the places were discussed in was altered.

Interview Analysis

As for the answers in the prototype interview, the answers to the first question in this interview were divided into units and categorised. The same categories as in the prototype interview were used. Though, a few new categories where added to get the place interview data to fit better.

Regarding question number two and three, a somewhat different analysis was made. The categories are based on a semantically deeper analysis of the interviewees’ answers. Utterances were considered more as a whole. The aim was to find the most important focus, or foci, in the interviewees’ answers. For instance, if the aesthetics of a place was appreciated because the place symbolised something to the interviewee, a category named Symbolic Value was created to fit that kind of answer. If an interviewee had a sympathetic attitude against the microclimate on a place because of the shelter for wind and rain the place offered, a category Shelter was created.
Each answer naturally could include different aspects with separable foci. A place’s aesthetics for example could be explained both with reference to the view from the place and the greenery at the place. In these cases the different aspects were categorised in more than one category. If one aspect included foci not easily separated, that what seemed the most important focus were used for the categorisation. For example an aspect like “I like the old houses” could fit in both a architecture category and a history/culture category. However, it does not seem plausible that such an utterance is experienced like two different aspects for the interviewee. Therefore an analysis was made to try to establish what category was most important for the interviewee. In such an analysis the context where the utterance was made was considered. If the utterance had company with other utterances with historic references, the utterance “I like the old houses” was placed in the category history/culture. If it had company with physical aspects it was categorised as architecture. Admittedly though, the boundaries were sometimes fuzzy.

Two different sets of categories were created - one for the answers on aesthetics and one for the answers on microclimate.

Discussion of Place Interview
In the prototype interview it was likely that schematic aspects of places would be retrieved and reported by the interviewees. What role could schemas be expected to have in the place interview? The difference in this interview was that specific places were discussed. To start with, this could work as a memory aid helping the interviewee to remember more than only the easy retrieved typical aspects. Both typical and salient aspects could therefore be expected. But discussing specific places could also lead to that the interviewees assumed that the interviewer were familiar with the places and therefore filter away the highly schema-expected aspects. People do not bring up aspects they assume the listeners can conclude for themselves (Baroni, 2003). In the place interview therefore, it was likely that the items reported were the less schema-expected, the unique and salient aspects.

8.3 Questionnaire
A questionnaire about places, climate and weather was mailed or handed out to 1205 subjects living or working in Gothenburg. Half of the subjects were randomly chosen from the register of population. They all lived in the central parts of Gothenburg. The other half of the subjects were visited at work in the central parts of Gothenburg and asked to participate. These either lived in the central parts or in the surroundings of Gothenburg. The subjects received a reminder if they did not answer the questionnaire in time. 716 subjects returned the questionnaire (dropout rate 40.6%).

Of the 716 subjects that participated 43.6% were males and 56.4% females. Their ages ranged from 15 to 81 with a mean age of 39 (median 35).

The questions of most interest for the present study were those concerned with the aesthetics and the microclimate for the four urban places. Regarding the aesthetics, the question was: “How do you like the appearance of these places at this time of year?”. The subjects could answer very ugly, quite ugly, neither nor, quite beautiful or very beautiful. The question regarding microclimate was:

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6 The questionnaire was a part of the research project Urban Climate Spaces at the University of Gävle.
“How do you perceive the climate at this time of year on the following places?” The possible responses were very unpleasant, quite unpleasant, neither nor, quite pleasant and very pleasant. Another question of interest was included in the questionnaire: “How often do you pass or stay at these places at this time of year?” The possible responses were daily, several times per week, sometime per week, sometime per month and more seldom.

In the light that each subject answered the questions pertaining to every place, this is classified as a within group design. Most of the questionnaires were answered and returned during the month of April.

8.4 On-site Interviews

Two on-site interviews were carried out at each of the four places. The first one took place in the middle of June (N=511) and the second one at the end of October (N=604). People that passed or stayed at the places were asked to participate in the interview that took a few minutes. In the June interview 46% were males and 54% were females. The mean age was found within the age category 21-35. In the October interview 45% were males and 55% were females. The mean age was found within the age category 36-50. It should be mentioned that the mean ages in the two interviews were not very far apart from each other since in the June interview the mean age was found in the upper part of the category and in the October interview in the lower part. The design of these interviews is classified as a between group design.

For the present study, one of the relevant questions concerned the interviewees’ instant experience of the place at the time for the interview. The question was “How do you perceive this place right now?” Interviewees could respond on a five-graded scale ranging from ugly to beautiful. The interview also included a question of the reason to stay at a place. Two alternatives were possible: I am on my way to or from work, school, shops or some other place and I am here to get some fresh air, see other people, relax. Answers were possible on a five-graded scale with these alternatives as extreme values.

7 The on-site interviews were parts of the project Urban Climate Spaces.
9. Results and Discussions

This section separately presents results, analyses and discussions for each one of the four methodological parts: the prototype interview, the place interview, the questionnaire and the on-site interviews. In the general discussion, these parts will be discussed in relation to each other.

In this section, four separate categorisations will be presented: one for the answer units from the prototype interview and three for the place interview (one for the answer units used in the place descriptions and one each for the different foci used in the aesthetic and microclimate explanations). For the section to be easier to understand, a discussion of how these categorisations evolved, together with an overview of the categories follows.

To start with, all of the categorisations were done with the aim to reveal the natural variations in the data. The four categorisations will therefore be different since the interviews, where the data forming the categories were collected, had different semantic content – they considered different aspects of people’s place experiences. However, on some analytical levels they have things in common.

During the categorisation of the results of the prototype interview, three head categories were created. This was done in order to organise the ten subcategories. The head categories were physical, social and psychological aspects. The same three head categories were then used in all four categorisations, even though the subcategories varied.

Furthermore, another analytical dimension was added to the categories, a dimension of internality and externality. It became obvious when analysing the aesthetic and microclimate explanations that people could explain for example aesthetics with a focus either on aspects located at the place in question (internal aspects, e.g. ground cover or people) or aspects temporally and/or spatially separated from the place (external aspects, e.g. historic events or the sea). The latter aspects were connected to the place in question via some kind of relation or association. Due to this, it was plausible to add a dimension to be able to discuss the different categories, and specific foci, as being more or less internal or external (i.e. more or less temporally and/ or spatially separated from the place). This dimension will be called the internality dimension.

Generally, it can be said of the head categories regarding the internality dimension that physical aspects are the most internal aspects – they are always physically present at the place. Thereafter come social aspects which also are physical present, but not constantly. The most external aspects are the psychological – they are connected to the place via an associative relation. In the tables presenting the four categorisations the subcategories are, within the head categories, ordered according to the internality dimension with the most internal subcategories at the top.
9.1 Prototype Interviews

The questions in the prototype interview generated 153 answer units for the plaza and 192 for the park. The mean value of answer units for the plaza was 4.9 per interviewee and for the park it was 6.2. The units were categorised in the following three head categories and ten subcategories (the categories are ordered with the most internal aspects at the top):

**Physical Aspects**
1. Physical Elements (e.g. statues, benches, walking paths)
2. Natural Elements (e.g. trees, grass, animals)
3. Architecture (e.g. buildings, house façades)
4. General Descriptions of Physics (e.g. open square, ordered)
5. Climate Aspects (e.g. summer, the sun shines)
   - If in the answer, there was a clear connection to a season, or a weather aspect like sun or wind.
6. Descriptions Relative to the Surroundings (e.g. a central place, no cars, the port)
   - If there was some notion of the surrounding city in the answer unit.

**Social Aspects**
7. Commercial Aspects (e.g. markets, cafés)
8. General Social Aspects/ Activities (e.g. people, meeting points, sitting, sports)

**Psychological Aspects**
9. Emotions (e.g. calmness, desolation)
   - Expressed as if the interviewee was picturing him or herself at the place. Feelings you would have if you were at the place. Attitudes can stem from these kinds of feelings.
10. Attitudes/ Opinions (e.g. beautiful, interesting)
    - A point of view taken by the interviewee about some psychological value attributed to the place. A standpoint you can have looking at a place from outside.

Table 2 shows the proportion of answer units in each category for both the park and plaza question. Thus, the table reveals the content and structure of both the plaza’s and the park’s prototypical concept.
Table 2
Categorised answer units in percentage for parks and plazas in the prototype interview. Ordered according to the internality dimension with the most internal subcategories at the top.

<table>
<thead>
<tr>
<th></th>
<th>Plaza Units</th>
<th>Park Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Aspects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Elements</td>
<td>22.9%</td>
<td>17.2%</td>
</tr>
<tr>
<td>Natural Elements</td>
<td>7.2%</td>
<td>38.0%</td>
</tr>
<tr>
<td>Architecture</td>
<td>1.3%</td>
<td></td>
</tr>
<tr>
<td>General Descriptions of Physics</td>
<td>13.1%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Climate Aspects</td>
<td>1.3%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Descriptions Relative to the Surroundings</td>
<td>2.0%</td>
<td>8.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>47.7%</td>
<td>72.9%</td>
</tr>
<tr>
<td><strong>Social Aspects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Aspects</td>
<td>27.5%</td>
<td>2.1%</td>
</tr>
<tr>
<td>General Social Aspects/Activities</td>
<td>23.5%</td>
<td>20.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>51.0%</td>
<td>22.9%</td>
</tr>
<tr>
<td><strong>Psychological Aspects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotions</td>
<td>0.7%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Attitudes/Opinions</td>
<td>0.7%</td>
<td>0.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.3%</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

Chi-square tests were done for the categories that make up each of the three head categories. These showed significant differences in how the categories have derived, depending on type of place (plaza or park) regarding physical aspects, \( \chi^2(5, N = 207) = 52.87, p = .001 \), and social aspects, \( \chi^2(1, N = 122) = 23.99, p = .001 \). No difference could be confirmed in the category psychological aspects.

If the specific answer units were investigated in more detail, in particular the more open categories general descriptions of physics and descriptions relative to the surroundings, the prototypical plaza and park could be described as:

**Plaza**
Enclosed and mainly hard-grounded open square associated with the social aspects bustling life, meeting places, market places and shops.

**Park**
Place associated with physical aspects rather than social, mainly greenery. Also recognised for the contrast with the surrounding city it manifests.
Discussion of Prototype Interviews

One of the most notable differences between the plaza and the park prototype is the emphasis on social aspects for the plaza. The park collected less than half of the plaza's answer units in this category. The difference was mainly made up of the plaza's commercial aspects (mostly markets and shops). In the category general social aspects/activities, the same trend, that social aspects are related to the plaza, could be seen. Even though the proportions of answer units for the category overall were alike for the plaza and the park, the focus for the plaza was on the social attributes (e.g. people, meeting place) and for the park, it was on activities (e.g. relax, picnic, walk).

Another difference found between the plaza and the park prototype is the higher rate of physical aspects for the park. The greatest difference consisted in the much higher rate of natural elements for the park. Another difference was found in the rate of descriptions relative to the surroundings where the park collected 8.3% to the plaza's 2.0%. The park's answer units were about how the park differs from the city in general. Mainly in that the traffic is much less salient, but also that the park functions as a haven where people temporarily can get away from the city. Generally, it seemed during the interviews, that an appreciated aspect of parks is that they manifest an effect of contrast to the surrounding city.

9.2 Place Interviews

In the place interview, the question of what the 24 interviewees associate with the specific four places in the study, generated totally 338 answer units. Most units were associated with Gustav Adolfs Torg (103, mean value per person: 4.3), followed by Kronhusbodarna (85, 4.3/ person), Jussi Björlings Plats (83, 3.6/ person) and Floras Kulle (67, 3.4/ person).

The units were ordered using the same categories used for the units from the prototype interview. Two categories were added to better match the units from this interview. These were personal episodes (specific memories with personal significance) and history/culture (national traditions, politics etc). Table 3 shows the distribution of answers between the categories for each place (referred to as place descriptions). Figure 5 graphically presents the distribution of answers divided in the three head categories.

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8 Some interviewees did not give answers for some of the places due to their unfamiliarity with the place. They are excluded in the calculations of mean values.
Table 3
Categorised answer units from the place interview in percentage for each of the four urban places (place descriptions). Ordered according to the internality dimension with the most internal subcategories at the top.

<table>
<thead>
<tr>
<th></th>
<th>Kronhushodarna</th>
<th>Floras Kulle</th>
<th>Jussi Björlings Plats</th>
<th>Gustav Adolfs Torg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Aspects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Elements</td>
<td>1.2%</td>
<td>10.8%</td>
<td>10.8%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Natural Elements</td>
<td>36.9%</td>
<td>7.2%</td>
<td>7.2%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Architecture</td>
<td>7.1%</td>
<td></td>
<td>7.2%</td>
<td>3.9%</td>
</tr>
<tr>
<td>General Description of Physics</td>
<td>1.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate Aspects</td>
<td>1.2%</td>
<td>7.7%</td>
<td>13.3%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Descr. Relative to the Surroundings</td>
<td>3.1%</td>
<td>14.5%</td>
<td>14.5%</td>
<td>5.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9.4%</strong></td>
<td><strong>58.5%</strong></td>
<td><strong>54.2%</strong></td>
<td><strong>34.0%</strong></td>
</tr>
<tr>
<td><strong>Social Aspects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Aspects</td>
<td>23.5%</td>
<td>1.5%</td>
<td>3.6%</td>
<td>7.8%</td>
</tr>
<tr>
<td>General Social Aspects/ Activities</td>
<td>7.1%</td>
<td>23.1%</td>
<td>9.6%</td>
<td>32.0%</td>
</tr>
<tr>
<td>History/ Culture</td>
<td>35.3%</td>
<td>3.1%</td>
<td>4.8%</td>
<td>10.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>65.9%</strong></td>
<td><strong>27.7%</strong></td>
<td><strong>18.1%</strong></td>
<td><strong>50.5%</strong></td>
</tr>
<tr>
<td><strong>Psychological Aspects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Episodes</td>
<td>8.2%</td>
<td>1.5%</td>
<td>7.2%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Emotions</td>
<td>14.1%</td>
<td>3.1%</td>
<td>12.0%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Attitudes/ Opinions</td>
<td>2.4%</td>
<td>9.2%</td>
<td>8.4%</td>
<td>4.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24.7%</strong></td>
<td><strong>13.8%</strong></td>
<td><strong>27.7%</strong></td>
<td><strong>15.5%</strong></td>
</tr>
<tr>
<td>Number of units</td>
<td>85</td>
<td>67</td>
<td>83</td>
<td>103</td>
</tr>
</tbody>
</table>

Note: During the period the interview was carried out, an appreciated photo exhibition took place at Gustav Adolfs Torg. Eight interviewees mentioned this specific event in their associations with the place. These answers were categorised as a general social aspect/activity. The rate of 32.0% could therefore be regarded as exceptionally high. If the exhibition was excluded the rate dropped to 26.3%.
Figure 5. Distribution of answer units from the place interview ordered in the head categories.

Jussi Björlings Plats and Floras Kulle had the most answers related to physical aspects. Kronhusbodarna and Gustav Adolfs Torg had the highest rates of social aspects, whilst Jussi Björlings Plats and Kronhusbodarna both had high rates of psychological aspects.

Characteristics of the Places

With the results from the place descriptions it can be discussed what aspects of the places that are the most salient ones. In what way do the places differ from each other? Firstly, though, a question can be put as to what saliency can be in this perspective. For something to be salient, it has to contrast with something else. Fundamentally, this is the very way people form concepts; if objects do not contrast with each other, they can belong in the same category, otherwise not. When looking at effects of contrast in urban places, it can be argued that the surroundings, i.e. the city, have to be considered. For example, if you imagine a city with gravel and mud as the only paving, except for one plaza, which is paved with cobblestone. Surely, because of the effect of contrast, this plaza will be mainly noticed for its' special paving. Thus, to understand how people perceive a place, the place has to be regarded in relation to the outside world (Gustafson, 2001). So, in the line of this reasoning of the effect of contrast and places in contexts, in what salient ways do the plazas differ from each other (the park is not considered here)?

The most notable aspect is the very high amount of history/culture answers for Kronhusbodarna (35.3% compared to the second highest of 10.7% for Gustav Adolfs Torg). This could be explained by that the oldest profane house in Gothenburg is located at Kronhusbodarna (Kronhuset, built 1642-54) and that the other houses nearby are from the middle of the 18th century. However, at the same time Gustav Adolfs Torg must be said to also have historical and cultural roots. For example, Gothenburg was grounded in 1621 on the very
spot where the plaza is located. This is manifested by a statue of Gustav II Adolf pointing out to his men as to where to start building the city. The houses surrounding the plaza have a history that go back to the 17th century. In spite of this, Gustav Adolfs Torg was not at all as much recognised for its history as Kronhusbodarna was. Presumably, this is due to that the commerce at Kronhusbodarna has refined its' historical roots and consists of varying handicraft items and also due to the absence of modern occurrences that Gustav Adolfs Torg in contrast houses: traffic, views of modern houses, modern market sales. It can also be noted that in the place descriptions, the commercial aspects of Kronhusbodarna were much more frequent than it was for Gustav Adolfs Torg. Seemingly, this was so because of people perceiving the “historic” commerce of Kronhusbodarna as an important part of the (historic) experience of the plaza. Furthermore, the rate of emotion answers (mostly consisting of the place being cosy) is the highest of all places (14.1%). Evidently, the historical aspects are an important and positive part of people's experience and evaluation of Kronhusbodarna.

Overall, it seems like the historic roots of Kronhusbodarna have been made use of in an explicit way that has not happened at Gustav Adolfs Torg. This presumably leads to that people noticed this aspect and their experience of the plaza could be centred around this. People probably experienced a positive effect of contrast between the ancient environment of Kronhusbodarna and the modernity striving city of Gothenburg surrounding the plaza. This could be the key to that Kronhusbodarna, when all adds up, was the most appreciated place in the study.

Turning to Jussi Björlings Plats, it was mainly descriptions relative to the surroundings that distinguished this place from the other places, as well as climate aspects. The relative descriptions were mainly about Jussi Björlings Plats as situated just nearby the river (Göta älv). This is surely experienced as the main characteristic of the place, which was showed by the 32.5% of the answer units that in someway were related to the water or the port (e.g. boats as physical elements and water as natural elements). The place is seemingly planned to be in close contact with the water, having sloping stairs towards the water and no fences or other objects blocking the view over the water. The opera house located at the place did not have as many answer units associated with it as the water, only 13.3%. This can be considered remarkable since the place is built to make space for the opera house and the place is even named after a famous opera singer, Jussi Björling. Apparently, the effect of contrast that the river against the city environment of asphalt and stone in general creates, made a greater impact on the users' experience of the place than another large modern house (such as the opera house) did.

The last plaza of the three, Gustav Adolfs Torg, did not distinguish itself in any salient way as Kronhusbodarna and Jussi Björlings Plats did. It had a high rate of general social aspects/ activities, mainly attributable to answer units about people and demonstrations indicating that the place is the most crowded of the three (and according to the questionnaire Gustav Adolfs Torg is the place most often visited). Furthermore, it had 8.7% of the answer units categorised as general descriptions of physics (comparing to 1.2% for Jussi Björlings Plats and zero for the other places). All these units were about Gustav Adolfs Torg as large and open. The plaza is surely the largest of the three, but not the most open. The other plazas can be considered just as open, if not more open. The fact that Gustav Adolfs Torg, despite this, was seen as more open could be explained by the absence of characteristic and salient attributes of the place,
making people in the interview situation rely more on the prototypical image of a plaza, which when it comes to general descriptions of physics to a large extent were about openness. Moreover, the study as a whole picks out Gustav Adolfs Torg as the most prototypical plaza (see general discussion).

Interviewees’ Explanations of Aesthetics
People were asked to explain why they, in the questionnaire, had rated a place as ugly or beautiful. The various explanations they gave were ordered in ten categories depending on what was in focus in the explanation. Hence, these ten aspects, divided in the three head categories, can all influence how the aesthetics of a place is perceived.

It can be put forth again that the focus of this categorisation, and the one of climate below, was to reveal the natural variation of the interview data. Hence, the categories are not clear-cut and exclusive, they sometimes represent different analytical levels and some categories subsume others. They can be said to characterise the semantic fuzziness of people’s everyday experiences.

**Physical Aspects**

1. **Interior**
   If clearly no external referents or associations are included in a place’s value. Instead it is about the place in itself. For instance, a valuation with focus on a statue at a plaza, a thing obviously and physically belonging to the place in itself. An example (of Gustav Adolfs Torg): “the place is not so beautiful in itself, it is just a paved place”. Other examples are: “the statue is not so beautiful”, “a courtyard with cobblestone” and “a big open square”. This, the most internal category, can be contrasted to the psychological categories, which presuppose external objects or aspects.

2. **Greenery**
   The amount of greenery that can be found at a place, for example trees and grass. Examples: “not enough greenery”, (of Floras Kulle) “flower arrangements” and “the nature, the trees, the grass, the canal”.

3. **Architecture**
   About houses surrounding, or situated at, the place.

4. **View**
   The view from a place, rather than the place itself. For example (of Jussi Björlings Plats), “it is beautiful with the view over the water”, “it is only shit at the other side of the river” and “to be at the place is beautiful, the surroundings makes it a nice place”.

5. **Climate**
   About the climate that characterises a place. Valuations with references to season are included in this category, for instance (of Jussi Björlings Plats) “it is cold there in the autumn” or (of Floras Kulle) “in the spring time, it is very beautiful, at that time and during summer, the place is the best”.

Results and Discussions
**Social Aspects**

6. **Activity**
   How a place makes different activities possible or which activities usually take place in the setting. For instance (of Jussi Björlings Plats), “this place is not useful for anything, I do not know what to do there”, “nothing happens there”, (of Gustav Adolfs Torg) “it is nice with exhibitions” and “in itself the place is kind of sterile, but a lot of things go on there, activity is beautiful”.

7. **Bustling Life**
   If a place accommodates many people doing different things or not. The category also concerns traffic. Examples: “there are no people there”, (of Gustav Adolfs Torg) “a lot of people sitting on the stairs, it is nice when there is a lot of people there” and “too many cars and trams”. This category is distinguished from activity, in that this focuses on people and the former on people’s activity.

**Psychological Aspects** (Could also be called relational aspects. When an evaluation of a place explicitly is influenced by some clearly external value abstractly related to the place.)

8. **Associations**
   A place can be associated with something nearby that is strongly valued. For instance, the value of a seaport or a river can be associated with the value of the place. For instance (of Jussi Björlings Plats) “the place has the river” and “it is not really the plaza that is beautiful, it is the nearness to water that does it, if you just cut out the place it is not so beautiful”. In these examples, the focus of the associations are the “internal” values of water, not what water could symbolise in a wider perspective.

9. **Concern**
   The level of concern, or maintenance, a place receives from other actors. For instance (of Floras Kulle), “the city keeps repairing the place in spite of the frequent vandalism” or “no one looks after the place anymore, one does not care for the place as much now”.

10. **Symbolic Value**
    A place can symbolise values only abstractly connected with the physical setting of the place. For example, a place by the water can symbolise freedom, or a place someway situated in a historical context can symbolise just that historic age. For instance (of Kronhusbodarna): “historic place, old houses, you feel transported back in time”, “the cultural and historical environment” and (of Gustav Adolfs Torg) “it is a political centre in Gothenburg”. An abstract value is incorporated in the experience and valuation of a place, and the value is mentioned as a symbolic value, not a mere association of the “internal” value of an object with another object. This is how this category is distinguished from associations.

There were some comments from the interviews worth mentioning, although they were too few and not coherent enough to form a category. They were about the effect of contrast. This was
said about Gustav Adolfs Torg: “In a densely populated area, an open space can be positive in itself – suddenly you come out to a space and it’s open, it’s like a contrasting effect”. About Floras Kulle this was said: “It is like a dividing line in a city because of the grass”. Both quotes were about the effect of contrast as a positive experience.

In table 4 it can be seen how often the different foci were used for the four places. The table also shows whether the interviewee was positive, negative or neutral in their explanation. If an interviewee appreciated a place because of, for example, the beautiful view, this was a positive explanation, and a negative if the view was not beautiful. If it was difficult to settle if an explanation was positive or negative, or if it was both positive and negative in different perspectives, it was categorised as neutral.

<table>
<thead>
<tr>
<th>Physical Aspects</th>
<th>Kronhusbodarna</th>
<th>Floras Kulle</th>
<th>Jussi Björlings Plats</th>
<th>Gustav Adolfs Torg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
<td>8 1 1</td>
<td>2 1</td>
<td>1 2</td>
<td>4 5 3</td>
</tr>
<tr>
<td>Greenery</td>
<td>1 13 2</td>
<td>1 1</td>
<td>2 3 4</td>
<td></td>
</tr>
<tr>
<td>Architecture</td>
<td>11 2 2</td>
<td>4 2</td>
<td>10 1</td>
<td></td>
</tr>
<tr>
<td>View</td>
<td></td>
<td>4 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate</td>
<td>1 3 2</td>
<td>1 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20 4 3</strong></td>
<td><strong>18 1 4</strong></td>
<td><strong>8 8 3</strong></td>
<td><strong>16 9 7</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Aspects</th>
<th>Kronhusbodarna</th>
<th>Floras Kulle</th>
<th>Jussi Björlings Plats</th>
<th>Gustav Adolfs Torg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Bustling Life</td>
<td>2 2 3 1</td>
<td>3 2 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4 2 3 1</strong></td>
<td><strong>4 2</strong></td>
<td></td>
<td></td>
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<table>
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<tr>
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<th>Kronhusbodarna</th>
<th>Floras Kulle</th>
<th>Jussi Björlings Plats</th>
<th>Gustav Adolfs Torg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associations</td>
<td>1</td>
<td>1</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Concern</td>
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<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symbolic Value</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6 1 1 1</strong></td>
<td><strong>17 4</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overall, architecture were the most common focus used to explain why the aesthetics of a place was liked or disliked. The aesthetics of Floras Kulle was explained mainly with greenery. Gustav Adolfs Torg was the place with the most interior units. The view category was used only in connection with Jussi Björlings Plats.
Looking at the head categories, the level of social aspects was quite alike for the places. The variation was larger within physical aspects and the largest within psychological aspects. Gustav Adolfs Torg had the most physical aspects, and Jussi Björlings Plats had the most psychological aspects.

**Interviewees’ Explanations of Microclimate**

Eight categories, and three head categories, based on the foci of the explanations of the microclimate were created:

**Physical Aspects**

1. **Greenery**
   About the amount of trees, bushes, grass etc. at a place.

2. **Shelter**
   If a place offers shelter against the weather or not. The shelter can consist of houses possible to enter, or other objects. Examples (of Jussi Björlings Plats): “there is nothing to protect you from wind and rain” and “the place is so shut-in that the winds can’t reach you”. Answers such as “it is very open and windy here” are also included in this category.

3. **Windiness**
   If a place is windy or not. Answers such as “it is very windy here” fit in this category. However, if answers are focused on windiness due to the absence of shelter they fit in the shelter category.

4. **Sun**
   About the amount of sun received at a place. Examples: (of Kronhusbodarna) “the café is placed so that the sun can reach you” and (of Gustav Adolfs Torg) “it is sunny and very hot sometimes in the summer”.

**Social Aspects**

5. **People**
   The level of bustling life happening. Examples (of Floras Kulle): “a lot of people are there to sunbath” and “there is so much hustle and bustle there”.

6. **Traffic**
   The amount of traffic or exhaust fumes nearby. Examples (of Kronhusbodarna): “you can get away from the traffic” and (of Gustav Adolfs Torg) “it is because of the exhaust fumes”.

**Psychological Aspects**

7. **Saliency**
   How salient the climate at a place is, if the place is exposed to the local climate or not. It is about the relation of the local climate and the microclimate. Example (about Gustav Adolfs Torg): “not as exposed to rain as Jussi Björlings Plats”. One interviewee, who did not
generally like Gustav Adolfs Torg, brought forward as a positive aspect, that at least it is possible to clearly perceive the weather as it is, no matter how it is. The interviewee contrasted the place with another one in Gothenburg (Fredsgatan) where it always is shady and you do not have the same possibility to know what the weather is at the local level. This category has some resemblance with the shelter category. An answer focusing on absence of shelter ends up in the shelter category and one focusing on exposure ends up in this category. It has some resemblance with the category windiness as well, in this category though, a relation between local and microclimate has to be present.

8. Expectations

Expectations or assumptions of places and climate, building on different general observations, rather then direct experiences. For example (of Jussi Björlings Plats), “probably it is quite windy there” or (of Floras Kulle) “it seems like people often stay there and relax, so I guess that it is pleasant there”. The category also contains utterances of climatic aspects such as windiness that sometimes can be experienced as suitable. For instance (about Jussi Björlings Plats): “It gets windy there, but it is OK though, by the water it should be windy. It is worse when it is windy at Gustav Adolfs Torg. When it is windy near the houses at a plaza, it feels worse than when it’s windy by the water. It’s something in the genes I guess.” In these cases the expectations of windiness influence the experience of the wind.

Generally, associations were not something at all common in the climate interview, as they were in the aesthetic interview. Therefore this aspect did not form a category in this area. However, one interviewee had an elucidatory comment regarding the association of values in two steps between different entities where the first was climate (about Jussi Björlings Plats): “A place greatly exposed to the weather, if it is windy in general, it is without doubt windy at this place. The sea is lovely, autumn storms over the water, the wind mingles with the water, the place lives up someway because it is so exposed to the weather, and the opera house also becomes vivid and alive”.

From some of the interviews it was possible to reveal a few different approaches for how the interviewees relate to climate when they are demanded to answer these kinds of questions. A few interviewees explicated an approach, for others the approaches were implicitly embedded in their arguments. Two main approaches could be identified. Firstly, the weather-exposed places are very pleasant when the weather is good and very unpleasant when the weather is bad. A consequence of this seemed to be that people visit them only when the weather at a local level (and also on the micro-level that is) is good. In these cases the weather is a part of the visiting motive. One interviewee said: “you only go there when the weather is good”. If so, this will lead to positive experience of microclimate, due to a climatically skewed visiting pattern. In the light of this, it can also be expected that the climatic dimension in general becomes important for these kinds of places. Climatic ratings will therefore be relatively well thought-out.

In contrast, and secondly, climate will not be as important for the places people have to visit for reasons independent of the weather (for example transportation). The decision to visit the place is not grounded on or related to weather. Thus, the climatic dimension is excluded from the
persons visiting motives. For climatic ratings, this seemed to have two outcomes. One was that people did not bother, or did not have the basis, to reflect on climate at these places. This led to ratings in the middle range of the scale (maybe an answer alternative like “don’t know” could have been used instead if it had been provided in the questionnaire). Another outcome, leading to the same kind of “middle answers”, but for another reason, was that people at such a place will perceive all kind of weather conditions and over a period of time it is likely that a mean value of perceived (bad and good) weather will accumulate around middle values. In this, the latter outcome, the climate ratings could have been reflected on, in contrast to the first mentioned outcome of this second approach.

It can be mentioned that people sometimes contradicted themselves when they in one context used one approach and in another used a different. Climate as a place dimension is not something that people seemed to have clear concepts of.

Table 5 shows how often the different foci of the climate explanations were used. The table also shows whether the interviewee was positive, negative or neutral in their explanations.

### Table 5

Number of times different foci were used in the place interview by interviewees to explain microclimate. Summarised in the three head categories. Ordered according to the internality dimension with the most internal subcategories at the top.

<table>
<thead>
<tr>
<th></th>
<th>Kronhusbodarna</th>
<th>Flores Kulle</th>
<th>Jussi Björlings Plats</th>
<th>Gustav Adolfs Torg</th>
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<tr>
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<td>Windiness</td>
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</tr>
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<td>Sun</td>
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</tr>
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<td>Expectations</td>
<td>2</td>
<td>3</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Regarding explanations of climate, the most common category was shelter used mainly for Gustav Adolfs Torg, in a negative sense. Shelter was mentioned also for Kronhusbodarna, but then in a mostly positive sense. The second most common category was windiness.
Looking at the head categories, the physical aspects were used most often in the explanations for the plazas. Regarding the social aspects, there were no notable differences between the places. The psychological aspects were mainly used in connection with Jussi Björlings Plats.

Discussion of Climate Explanations
Generally it seems that wind is what people think of when they think of weather and climate. A large proportion of the answer units were found in these categories. Answers focused on sun clearly was not as frequent.

Considering the explanations of climate in more depth, Jussi Björlings Plats and Floras Kulle had the highest level of psychological aspects (expectations and saliency). It could be argued that this depends on the natural elements found at these places; the river and the trees that mediate the climate so that it more clearly can be perceived – the weather becomes salient, and from this, people can form expectations. For example, considering Jussi Björlings Plats and the river, if it is windless, or very windy - this clearly can be seen on the surface on the water, if it rains - the extent of the raining shows on the water (both visually and audibly) in a way that it does not on concrete ground, if it is cold – the water turns to ice. The same reasoning can be used for trees; the rain can be heard when it falls on the leaves, the wind can be both seen and heard when it moves the crown of the trees and the leaves.

If considering a longer period of time, it can also be noted that natural elements like trees and water capture the changing of seasons in a way that urban environments do not. Further evidence that climate is important in relation to these two places, is that in the place descriptions, they clearly had the highest rates of climate aspects.

The climate of Kronhusbodarna and Gustav Adolfs Torg was more often explained with references to shelter than the climate of Jussi Björlings Plats and Floras Kulle was. This point in the same direction as the reasoning above, that Kronhusbodarna and Gustav Adolfs Torg are perceived as more urban, and not-natural, than the other two places, since urbanity to some extent is about protection from climatic conditions.
9.3 Questionnaires

The distribution of answers to the question of aesthetics, “How do you like the appearance of these places at this time of year?” in the questionnaire is presented graphically in figure 6 and numerically in table 6.

![Figure 6](image)

Figure 6. Proportions of answers regarding interviewees’ evaluations of aesthetics in the questionnaire for each of the urban places. Neither nor answers are excluded.

<table>
<thead>
<tr>
<th>Aesthetic Evaluation</th>
<th>Kronhusbodarna</th>
<th>Floras Kulle</th>
<th>Jussi Björlings Plats</th>
<th>Gustav Adolfs Torg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Beautiful</td>
<td>11.3%</td>
<td>8.8%</td>
<td>7.5%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Quite Beautiful</td>
<td>47.7%</td>
<td>44.2%</td>
<td>31.7%</td>
<td>39.5%</td>
</tr>
<tr>
<td>Neither Nor</td>
<td>37.4%</td>
<td>40.1%</td>
<td>53.7%</td>
<td>44.8%</td>
</tr>
<tr>
<td>Quite Ugly</td>
<td>3.5%</td>
<td>6.0%</td>
<td>5.3%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Very Ugly</td>
<td>0.2%</td>
<td>0.7%</td>
<td>1.9%</td>
<td>0.6%</td>
</tr>
<tr>
<td>N</td>
<td>665</td>
<td>678</td>
<td>644</td>
<td>692</td>
</tr>
</tbody>
</table>

Table 6

Numerical presentation of the graph in figure 6 (interviewees’ evaluations of aesthetics in the questionnaire for each of the urban places).

Kronhusbodarna was the place that the most people found very beautiful (11.3%). Looking at the other extreme (very ugly), Jussi Björlings Plats had the most votes (1.9%). Considering the mean values of the aesthetic ratings (figure 8), Kronhusbodarna was ranked highest (3.66 where 5 is
very beautiful\(^9\), followed by Floras Kulle (3.54), Jussi Björlings Plats (3.38) and Gustav Adolfs Torg (3.33). The mean for all places in total was 3.48.

In figure 7 and table 7 the answers to the question of microclimate in the questionnaire, “How do you perceive the climate at this time of year at the following places?” are presented.

Figure 7. Proportions of answers regarding interviewees’ evaluations of climate in the questionnaire for each of the urban places. Neither nor answers are excluded.

Table 7
Numerical presentation of the graph in figure 7 (interviewees’ evaluations of climate in the questionnaire for each of the urban places).

<table>
<thead>
<tr>
<th></th>
<th>Kronhusbodarna</th>
<th>Floras Kulle</th>
<th>Jussi Björlings Plats</th>
<th>Gustav Adolfs Torg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Pleasant</td>
<td>6.4%</td>
<td>5.6%</td>
<td>3.5%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Quite Pleasant</td>
<td>35.2%</td>
<td>36.5%</td>
<td>26.2%</td>
<td>31.1%</td>
</tr>
<tr>
<td>Neither Nor</td>
<td>51.1%</td>
<td>46.8%</td>
<td>50.1%</td>
<td>48.4%</td>
</tr>
<tr>
<td>Quite Unpleasant</td>
<td>7.0%</td>
<td>10.1%</td>
<td>17.6%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Very Unpleasant</td>
<td>0.3%</td>
<td>1.1%</td>
<td>2.6%</td>
<td>2.1%</td>
</tr>
<tr>
<td>N</td>
<td>657</td>
<td>666</td>
<td>649</td>
<td>678</td>
</tr>
</tbody>
</table>

Kronhusbodarna, and Floras Kulle, were the places rated most climatically very pleasant (6.4% and 5.6% respectively). Jussi Björlings Plats had the highest numerical value for very unpleasant answers (2.6%). Considering mean values, the ranking was Kronhusbodarna (3.40, where 5 is very pleasant), Floras Kulle (3.35), Gustav Adolfs Torg (3.17) and Jussi Björlings Plats (3.10) (figure 8). The mean value for all places taken together was 3.26.

\(^9\) Consistently in this paper, higher values in scales mean more positive/better ratings.
Figure 8. Mean values for the evaluation of aesthetics and microclimate in the questionnaire.

Univariate analyses of variance for mean values showed a significant difference in the reports of experience between the places of both aesthetics, $F(3, 2647) = 21.18, p < .001$, and microclimate, $F(3, 2618) = 16.63, p < .001$ (figure 8). A post hoc test showed that regarding aesthetics, the only places not differing from each other significantly was Jussi Björlings Plats and Gustav Adolfs Torg. Regarding climate, two different subsets were found. One includes Kronhusbodarna and Floras Kulle, and the other Jussi Björlings Plats and Gustav Adolfs Torg.

Additionally, a significant positive correlation, $r = 0.358, p < .01$, was found between the questions of aesthetics and microclimate. That is, if people rated a place to be aesthetically beautiful, they also tended to rate it as microclimatically pleasant. This trend and the mean value ranking of aesthetics and climatic pleasantness can be seen in figure 8.

Univariate analyses of variance were done for both the aesthetic and the climate question testing the effect of age and gender. Regarding aesthetics, gender had a significant effect, $F(1, 2647) = 8.37, p < .004$. Women generally rate places as more beautiful than men. This effect was seen mainly at Jussi Björlings Plats. Age had no effect for aesthetics. For climate, both gender and age had a significant effect on response patterns, $F(1, 2618) = 4.58, p < .032$ and $F(3, 2618) = 11.57, p < .001$ respectively). Women tended to rate places as more pleasant than men did. This effect was most salient at Kronhusbodarna and Floras Kulle. Regarding the age effect, younger rated places as more pleasant than the elderly did. This was most applicable at Gustav Adolfs Torg and Floras Kulle.

Furthermore, the questionnaire included a question of how often people pass or stay at the different places. From the answers, it can be concluded that Gustav Adolfs Torg was the most
frequently visited place by far. 32% of the subjects visited Gustav Adolfs Torg daily or several times a week, compared to 19% for Floras Kulle, 9% for Kronhusbodarna and 5% for Jussi Björlings Plats. Clearly, Kronhusbodarna and Jussi Björlings Plats were the two places visited the least.

Discussion of Questionnaires

One of the main results from the questionnaire, weighting in the results from both the aesthetic and climate question, is that Kronhusbodarna was the most preferred place in the study. Jussi Björlings Plats and Gustav Adolfs Torg were the least preferred.

For both the aesthetic and climate question, Gustav Adolfs Torg received the least extreme values (very ugly/beautiful and very unpleasant/pleasant). Presumably, this is a sign of Gustav Adolfs Torg not arousing such strong feelings compared to the other places. In spite of this, and considering that Gustav Adolfs Torg was one of the two least preferred places, it was nevertheless the most visited place. This could be attributable to the place being as central as it is, and that it is a junction for trams and buses. It could be that the place is recognised mainly for its function and not for its aesthetic qualities. This can explain the low amount of extreme values.

The strong positive correlation between the ratings of aesthetics and climate could indicate that climate was not perceived as a separate part of places. Maybe, as Knez (in press, a) suggested, climate is a nested in the structure of places and if so, it can be argued when it comes to everyday experiences of urban places of the kind investigated in this study, that users are not able to separate aesthetic and climatic dimensions. Instead they have a general feeling for a place, either one mainly positive or one mainly negative, and this is what is being communicated in a study of this kind (even if it can be argued that these feelings stem from separate parts of the places).
9.4 On-site Interviews

The distribution of answers to the question of aesthetics, “How do you perceive this place right now – ugly/beautiful?” for both the summer and the autumn interview taken together is presented in figure 9 and table 8.

![Proportions of answers regarding interviewees' evaluations of aesthetics in the on-site interviews for each of the urban places](image)

Figure 9. Proportions of answers regarding interviewees’ evaluations of aesthetics in the on-site interviews for each of the urban places. Neither nor answers are excluded.

Table 8

Numerical presentation of the graph in figure 9 (interviewees’ evaluations of aesthetics in the on-site interviews for each of the urban places).

<table>
<thead>
<tr>
<th>Urban Place</th>
<th>Beautiful</th>
<th>(Less Beautiful)</th>
<th>(Less Ugly)</th>
<th>Ugly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kronhusbodarna</td>
<td>54.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floras Kulle</td>
<td>49.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jussi Björlings Plats</td>
<td>43.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gustav Adolfs Torg</td>
<td>22.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Beautiful</th>
<th>(Less Beautiful)</th>
<th>(Less Ugly)</th>
<th>Ugly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kronhusbodarna</td>
<td>32.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floras Kulle</td>
<td>27.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jussi Björlings Plats</td>
<td>28.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gustav Adolfs Torg</td>
<td>27.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Beautiful</th>
<th>(Less Beautiful)</th>
<th>(Less Ugly)</th>
<th>Ugly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kronhusbodarna</td>
<td>12.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floras Kulle</td>
<td>16.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jussi Björlings Plats</td>
<td>21.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gustav Adolfs Torg</td>
<td>31.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Beautiful</th>
<th>(Less Beautiful)</th>
<th>(Less Ugly)</th>
<th>Ugly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kronhusbodarna</td>
<td>0.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floras Kulle</td>
<td>6.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jussi Björlings Plats</td>
<td>3.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gustav Adolfs Torg</td>
<td>14.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Beautiful</th>
<th>(Less Beautiful)</th>
<th>(Less Ugly)</th>
<th>Ugly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kronhusbodarna</td>
<td>1.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floras Kulle</td>
<td>3.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jussi Björlings Plats</td>
<td>4.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gustav Adolfs Torg</td>
<td>4.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>277</td>
</tr>
</tbody>
</table>
Kronhusbodarna was rated as most beautiful, as it also was in the questionnaire. Here Kronhusbodarna had the highest rate of beautiful answers (54.9%), was the only place with 0% ugly answers and also had the highest mean value (4.41, where 5 is beautiful). The other places’ mean values were 4.17 (Floras Kulle), 4.04 (Jussi Björlings Plats) and 3.49 (Gustav Adolfs Torg) (figure 10). The mean value for all places lumped together was rather high (3.99).

Univariate analyses of variance showed, that regarding aesthetics, the mean values were significantly different from each other, $F(3, 1052) = 48.44, p < .001$, except regarding Floras Kulle and Jussi Björlings Plats. A check for age and gender effect showed no gender effect, but an age effect, $F(2, 1052) = 5.59, p < .004$; elderly rated places as being more beautiful than youngsters. This contradicts the results from the questionnaire, where the youngsters rated the places as being more beautiful.

The results for the question of if people stayed at the place mainly to relax, get some fresh air or if they were on their way to work, school or some other place are presented in table 9. Only the extreme values are included (1 and 5 on the five-graded scale). The figures are mean values of the autumn and summer interview taken together.
Table 9
Reasons for interviewees to stay at places depending on season reported in the on-site interviews.

<table>
<thead>
<tr>
<th></th>
<th>Kronhusbodarna</th>
<th>Floras Kulle</th>
<th>Jussi Björlings Plats</th>
<th>Gustav Adolfs Torg</th>
</tr>
</thead>
<tbody>
<tr>
<td>On my way</td>
<td>32%</td>
<td>34%</td>
<td>29%</td>
<td>60%</td>
</tr>
<tr>
<td>Relax</td>
<td>44%</td>
<td>35%</td>
<td>56%</td>
<td>26%</td>
</tr>
</tbody>
</table>

Gustav Adolfs Torg was the place most people visited on the basis that they were on the way to or from something, whilst Jussi Björlings Plats was the most visited place with the aim just to relax, get some fresh air, see other people etc.

Discussion of On-site Interviews
Regarding the mean values of aesthetic evaluation, the on-site interviews taken together showed a ranking similar to that in the questionnaire, Kronhusbodarna was the most beautiful, Gustav Adolfs Torg was the most ugly, and Floras Kulle and Jussi Björlings Plats were in-between. In the on-site interview though, generally, people rated all the places as more beautiful than in the questionnaire. On-site the mean value was 3.99 and the questionnaire’s was 3.48.

In the on-site interviews, it showed that Gustav Adolfs Torg was the place where people most often are on their way to or from something. This could be a part in an explanation of why the plaza is evaluated as not beautiful, since motivation to visit a place has an effect on the experience of it. If the aim to visit Gustav Adolfs Torg mainly is to go there and wait for transportation this in itself can create dissatisfaction with the physical environment (Nikolopoulou & Steemers, 2003).
10. General Discussion

The aim of this study was to reveal the structure and content of people’s urban place concepts and understand how they relate to evaluations of the places’ aesthetics and microclimate. Regarding aesthetics it is important to emphasise that the main issue was not to find out generally what is aesthetical, rather the issue was to understand what aspects of urban places aesthetic evaluations revolve around.

The most important results (summarised from the Results and Discussions section) are:

1. A prototypical urban plaza is an enclosed and mainly hard-grounded open square with the associated aspects bustling life, meeting places, market places and shops. Parks are prototypically associated with physical aspects, mainly greenery, but also for the contrast with the surrounding city it manifests.

2. Of the four places in the study, Kronhusbodarna was the most appreciated considering both aesthetics and microclimate. Thereafter came Floras Kulle. The least appreciated was Gustav Adolfs Torg. Jussi Björlings Plats was slightly more appreciated than Gustav Adolfs Torg.

3. Users mainly recognised Kronhusbodarna for its historical heritage and Jussi Björlings Plats for its location by the water. Gustav Adolfs Torg was not recognised as clearly for any one characteristic. Floras Kulle was recognised for its greenery.

4. The aesthetics of Gustav Adolfs Torg, the most prototypical plaza, was the place explained with the highest proportion of (internal) physical aspects and one of the lowest proportions of (external) psychological aspects. The least prototypical plaza, Jussi Björlings Plats, was the place explained with the lowest proportion of (internal) physical aspects and the highest proportion of (external) psychological aspects.

In this general discussion it is important to note the character of the interpretation of the results obtained with the mixture of quantitative and qualitative methods used in this study. The quantitative data from the questionnaire and the on-site interviews were statistically investigated and interpreted. However, the more qualitative data from the prototype and place interviews could not be interpreted in this manner. These data were instead intended to offer a possible explanation of the quantitative data; the evaluative ratings from the questionnaire and the on-site interviews. That is, with the qualitative data it was possible to state what the reasons for the specific evaluations of the places could be, and try to thoroughly understand these reasons.

10.1 How Prototypical are the Places?

Depending on how prototypical urban places are, Purcell’s schema discrepancy model makes claims of how the places should be evaluated. Expectations of kinds of places do influence the input situation that partly determines the evaluation of it. One utterance of an interviewee in the
place interview illustrates this: “In their categories Gustav Adolfs Torg and Floras Kulle are good examples”.

Table 10 presents the three most common categories from table 2 for the prototypical places (italics in the first column) and, from table 3, the three most common categories from the place description of specific places (the first column). To better be able to compare the specific places with the prototypical places, the proportion of answer units regarding the three most common prototypical categories are stated for each specific place (the second column).

Table 10
The answer categories most commonly associated with the specific four places, and the prototypical places. And also, for the prototypical categories, the proportion of answer units for the specific places.

<table>
<thead>
<tr>
<th>Three Most Common Categories</th>
<th>Prototypical Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaza Prototype</td>
<td></td>
</tr>
<tr>
<td>Commercial Aspects</td>
<td>27.5%</td>
</tr>
<tr>
<td>General Social Asp. / Activities</td>
<td>23.5%</td>
</tr>
<tr>
<td>Physical Elements</td>
<td>22.9%</td>
</tr>
<tr>
<td>Kronhusbodarna</td>
<td></td>
</tr>
<tr>
<td>History/ Culture</td>
<td>35.3%</td>
</tr>
<tr>
<td>Commercial Aspects</td>
<td>23.5%</td>
</tr>
<tr>
<td>Emotions</td>
<td>14.1%</td>
</tr>
<tr>
<td>Jussi Björlings Plats</td>
<td></td>
</tr>
<tr>
<td>Descriptions Relative to the Surr.</td>
<td>14.5%</td>
</tr>
<tr>
<td>Commercial Aspects</td>
<td>23.5%</td>
</tr>
<tr>
<td>Emotions</td>
<td>12.0%</td>
</tr>
<tr>
<td>Gustav Adolfs Torg</td>
<td></td>
</tr>
<tr>
<td>General Social Asp. / Activities</td>
<td>32.0%</td>
</tr>
<tr>
<td>Physical Elements</td>
<td>10.7%</td>
</tr>
<tr>
<td>History/ Culture</td>
<td>10.7%</td>
</tr>
<tr>
<td>Park Prototype</td>
<td></td>
</tr>
<tr>
<td>Natural Elements</td>
<td>38.0%</td>
</tr>
<tr>
<td>General Social Asp. / Activities</td>
<td>20.8%</td>
</tr>
<tr>
<td>Physical Elements</td>
<td>17.2%</td>
</tr>
<tr>
<td>Floras Kulle</td>
<td></td>
</tr>
<tr>
<td>Natural Elements</td>
<td>36.9%</td>
</tr>
<tr>
<td>General Social Asp. / Activities</td>
<td>23.1%</td>
</tr>
<tr>
<td>Physical Elements</td>
<td>10.8%</td>
</tr>
</tbody>
</table>
As can be seen in table 10 the prototype park and the Floras Kulle park had the same three most common answer categories. Even the proportions in between the categories were similar. Thus, it can be concluded that Floras Kulle represents a prototypical park.

Regarding the plazas, no plaza was shown to have the same prototypical status, as Floras Kulle had. Looking only at the commercial aspect, which was the most common category for the prototype, Kronhusbodarna had the highest rate of these answers. The rate was even similar to the rate for the prototype (23.5% to 27.5%). A difference though was that the commercial aspects for Kronhusbodarna were commonly about cafés, whilst for the prototype, they were about market trade.

When considering the second most prototypical category (general social aspects/activities), Kronhusbodarna had a much lower rate; 7.1% compared to the prototype’s 23.5%. Instead, Gustav Adolfs Torg was the place with the highest amount of general social aspects/activities, 32.0%.

Lastly, considering physical elements, the third most common prototypical category, both Jussi Björlings Plats and Gustav Adolfs Torg had half of the amount of the prototype’s 22.9%.

Looking in depth at the specific answer units it can be concluded that Gustav Adolfs Torg had the most prototype like units regarding this category. Kronhusbodarna had almost no answer units in the physical elements category (1.2%).

Apparently, it can be said that Gustav Adolfs Torg is the most prototypical plaza considering the two categories of general social aspects/activities and physical elements. Considering only the prototype number one category, commercial aspects, Kronhusbodarna can also be considered a prototypical plaza. Jussi Björlings Plats is the least prototype like plaza. Also if considering the three head categories physical, social and psychological aspects, Gustav Adolfs Torg can be seen as the most prototypical plaza. In the prototype interview the plaza rendered the following proportions: physical aspects, 47.7%, social, 51.0% and psychological, 1.3% (see table 2). This can be compared to Gustav Adolfs Torg’s proportions of (in the same order) 34.0%, 50.5% and 15.5% (see table 3) which, compared to the other plazas, diverges the least from the prototype proportions.

Prototypical status can also be settled when considering the kinds of environmental items in the place descriptions and their relation to schemas (see section 7.2, Schemas and Evaluation). With support from the prototype interviews, it can be argued that the only schema-expected item for a plaza is (enclosed and mainly hard-grounded) open square. This is the only item, or aspect, absolutely necessary to define an urban plaza. In the prototype interview, 19 (12.4%) answer units regarding the plaza were in someway related to this schema-expected aspect. Further, schema-compatible items for a plaza can for example be markets, people and statues. An investigation of the answer units in the place descriptions exposes that Gustav Adolfs Torg had several more both schema-expected (11, 10.7%) and schema-compatible (12) items than both Kronhusbodarna (1 expected, 4 compatible) and Jussi Björlings Plats (1 expected, 2 compatible). Thus, this rather convincingly confirms the mentioned ranking of prototypical likeness of the places with Gustav Adolfs Torg as the most prototypical plaza.
10.2 Prototypical Status and Affect

This study ranks Gustav Adolfs Torg as the most prototypical plaza followed by Kronhusbodarna and Jussi Björlings Plats in that order. Considering both aesthetics and microclimate, overall, Kronhusbodarna is the most appreciated place of the four in the study. Gustav Adolfs Torg is the least appreciated. Thus, the most prototypical plaza is the least appreciated. The most appreciated plaza, Kronhusbodarna, is somewhat removed from the prototypical plaza, and the plaza farthest removed from the prototype, Jussi Björlings Plats, is appreciated almost as little as Gustav Adolfs Torg.

These results could be explained by Purcell’s schema discrepancy model. Purcell (1986) argued that an environment of prototypical status would not arouse users and therefore not lead to an affective response. This can hold for Gustav Adolfs Torg. Furthermore, Kronhusbodarna can in Purcell’s theory be considered to be appreciated because of the ideal degree of discrepancy between it and the plaza prototype; people encountering the plaza have no trouble defining it as a plaza and explore it with this schema as ground, but yet it still is perceived as something new and different from what is expected. Lastly, Jussi Björlings Plats is almost as unappreciated as Gustav Adolfs Torg, but instead, presumably due to the plaza as being too removed from the prototype.

When discussing place experiences of the kind investigated here it must be acknowledged that they can be analysed in several different dimensions. The dimension analysed here is a psychological one of place concepts. Other dimensions could for example be physical with focus on level of complexity and coherence, or it could be activities looking at patterns of different activities. Depending on dimension, analyses of distance between concepts and instances in the light of the schema discrepancy model can come to different conclusions.

Relations Between Concepts, Descriptions and Aesthetic Evaluations

Can any relations be seen between users’ place concepts, their descriptions of the specific places and their explanations of their evaluations of the aesthetics and microclimate of the places? It could be hypothesised that the experience of prototypical places will be centred around internal aspects more than on external, since the internal aspects, physical and social aspects (in contrast with the psychological), is the focus in the prototypes. Does this hold for the data for the specific places? Looking at the aesthetical explanations of the plazas, seemingly yes. If focusing on the most internal aspects of the explanations: interior and greenery, it can be seen that the prototypical Gustav Adolfs Torg had the highest amount of these aspects (21 foci followed by the 11 foci of Kronhusbodarna). Gustav Adolfs Torg also had a high proportion of (internal) foci on architecture. The least prototypical plaza, Jussi Björlings Plats, clearly had the fewest aesthetic explanations related to internal values and greenery. And also, it had the highest amount of (external) psychological aspects, mainly associations to water, the port and boats. Thus, it is plausible to state that the aesthetical experience of a prototypical plaza will focus on prototypical (internal) physical attributes. This, following Purcell’s schema discrepancy model, could lead to that experiences of prototypical plazas will not be very emotionally arousing. Confirmation of this can be the clearly higher amounts of emotions in the place descriptions for Jussi Björlings Plats and Kronhusbodarna, the two plazas without a clear prototypical status.
Furthermore, considering Gustav Adolfs Torg and Floras Kulle together (as the most prototypical plaza and park respectively), a relation can be seen between them in how the aesthetic explanations and the place descriptions correspond. Regarding the descriptions, Gustav Adolfs Torg did not, overall, have a very high amount of physical aspects. However, if looking at the most outstanding physical aspects in the prototype, physical elements and general descriptions of physics, these (especially the latter) were well represented in the description of Gustav Adolfs Torg. Floras Kulle had a very high amount of natural elements, as well as physical elements. Thus, both the place descriptions of the most prototypical places are focused on internal values. And as mentioned above, the same hold for the aesthetic explanations. Thus, the more prototypical status a place have, the more will descriptions and evaluations focus on internal aspects.

Here it can be reminded of the before identified aspects that seemed to be the most important for people's experience and evaluation of the specific places: the historic heritage for Kronhusbodarna and the water (and related aspects) for Jussi Björings Plats. No place is very prototypical and both the salient aspects are schema-irrelevant items, i.e. they are not needed for the places to be defined as plazas.

From this reasoning, it seems that prototypicality influences the way people perceive and experience the aesthetics of places. That is, when you visit a place and perceive only schema-expected and schema-compatible objects and aspects, you will probably not become very emotionally aroused. Furthermore, the specific memory of the place will be transformed in the direction of the familiar, i.e. the place schema. An evaluation of such a place will naturally be centred around prototypical aspects since this is what is remembered of the place.

For an aspect of a place to succeed to be perceived as salient it has to manifest a certain level of contrasting effect. Supposedly, schema-irrelevant aspects that only have a low level of saliency will in people's memories of the place loose its significance and maybe even be forgotten when the memory of the place transforms to the schema. It is therefore necessary for an aspect to be able to have the role of a centre of attention, to have a level of saliency above a certain threshold. Only in such cases will the specific aspect “survive” the memory transformation and be perceived as truly salient.

The term (perceptual) saliency as used by Baroni (2003) has to be broadened though to better fit in with this argument. She defined it as being comprised of physical characteristics or of spatial location. In this reasoning it has to include more, such as cultural and historical aspects for example. Saliency can maybe best be defined as something that manifests a contrasting effect, whether physical, social or psychological.

**Prototypicality and Climate Aspects**

What about the climatic explanations of the evaluations, are they influenced by prototypicality and place characteristics? A first observation that can be made regarding climate and aesthetics is that questions of climate does not seem to create an experience as easily explicated as questions of aesthetics. This was also the general feeling in the interview situations. The number of different foci in the explanations of aesthetics was 135, for climate, it was 57. From this it could be argued that people's thoughts of climate is not as vivid as these for aesthetics. Pointing in the same direction, even though not as clearly, is that the extreme values (1 and 5) in the
questionnaire were not as frequently used regarding the climate as for aesthetics (a mean of 6.1% for climate and 8.6% for aesthetics). The mean value for climate of the neither nor answers was 49.1%, for aesthetics, it was 44.0%.

Due to this, relations between climate explanations, concepts and descriptions are not as certain as they are for aesthetics. What can be observed though regarding the climate explanations, is that Gustav Adolfs Torg had the highest number of foci with physical aspects and Jussi Björlings Plats had the highest number with psychological aspects. This confirms the reasoning of prototypicality and evaluations above, that people’s experiences of a prototypical plaza focus on prototypical aspects, even when it comes to aspects such as microclimate.

11. Methodological Concerns

In this section it will be discussed how the results of this study could have general implications of methods used in studies of place experiences.

11.1 Users or Observers as Subjects?
Considering the most obvious difference between the place and prototype interviews, the one that the psychological aspects like emotions and attitudes are much more frequent in the former than in the latter (even if excluding personal episodes which naturally were not applicable in the prototype interview), it is plausible to conclude that the psychological aspects are evoked and reported mainly when interviewees personally can relate to the objects discussed. According to Canter (1977) a place is the result of relationships between actions, concepts (i.e. psychological aspects) and physical attributes. Thus, place concepts will not be ecologically valid if they are not related to both actions and physical attributes. And since concepts influence place evaluations, these will be distorted if the subjects in a study have not been able to use the investigated places in an ordinary way.

Focusing on attitudes, Jorgensen and Stedman’s (2001) stated that an attitude is an organiser of self-referent cognitions, emotions and behaviours. In the place interview people report attitudes (6.2% in mean for all places), but not at all in the prototype interview. Thus, it can be argued that it is not until people personally and specifically can relate (cognitively, emotionally and behaviourally) to the object discussed that they have an organised overall picture of it.

Consequently, to do justice to place experiences and include all actual and relevant aspects of these experiences, subjects who have experienced activities and physics of the place of interest must be included in place studies.

11.2 Width of Users’ Aesthetic and Microclimatic Explanations
One aspect worth emphasising is the variation and width of the explanations of aesthetics and microclimate. Considering the questions in the questionnaire (“How do you like the appearance of these places at this time of year?” and “How do you perceive the climate at this time of year?”), it is quite notable that people that answered them related to such widely separated aspects such as climate, activities, symbolism (for aesthetics), traffic, expectations and shelter (for climate). The lesson must be that terms like aesthetics and climate, even though more or less well lexically defined as “of the appreciation of the beautiful” (Hornby, 1974, p. 15) and “conditions
of temperature, rainfall, wind, etc.” (Hornby, p. 155), to users of places, comprise large networks of meanings. To fully understand users’ experience of places, a wide array of (meaningful) aspects must be calculated for, and what the aspects can be, will hardly be predicted. Therefore qualitative and “open” methods play an important role in research of place experiences.

12. Practical Implications

The results from this study suggest that if places are prototypical, they will not be as appreciated as places deviating somewhat from the prototype. For places to cause positive effect and an appreciated experience on the whole, the centre of attention needs to be an unprototypical aspect that also functions as an effect of contrast to the surrounding environment. However, prototypical, less emotionally reviving places could be better suited to fulfil citizens’ practical needs (e.g. as junctions for transportation or places for demonstrations and exhibitions). If the people visiting a place have clear and practical motives, presumably it will be easier to succeed with these motives if the place do not offer surprises - if it “behave” as expected. Thus, in a city the different parks and plazas should be planned relative to each other in a perspective including the whole city in general.

This distinction, which must be considered as important, between emotional and practical aspects is not attended to in the Kaplans’ predictor of preference. Their model seem to suggest that places always should be planned as to imitate prototypical places. They proposed, in an evolutionary fashion, that environments that are readily organised spatially, aid the process of understanding it and should therefore be appreciated. Understanding in this context means that people easily can categorise a place and from that foresee how to orientate oneself at the place. Building places that look like these that people are used to will lead to that users understand the places. Thus, the more predictable a place is, the more appreciated should it be according to the model.

The findings in this study are more refined as they separate emotional and practical aspects of place experiences. In general then, with these findings it is possible for architects and city planners to understand what aspects of existing urban places that users appreciate and also have an indication of why. This knowledge is important, for example, when urban places are rebuilt or in some way changed in order to avoid to “build away” popular aspects and to be able to improve supposedly appreciated aspects. Both formal and symbolic aspects can be found with this method since it focuses on users’ own experiences without theoretical presumptions.

Furthermore, the model seems to focus on how people prefer places not yet visited. Legibility and mystery, the inferred aspects, are about what a place could offer if travelled into. That is, the model only covers places seen by people, but not used. This is not very useful for architects and city planners who either deal with places seen and used (if rebuilding) or places not seen or used (if planning new places). It is plausible that the reason for this is that many environmental preference studies are conducted with only photos of places where people only can imagine (or infer) how it would be to actually experience the places.

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13. Conclusion

For urban places to be emotionally appreciated, they have to manifest some kind of effect of contrast. For a plaza to do this, it has to embrace some salient schema-irrelevant aspect outstanding enough to work as a centre of the total experience of the place. For the park, it should in itself be a contrast to the surrounding city (which they most often are).

For urban places to be practically useful, they have to have a prototypical character. For a plaza to be prototypical, it has to be experienced as an enclosed and mainly hard-grounded open square, with good opportunities for commerce and social life. A park has to be green and be able to house a range of activities such as relaxing, picnics and walking.

In this reasoning effect of contrast is an important concept. Following from it, to understand urban place experiences, the whole city has to be included in research. Because it is differences between separate places in a city and differences between places and the surrounding environment that can manifest the effect of contrast.
14. References


How People's Concepts of Urban Places Relate to Their Evaluations of the Places' Aesthetics and Microclimate

Fredrik Bergström

The objective of this study was to uncover what aspects of urban plazas and parks that are most important for users' evaluations of places' aesthetics and microclimate (the characteristic climate for a limited space). This was done by investigating people's general ideas of plazas and parks (the prototypical concepts) and compare these with place users' descriptions of four specific places. Interviews with two groups (31 and 24 persons respectively) were carried out in order to collect this information. Aspects commonly mentioned in the descriptions, but not included in the prototype, were considered salient and schema-irrelevant (perceived as outstanding but not needed as a defining attribute of the place). This part of the result was related to evaluations of aesthetics and microclimate of the specific places, as well as to subjects' explanations of some of these evaluations. Evaluations were collected in 716 questionnaires and 1115 on-site interviews, and the explanations in the 24 persons interview concerning specific places. The results indicate that for urban places to be emotionally appreciated they have to manifest some kind of effect of contrast, i.e. they have to embrace some salient schema-irrelevant aspect outstanding enough to work as a centre of the total experience of the place. Furthermore, the results indicate that a separation between emotional and practical aspects of place experiences is needed. In view of that, for urban places to be practically useful, they have to have a prototypical character. For a plaza to be prototypical, it has to be experienced as an enclosed and mainly hard-grounded open square, with good opportunities for commerce and social life. A park has to be green and be able to house a range of activities such as relaxing, picnics and walking.

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urban places, prototypical concepts, schema, aesthetic evaluation, effect of contrast