When dealing with the quality of urban design, there is a strong tradition – among lay people and professionals alike – to focus on its outcomes. Whether the focus is on the aesthetic, spatial, functional or environmental quality of the urban environment, the object of judgment for urban design is its product. Unlike consumer products and buildings, however, the outcome of urban design is rarely a unified product with a unified function and design. On the contrary, the product of urban design is most often

the sum of multiple individual products, in the form of buildings and open spaces, each serving their own functions and each following their own designs.

Although it is normally the aim of urban design to combine these individual buildings and spaces into a unified whole, it is rarely within its power to exert full control over the shaping of physical space. The formulation of the overall framework for development, however, is only a part of the task for urban design. The orchestration of the multitude of individual activities in the course of development is an equally important part of the task, and the success of urban design therefore depends as much on its ability to perform this part of the task. This brings as much focus on the process of urban design as on its product.

"Indeed, it is probably more revealing to recognize the difference between urban designers in terms of the processes of designing they use than the forms they generate. Procedural paradigmatic differences represent fundamental sociopolitical attitudes. These attitudes pervade the methods used in programming, designing, and evaluating, and even the methods an urban designer is willing to learn about."
– Jon Lang, 1994, p. 401

In order to understand the task of urban design, it is therefore important not only to consider its product, but also its process. Considering the process of urban design, therefore, is 'fundamental to understanding the activity of building … cities … and the responsibilities of urban designers' (Lang, 1996, p. 8). Nonetheless, while there is an abundance of normative as well as positive literature on how cities should be, very little has been written on how cities should come into being. As George puts it, when it comes to the methods, processes and procedures of urban design, 'our knowledge is mostly anecdotal and at the very least, it is extremely disorganized. … Most urban designers are in the dark, when it comes to this kind of knowledge' (1997, p. 158).

The term urban design encompasses a broad variety of ideas about why and how to deal with the shaping of urban space. The ambiguities arising from these seemingly disparate ideas have fundamental implications for the conceptualization of the process of urban design. Apart from a broad understanding that the purpose of urban design is somehow the conscious shaping of urban space, there is no unified view, neither of the objectives of urban design – why it should be performed, nor of its object as an activity – what it should act upon, in order to achieve its purpose. As Madanipour (1996) contends, the different views of the objective of urban design is expressed in varying emphasis on the visual, spatial or social aspects of urban design. And, in turn, what is considered to be the objective of urban design has implications for, whether it is viewed as a creative, technical or social process (ibid.).

Framed in terms of the purpose of urban design, three fundamentally different approaches may be discerned within urban design thought. One approach views urban space in terms of narrowly defined aesthetic qualities. By this view, the major task of urban design is to lay out urban space in order to achieve an aesthetically interesting environment. As the aesthetic quality of the environment is directly linked to its concrete appearance, the focus of this approach is on the physical environment

in terms of the actual shape and layout of buildings and open spaces. By this approach, focus is on the creation of the design, and less attention is paid to the process of implementation, which is often regarded as the mere actualization of the design. This approach to urban design largely conforms with the general public's image of urban design, and is widely adopted among architects.

Following Jonathan Barnett's famous maxim that urban design is 'designing cities without designing buildings', the object of urban design may also be defined as that of defining the overall framework – spatially, legally, as well as organizationally – within which the subsequent design and development of individual buildings and spaces takes place. By this approach, urban design may be described a 'second-order design endeavor' (George, 1997), as it is concerned with realizing a desired state of the built environment, without actually designing the components of the environment. And as such it is aiming at creating 'a decision environment that enables others to author the built environment' (ibid., p. 148). Although the approach may encompass narrow aesthetic considerations, it generally acknowledges a wider scope for urban design. This is the most widely adopted approach within the framework of public planning.

A third, more pluralistic, approach to the urban design process, is to view the process as one evolving out of the needs and wishes of concrete people as the users and creators of physical space in concrete contexts. In this case, the design process is highly participatory, and involves little, or in extreme cases no preconfigured anticipations or ideals on behalf of the designer, who acts primarily as a facilitator and supervisor for the actors involved. As people are generally most concerned about their immediate environment, this approach is mostly adopted on the smaller scale of housing schemes and neighborhoods, but may also be put to use for entire neighborhoods and towns (Wates & Knevitt, 1987). Although this approach is increasingly adopted within the framework of public planning, it has typically been adopted by citizens and grassroots organizations who have engaged in urban design out of discontent with the outcomes of institutionalized urban design and planning.

Although these strands may rarely appear in their pure form in practice, they constitute a good basis for the discussion of the strengths and weaknesses of different approaches to urban design, and hence for the understanding of urban design as a process. In order to qualify this discussion the first two sections of this chapter offer, a description of different modes of urban design, as well as a methodological discussion of the nature of design processes.

DIFFERENT MODES OF URBAN DESIGN

Urban design may operate in different modes, according to the amount of control it is intended to exert over urban development. Central to the discussion of these different modes is the distinction between design objectives, design principles and design guidelines. All urban designs are founded on some notion of what the design must achieve – the design objectives. Design principles are formulations of how these objectives are met through interventions in the physical environment. And design guidelines, finally, are the operational definitions of design objectives (Lang, 1996).

Design guidelines can be either prescriptive or performance oriented. Prescriptive guidelines are oriented towards the concrete end product of a design scheme, describing the characteristics of the physical environment to be achieved. Performance guidelines, on the other hand, focus on the performance required by the end product, rather than its concrete physical characteristics. As the former are more unambiguous, they are easier to evaluate. However, the latter provide more flexibility because they allow different solutions to a given problem (ibid.). Different modes of urban design offer different ways of handling design objectives and design guidelines.

Probably, one of the most widespread ways in which to think of urban design – and which definitely has a long tradition in prescriptive urban design thought – is to conceptualize it as large-scale architecture. Much like designing a single building, this 'total design' mode incorporates all aspects of the spatial environment into one grand design. The object of the design is therefore the actual physical environment, and the means of conveying the design content is highly specified design prescriptions, in the form of masterplans.

The power to control the implementation process is crucial to the success of total urban design. Historically, such power has been held by autocratic rulers who have commissioned many successful total urban designs. After the second world war, in the era of large-scale urban developments, both public and private developers held similar power by the implementation of large detached housing and multi-story housing schemes as well as urban renewal and infrastructure projects.

In contemporary capitalist democracies, development generally takes places on a smaller scale (and mostly over a longer span of time), and an increasing degree of public participation in the design process has opened it up for a more pluralist formulation of design objectives. These changes in the societal context has reduced the scope for total urban design. A notable exception is the cases where corporations develop large tracts of land, typically for suburban housing or malls. For the rest, total urban design is only likely to be successful in more limited settings, thus making it 'total' on a smaller scale.

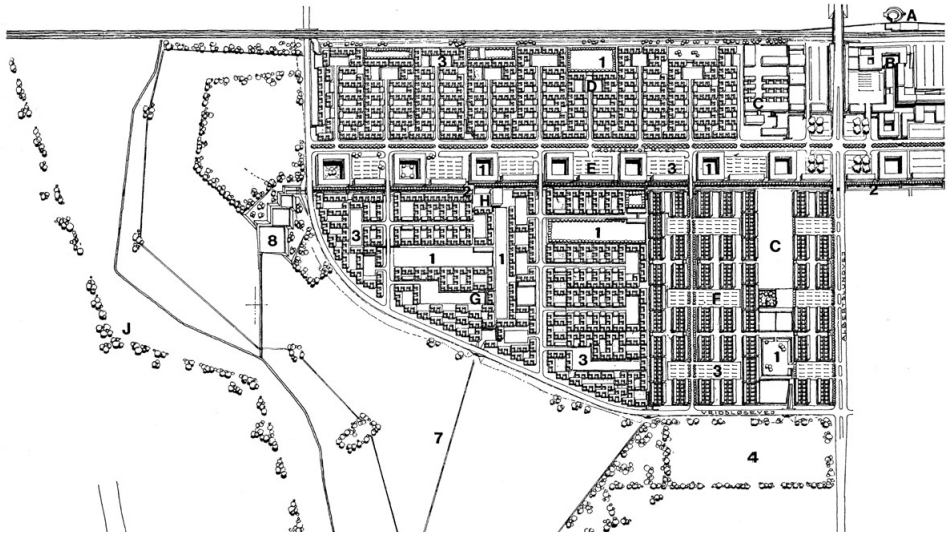

Figure 7.1
Albertslund New Town, Copenhagen. Early 1960s example of urban design as large-scale architecture: '... a firmly carried out urban construction' (Gaardmand, 1993).
Not to scale

Therefore, whether the total urban design mode is preferable partly relies on the societal context in which it is executed. It also relies, however, on the qualities inherent in the design. When the total urban design mode is accompanied by adequate power of implementation, it provides the designer with a high degree of freedom to determine the design objectives (though in accordance, of course, with the commissioner of the design). These may be more or less in accordance with the objectives of the users and the general public.

Historical examples of total urban design have led to some of the most celebrated, as well as some of the most criticized urban environments. Both the Hausmannian Boulevards of Paris and some of the most notorious *banlieues* of the same city, for instance, are the outcomes of total urban design. Although the total urban design mode may have the potential to produce the most outstanding urban environments, it does not guarantee a successful outcome. This relies on the societal context as much as on the quality of the design.

The long standing traditions of total design mode within urban design theory may explain why especially architects tend to think of this mode as the norm (Lang, 1996). Another reason may be that it is the only mode of urban design which expressly deals with the actual physical shaping of the environment, thus making it bear a strong resemblance with architecture.

Another mode, which is less controlling than the total urban design mode may be termed all-of-a-piece design (Lang, 1996). By this mode, only the conceptual site design is uniform, whereas individual components of the plan may be designed by others (ibid.). This allows for a certain unity of design, while leaving the details of individual developments flexible. In that sense, this level of intervention only extends to the conceptual design phase of the design process, leaving the detailed design phase open. This has important implications for the nature of all-of-a-piece mode of urban design as an instrument of design control.

Whereas the total design mode is more or less unambiguous in terms of whether an individual design conforms with the overall urban design because of the 'wysiwyg'[1] nature of the design mode, all-of-a-piece design, due to its more generic nature, is open to interpretation. Hence, whether an individual design is in compliance with the overall design becomes a question of whether it complies with the design objectives. Contrary to total design schemes, individual designs within an all-of-a-piece urban design scheme are open to negotiation. It therefore becomes important to define what elements of the scheme are negotiable and which are not. What is essential by the all-of-a-piece design mode, is the design objectives which must be complied with, while room is left open for different ways of meeting these objectives.

For all-of-a-piece urban design schemes it is therefore crucial to make the design intent explicit, or, in other words, to formulate what constitutes the *sine qua non* of the scheme. A total design scheme need not be explicit about the reasoning behind it in terms of judging the conformity of a partial design with the scheme, because it is a simple question of whether it meets the prescriptions for the actual physical layout. All-of-a-piece design schemes, however, are concerned with whether the performance requirements of the scheme are met. And the question of whether a partial design meets the performance requirements of a scheme depends on what

[1] What You See Is What You Get

these requirements are.

All-of-a-piece urban design schemes are therefore formulated on a more abstract level than total urban design schemes. Rather than depicting the desired state of the actual physical space in the form of a masterplan, it must be formulated in the form of more abstract diagrams which specify the design objectives and the boundaries within which interpretation may take place. Such diagrams may be supplemented by illustrations, either in the form of plans or three-dimensional drawings, which suggest how the design intent may be interpreted. In all-of-a-piece urban design, however, such graphics are secondary to the diagrams, serving only as exemplification.

If urban design is the conscious shaping of the urban environment, the lowest level of intervention which may be considered an act of urban design, is to merely regulate infrastructure and land use, and leave the design of buildings and open spaces free (Lang, 1996). This 'overall infrastructure' mode of urban design may often be adopted in situations where no more than the interventions necessary to make the land accessible and to maintain public health and safety is desired. Typically, this will be the case for industrial areas and harbors, where the utility of the space is generally considered to have precedence to other aspects of urban space, such as aesthetic and environmental qualities. In such areas other than utilitarian considerations may even be considered to reduce their quality as production spaces, as they may conflict with rational and efficient use.

Total design, all-of-a-piece-design and infrastructure design constitute different modes of urban design as they seek different amounts of control over urban development. But they also represent different procedural types of urban design, as they represent different ways in which to judge whether partial designs conform with the overall design. The biggest procedural difference lies in whether design objectives must be made explicit in order to make this judgment.

METHODOLOGICAL APPROACHES TO URBAN DESIGN

The practice of urban design may be guided by different methodological approaches. What design methodology is adopted is determined by conceptualizations about how the design task at hand may best be solved, which, in turn, is determined by conceptualizations about what the design task is. On a more fundamental level the choice of design methodology is also determined by conceptualizations about the very nature of the design process.

The nature of design processes is the object of design methodology studies. In the early days of design methodology studies in the 1960s, design methodology was approached as a science. Based on the view that design processes could be described as a discrete set of operations in a unidirectional, sequential order, it was believed that they were amenable to systematization, based on scientific method (Lang, 1987). The inspiration for this 'systematic' design approach came from instrumental problem solving techniques, management and operational research which had been developed during the second world war and in the 1950s (Cross, 1984).

This approach was founded on a Cartesian view of design by which complex design problems are broken down into fragments which are solved individually,

followed by the combination of the partial solutions into a grand synthesis. The aim was to develop a methodologically 'sound' process, by which any preconception of the design solution was abandoned (Broadbent, 1984). The process of design was seen as scientific in the sense that an objectively best way of solving design problems could be developed, and as universal, as design methods were seen as applicable to all design problems, independently of the nature of the specific task (Harfield, 1999).

When practiced, this 'expert-knows-best' approach often led its practitioners to a somewhat abstract view of the world:

Clearly there was a fascination for many rationally inclined theorists in raising design to the highest possible level of abstraction. … We find the same desire for the abstract purity of a concept, the same tendency to think of people as abstractions (often of statistical nature) rather than as persons, the same unwillingness to think of a building (or anything else in design) as a concrete physical thing.

– Broadbent, 1973, p. 272

By the early 1970s what Horst Rittel coined 'first-generation models' (quoted in Lang, 1987) of the design process became increasingly criticized for being founded on a too narrow functional definition of rationality. By the discovery of this embedded normativity of the supposedly scientific approach, it became clear that their claim to objectivity was an illusion. Although the behaviorists still believed that models of man-environment interactions could be quantified on the basis of empirical methods as a basis for scientific design, this 'latter-day-modernist' approach (Broadbent, 1984) was largely dismissed as too linear and one-dimensional to address the profoundness and richness of human existence and the design problems relating to it (ibid.).

The fundamental critique of the rational approach of the first-generation models lay with the definition of design problems. If design problems could be definitively stated they would also be solved. Design problems are therefore essentially ill-defined, as the nature of the problem can only be fully understood through the process of solving it. The design process is therefore a dialectic process of problem solving, definition and redefinition (Cross, 1990; Rowe, 1987). Extremely ill-defined problems may even be characterized as wicked. Wicked problems have no definitive formulation, as they cannot be fully defined. Consequently there is also no way of determining when the problem is solved; it has no stopping rule (Rittel & Webber, 1973; Lang, 1987; Rowe, 1987).

Second-generation models therefore see the process of design as argumentative rather than scientific. The design process is reiterative and includes backtracking, as new solutions foster new problems. In the process of design, choices must be made between different design objectives, and through this process, both the problem and its solution becomes clearer. An ultimate solution, however, cannot be reached. As design problems are inherently ill-defined, they can always be improved upon, and the decision as to when to finish the design process is likely to be when a 'good enough', or satisficing, solution is found (Lang, 1987).

The design process must be directed towards a goal, which can only be of a generic nature – otherwise there would be no design, as the goal would already be known.

Furthermore, the design must be guided by a certain approach – aesthetic, technical, etc. – in order to make it a process. Any design methodology, in other words, relies on a certain ideology, which suggests that it cannot be generic and applicable to all design processes (Harfield, 1999).

The argumentative approach not only sees every design problem as unique, but also redefines the role of the designer. Rather than being an expert who possesses a professional know-how for solving design problems, he or she is seen as a mediator of different attitudes towards them (Broadbent, 1984). In more radical interpretations of the argumentative approach, to claim any professional knowledge on behalf of the designer, is seen as an inappropriate attempt to bias the design process under the guise of technical insight, and emphasis is put on collaborative techniques for participation:

Design method seems quite irrelevant in contexts such as these. Or, worse still, it is seen as a 'skill' which the 'expert' will bring to bear in overriding the wishes of those he is supposed to be designing for.

– ibid., p. 340

An argumentative design process invites an empiricist, rather than a rational, approach. Rationalism is based on logical reasoning, but as the nature of a design problem cannot be defined prior to the process of solving it, any methodological approach based on logical reasoning is inappropriate, as attempting to reason about something which is uncertain would be essentially irrational. Empiricism is based on observations of the lived world as a means to generate the knowledge necessary to produce solutions to the problems pertaining to it (Lang, 1994).

Rather than formulating general theories about the world, empiricism looks at the world in a case-by-case manner, in order to analyze the specific situation at hand. This approach is more sensitive to the complex nature of design problems and offers a more pluralistic way of looking at design problems, as it allows a host of different design parameters to guide their solution. Empiricism like rationalism, however, may be guided by different normative positions, leading to different methodological approaches and design techniques. Empiricism, for instance, has formed the basis for behaviorism and environmental determinism as well as for argumentative approaches.

Another way of framing the difference between the empiricist and the rationalist approaches, is to discuss them in the context of programs and paradigms (Rowe, 1982). Whereas the empiricist approach is based on programs – definite plans, schemes of intended proceedings, outlines or abstract of something to be done, the rationalist approach is based on paradigms – in Kuhn's words, universally recognized scientific achievements that, for a time, provide model problems and solutions to a community (ibid.).

Rowe is critical of both. While the paradigmatic approach, despite its claims to universality, is explicitly based on a particular view of the world, the programmatic approach is implicitly so, as facts are always subject to interpretation. What therefore seems to be false empiricism and false idealism simply present superficial alternatives.

And while empiricism, which refuses to deal with the 'fabric of ideas' is illusory, idealism, which rejects involvement with empirical detail, is inadequate (ibid.). Neither of the two, Rowe argues, therefore seems adequate as design approaches:

To me, the first [program] seems to be unduly deterministic and the second [paradigm] to disclose an unwarrantable pessimism. For surely both of them disallow the possibilities of genuine novelty and, in the end, both of them envision the solution*, the synthetic statement, as no more than the extrapolation of the existing. On the one hand, the procedures are too flat and empirical and, on the other hand, they are too exalted, too idealistic and too* a priori*. Both positions, I think, leave the world without hope.*

– ibid., p. 9, emphases in original

As an alternative to the programmatic and paradigmatic approaches, Rowe suggests a 'detective' approach based on conjectures and refutations. This view is shared by Broadbent (1984), who suggests that a 'third generation' model should build on Popper's methodology of science, which describes the scientific approach as one of making hunches and guesses about phenomena and to collect data to support conjectures, and subsequently to test and possibly disprove these conjectures. If the test is successful, the scientist may hold his or her conjectures as a theory, until a better one may eventually arrive (ibid.).

In the context of urban design, the weakness of this methodology of science metaphor may be, that urban design does not take place in a scientific discourse environment. On the contrary, urban design is situated in a highly political context, where the quality of solutions is measured against different interests and normative positions, rather than scientific argument. To look for optimal solutions as commonly accepted, less refutable, propositions in this context, may therefore rely on an illusory Habermasian understanding of ideal speech situations, which ignore the presence of power (see Flyvbjerg, 1998).

A third – or maybe fourth – methodological approach, which has not been dealt with as much in the design methodology literature as the rational and the empiricist approaches, could – in lack of a better term – be called the intuitive approach. Although intuition may be considered as adversary to method (a probable reason why this approach has gained less attention), this approach is widely used, especially within the more aesthetically oriented part of the design discipline.

The problem with both the rational and the empiricist approach, as Rowe contends, is that none of them necessarily leads to genuinely novel design. As the rational approach is founded on theoretical paradigms about design, it fundamentally relies on preconceived design ideas. As such, it represents an established world view which, of course, is already known. The empiricist approach with its recourse to the lived world, is equally unlikely to come up with genuinely new design concepts, as it is based on the world, as it already is. The intuitive approach, on the other hand, does not rely on either preconceptions or preexisting fact, and as such, it represents the most promising potential for original design.

The differences between the three approaches may be framed within the American

philosopher Peirce's terminology. As such, the rationalist approach may be described as deductive, because it approaches design with a view of how things must be, the empiricist approach as inductive, because it approaches design from an interpretation of how things actually are, whereas the intuitive approach is abductive, because it suggests how things may be.

The difficulty in describing the intuitive approach is, that it tends to be implicit about its own process. It is most often performed in a 'black box'-manner, making it difficult to explain and convey its methodology (Lang, 1987). As this tacit nature of its methodology makes it incommunicable, it is impossible make explicit as objective knowledge. This, however, does not mean that tacit methodological knowledge is irrational (Harfield, 1999). But it does represent a dilemma, which Schön sums up in the question that, if knowledge is what can be made explicit, then what do designers know? And if tacit knowledge is recognized, then how do we describe how they know it and get access to it? (according to Harfield, 1999).

Anthony Ward (1990) sees the opaque nature of intuitive design as a deliberate mystification of a process which cannot be argued objectively. Because artistic design is inherently subjective, what is considered the better design can never be determined by argument, but becomes a question of power. In their battle for a position in this power game, designers feel inclined to accredit their design achievements to a certain design genius rather than to design methodology. By making recourse to a mysterious talent, design methodology is substituted for some godly insight, and its results may thus be withdrawn from argumentative discourse. The process of design is turned into a 'mastery-mystery game', where mystery is taken as a symptom of mastery (ibid.).

Another explanation for the difficulties in verbally conveying design knowledge is offered by Cross (1990), who suggests that it may lie with the nonverbal media of thought and communication which are used in the design process. Models and drawings are not only means of communicating design but also of formulating design. As Daley suggests, 'the way designers work may be inexplicable, not for some romantic or mystical reason, but simply because these processes lie outside the bounds of verbal discourse: they are literally indescribable in linguistic terms' (quoted in Cross, 1990, p. 132).

Cross argues that design competence is a natural ability, possessed by everyone, although it is more developed among professional designers. Following Gardner's criteria for distinct forms of intelligence, Cross suggests – although admitting that the case is not fully proven – that the ability to design may rely on a certain 'design intelligence' (ibid.).

Whether the mysterious nature of intuitive design processes is ascribed to the power game of positioning design views of an essentially unargumentative nature, or it is an inherent quality of the process, it certainly leaves designers in the dark, as George says. But, as it shall be argued below, it also leaves others in the dark, something which presents a major dilemma in urban design.

Urban design practice has swayed between the rationalist, argumentative and intuitive approaches as the dominant methodology. But although one approach has often been dominant, urban design practice usually includes more, if not all of them (Lang, 1994). Because the different approaches largely correspond to views of

urban design as a technical, social or creative process, their application has varied according to which view has been dominant. But as Madanipour (1996) points out, too narrow views of urban design as an either technical, social, or creative process rarely correspond with the practical reality of urban design. Rather, the different approaches must be seen as applicable to different aspects of the urban design process, as it involves dealing with both the objective world, the institutions and individuals involved in the process, as well as the subjective world of ideas (ibid.).

URBAN DESIGN AS AESTHETICS

The plurality of architectural theories about what constitutes proper architecture can be categorized within two major strands, according to what they see as the realm of inquiry for architecture. One strand sees architecture in relationship with the outside world, and is based on theories about society or interpretations of the lived world. Within this strand, architecture is legitimized and validated with reference to phenomena that lie outside architecture itself. Its realm of inquiry, therefore, is the outside world, which forms the basis for design. The other strand sees architecture in relation to itself and its constituent elements. Within this strand, architecture does not require any outside excursions to validate or legitimize itself; it deals with architecture for its own sake. Its realm of inquiry is therefore architecture itself (Rowe, 1987).

Although this latter strand of architecture dates back at least to the enlightenment period and the formation of the École-des-Beaux-Arts tradition within architecture (Nygaard, s.d.), it is generally associated with postmodern architecture. It is often ascribed to the disillusion about the poor achievements of modern architecture in trying to connect with the outer world, and as a reaction against it (Ward, 1989). However, as Eisenman points out, much modernist thinking was equally occupied with the language of architecture and its own 'objecthood' (quoted in Rowe, 1987). But while modernist architecture is predominantly occupied with non-referential or natural form, without cultural connotations or meaning, post-modernist architecture is interested in figure, as form imbued with cultural meaning (ibid.).

Whereas modernist architecture relates to the aesthetic paradigm,[2] which sees genuine art as something which speaks only of itself, is non-referential and therefore mute (Harries, 1998), the post-modernists are interested in the rhetorical, argumentative and polemical potential of architecture, and its ability to comment on the outer world (Rowe, 1987). Modernism and postmodernism are generally seen as two very different, and even antithetical, approaches to architecture. It may be that postmodernism – in architecture as in art – has discarded the aestheticism notion of art for art's sake, but it is still equally occupied with architecture for architecture's sake. And by that token, much modernist and postmodernist architecture is of a piece. Paraphrasing 'aestheticism' as the notion of art for art's sake, an architecture which is occupied only with itself might therefore be termed 'architecturism'.

The 'architecturist' approach to urban design, hence, is concerned with the built form of cities for its own sake. One of the most prominent exponents of this approach is Camillo Sitte who, in his City Planning According to its Artistic Principles, promoted an artistic approach to urban design with a distinct focus on the 'urban image'. It is

[2] The aesthetic paradigm, or aestheticism, was formulated by the 18th century philosopher Baumgarten, who asserted that a work of art has to be a perfect whole. Aesthetic experience is based solely on the aesthetic object as it presents itself to the spectator, and the aesthetic object serves no other function than the aesthetic. Thus, neither the aesthetic object, nor the aesthetic experience needs any external justification but are sought for their own sake. (see Harries, 1998, chapter 2)

therefore not surprising that Sitte's ideas gained much attention in the 1970s and 80s, most notably through Rob Krier's Urban Space, which drew much inspiration from Sitte (although Krier's formal language features many of the elements of the 19th century city which Sitte was opposed to).

To view the built environment as a work of art, and hence to view urban design as an aesthetic endeavor has implications, not only for the process of urban design, but also for what is considered the outcome of this process. And ultimately it has implications for the viability of urban design schemes, depending on the conditions for its implementation. The narrow definition of architecture within the aesthetic approach, as expressed by an anonymous writer in the introduction to an interview with Cecar Pelli about his project for the expansion of the Museum of Modern Art in New york, might explain the problems of its application to urban design:

The issues in the project are complex, touching on financial, political, and social concerns. These, however, are ideological problems, and once the idea of the project is accepted – that this is the best way for the Museum of Modern Art to expand and to continue to exist – the issue becomes architectural: how *should the museum expand.*

– Perspecta, 1980, p. 97, emphasis in original

This view is formulated even more bluntly by Michael Graves:

I really don't think that architecture is about social or political activity any more than I think politics is about architecture.

– quoted in Rowe, 1987, p. 175

When urban design is about itself, its realm of inquiry is essentially arbitrary. If urban design is not intended to serve any external purpose, but only the aesthetics of its own composition, inquiry does only serve as a source of inspiration for the design as a work of art. Therefore, one type of inquiry is as good as any. If analysis is not intended to inform about a problem which must be solved, but only to inspire the creation of new form, what analysis is chosen does not have to be justified.

Therefore, when Bunschoten (1999) throws beans on a map as a way to make an 'unbiassed' selection of places of investigation in the terrain, this is no different from the deconstructionist method of superimposing different ordering systems (Proudfoot, 1991). And the Dutch architecture firm MVRDVs (1999) obsession with data and statistics without any stated design objectives, apart from a vaguely argued, yet strong wish, for density, likewise becomes a sort of 'data-dada'. Both serve as sources of inspiration for arbitrary artistic designs, rather than of information for solving specific problems.

As Lang (1994) notes, the aesthetic approach to urban design (as to architectural design in general) tends to take place in a 'black box'-manner, by which the reasoning behind design decisions remains undisclosed. Although the deconstructionist approach lays open the different systems of interpretation which are used to generate the design – whether it be points, lines and surfaces, as in the Parc de la Villette design or in

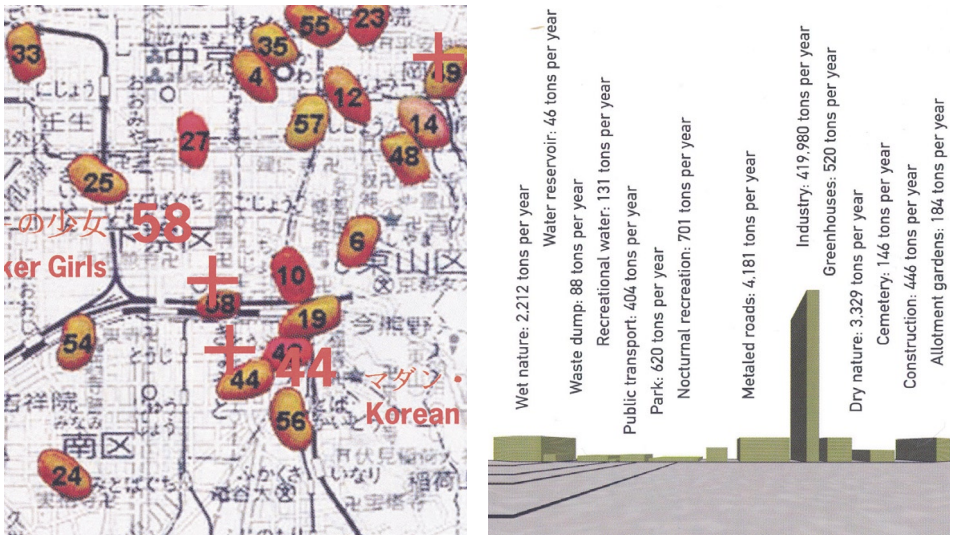

Figure 7.2-3
Throwing beans on a map or playing with mass and density, like the deconstructionist approach, are design techniques to help triggering new ways of interpreting the environment as a basis for genuinely new design, rather than survey techniques, dealing with the outside world.

the Skejbygård Plan, or something else – the way in which these systems are used is the personal decision making process of the designer. And the same goes with Bunchoten's beans and the dutchmen's data.

These different techniques may be excellent means of generating genuinely novel designs, or new ways of interpreting the environment – with all the potentialities which it encompasses – but they are so on conditions exclusively set by the designer. They are therefore not tools of inquiry or analysis in any conventional sense, but rather design techniques. Whether one cherishes the one technique or the other is therefore a matter of professional preference as to design techniques, but does not address the fundamental question of whether urban design should deal with the outside world, or only with itself.

The undisclosed nature of 'black box' designs raises the question of legitimization of the design. When the generation of a design relies on subjective choice, it is difficult to make it subject to objective judgment. Whether a design is good or bad therefore becomes a matter of belief, rather than of argument. Furthermore, if a design is primarily concerned with problems pertaining to its own 'objecthood' and not to the outside world, any lay judgment becomes essentially irrelevant. Qualified judgment is reserved for those with special knowledge and insight into the architectural discourse, and what constitutes good design therefore becomes a matter of judgment by the designer's professional peers, rather than of other actors in the urban development process or the general public (Shirvani, 1985).

In the case of urban design, this supremacy of the profession in terms of the legitimization of designs is problematic in a number of ways. On the one hand, it is conflicting with the wish for democratic planning processes, as non-professional actors are not only incapable of making their own judgment but also have to rely on the judgment by professionals, who, in turn, are not inclined to justify their arguments. On the other hand, it makes it potentially hard to argue politically for any design scheme which can be justified only internally, thus making its implementation potentially more volatile.

An urban design which is only internally justified becomes a *fait accompli*. Because it does not address any external questions but is only interested in urban form for its own sake, there is no other choice than to take it or leave it. If external questions are addressed, alterations to a design can be judged by their ability to address these questions. When only internal questions are addressed, the answer to which relies on subjective judgment, there is no way of knowing, whether an alteration will sustain the quality of the design or possibly even ruin it. As the design is based on subjective choice, only the author can make this judgment. In a contemporary setting with highly unstable processes of urban development, this represents a major weakness for any such urban design.

As the aesthetic approach to urban design is concerned only with the physical appearance of the built environment, its natural mode of expression is total urban design. As there is nothing beyond the form, it cannot meaningfully be formulated on a generic level. Hence, diagrammatic representations of the design are meaningless, and the design can therefore only be formulated in the form of a masterplan.

The viability of 'architecturist' urban designs therefore seems to depend on stable power conditions for their successful creation and implementation. The 'black box'-manner of their creation makes them potentially authoritarian, as it does not allow for democratic scrutiny. And likewise, their implementation requires a firm hand, as they can only be meaningful if implemented in accordance with the discrete ideas of the author. In a contemporary context of urban design with democratic decision making processes and ever-changing processes of urban development, aspirations to 'architecturist' urban design therefore seem at risk of being either authoritarian or futile. Or, as Harvey puts it:

The translator who assumes omnipotence represses. The great individual (the architect/philosopher) who becomes detached from the masses and from daily life becomes either an irrelevant joke or an oppressive and domineering figure…

– 2000, p. 253

URBAN DESIGN AS DECISION ENVIRONMENT

In practice, most urban design takes place within the framework of public planning. As public planning is based on notions of public good, urban design from a public planning point of view generally has a broader scope than just built form for its own sake. Rather, urban design is a tool for changing the built environment, for the purpose of implementing economic, social and cultural policies (Lang, 1994). From this perspective, urban design as a field of activity is imbedded in both political and economic contexts, and as such, it has to merge ideal normative concerns about how the built environment should be, with more pragmatic concerns about how it could be, within the given economic and political realities (ibid.).

As most urban development, apart from infrastructure development, is undertaken by private or semi-private developers, public planning agencies often have limited power of implementation. Hence, urban design as a public sector activity, rather than dealing with the actual design of the built environment, deals with defining the

framework within which urban development can take place:

Urban design activities seek to develop the policy framework within which physical designs are created. … It extends in both time and space in that its constituent parts are distributed in space and constructed at different times by different persons. In this sense, urban design is concerned with the management of the physical development of the city. Management is difficult in that the client is multiple, the program indeterminate, control partial and there is no certain state of completion.

– UD Review, 1976, 1, quoted in Shirvani, 1985, p. 2

This approach to urban design differs substantially from the aesthetic approach. From a public planning perspective, urban design is imbedded within the larger framework of public policy (Friedman, 1987). Far from being concerned only with its own 'objecthood' or built form for its own sake, the public planning approach to urban design therefore includes objectives pertaining to the immediate built environment, as well as to more general purposes of public planning. It does not only involve a distinction between the object and the objectives of urban design, it also does so on a number of different levels.

On the macro-level, the built environment is the overall framework for most activities in society as the space for production, consumption and reproduction. The urban environment may fit these purposes more or less adequately and effectively, and as society changes over time, its requirements towards the urban environment change too. An important purpose of urban design is therefore to adapt the urban environment to meet the needs and uses which are required for society to function in space (Harvey, 1996). Space for housing, recreation, public and private services, production and transportation, ideally, must be made available to the extent and at the locations where it can best meet these purposes.

On the intermediary level, the built environment is the space for the actualization of private and public activities. Different activities have different requirements, and public and private developers therefore judge concrete spaces with regard to their ability to meet their specific needs. In order to facilitate urban development, another purpose of urban design therefore, is to meet the specific requirements of housing, offices, industrial uses and public amenities in the specific areas designated for these purposes.

On the micro-level, the built environment serves as the living environment of people. And a third purpose of urban design therefore, is to shape the built environment with regard to quality of life. This encompasses considerations about environmental, social, and cultural aspects of the built environment. Aesthetic concerns, from a public planning perspective, is therefore but one of the objectives of urban design.

When urban design is carried out within the framework of public planning, it operates in the public arena. It deals with the public realm and with issues of public interest, and is financed with public funds. Public sector urban design therefore has an obligation to meet public objectives. In order to judge whether it does so or not, it must be possible to trace its underlying arguments. The process of urban design

therefore has to be open to scrutiny (Lang, 1994). Public sector urban design, in other words, has to be explicit with respect to its objectives, as well as to the means devised to achieve them.

When urban design is based on implicit values, the underlying reasoning renders opaque. It thus becomes resistant to objective analysis (Ward, 1989). Lack of transparency complicates qualitative inquiry into the design, making it potentially questionable whether, or to which extent, design objectives are actually met. Furthermore, design objectives which are not explicable make the design more vulnerable to conflicting rationales (typically economic or functional), and therefore susceptible to failure. Public sector urban design therefore, has to be carried out in a 'glass box'-manner, based on objective argument, in order to gain validity, as well as integrity.

Likewise, the the procedures of urban design should ideally be methodologically 'sound', in order to be accountable. It is therefore understandable, when some urban design theorists argue that urban design practices which rely on tacit understandings of 'good practice' or 'personal [or professional] whimsy' (Lang, 1996), are problematic and call for the generation of substantive procedural knowledge (Lang, 1996, George, 1997). Given the nature of design processes, as discussed above, however, this does not seem to be an easy call.

When urban design is not supported by power of implementation, detailed design prescriptions may be difficult to sustain. Actual developers may have differing design intentions for their developments, and if there is a misfit between design prescriptions and developer wishes, areas may be unattractive to development (Lang, 1994). When development occurs gradually over time, design paradigms may also change, and original design criteria may render irrelevant. Without power of implementation, urban design therefore has to be flexible.

This implies that public sector urban design has to be oriented as much towards process as towards project, and to consider *how* to implement, as well as to consider *what* to implement. To view urban design as large-scale architecture or 'one-shot/ one-sheet planning' (Shirvani, 1985), whose primary aim is to produce masterplans or blueprints for urban development, is therefore inadequate. On the contrary, the act of urban design is rather a question of designing the decision environment for urban design, than to design the built environment itself. As such, urban design differs from other design disciplines like architecture, landscape architecture or product design, as it is one step away from its object (George, 1997):

Urban design is designing cities without designing buildings because the intention is to realize a desired state of the built environment, but without actually designing the components of the environment. Urban designers are not authors of the built environment, rather they create a decision environment that enables others to author the built environment.

– ibid., p. 148

Similar to architectural programming in its indirect relationship with its object, this approach to urban design can therefore be characterized as a second-order design

approach. By waiving claims to first-order design, and by concentrating on generic design qualities, this approach becomes more robust towards changing economic, political, social and legal factors:

Second-order design is more appropriate to a turbulent decision environment because it is based on a strategic approach to decision making ('what do we really need to specify? What can we ignore') rather than the comprehensive decision making that characterizes first-order design (where every aspect of the designed object must be specified).

– ibid.

As the focus of this urban design approach is the decision environment rather than the built environment, it operates not only by means of plans, but also by means of policies, guidelines and programs (Shirvani, 1985). Design policies are general statements about various aspects of urban design, which constitute the framework for the overall design process. Although they state intentions for urban design, they do not formulate actual goals or specific implementation strategies. Guidelines, regulate general aspects of built form such as density, skyline, distribution of built and open space, and use, without addressing the specific design. Design programs are more action oriented and often oriented towards maintenance of the existing built environment, as they encompass preservation, urban renewal and regeneration. Programs formulate targeted strategies for specific aspects of urban design, and are normally backed by varying degrees of funding (George, 1997; Shirvani, 1985). Expos and experimental urban designs may also be considered as urban design programs.

The strength of the decision environment approach is, that it views urban design as embedded in the societal context, as it relates to political, economic and legal realities. As its formulation of objectives is explicit and based on argument rather than belief, it is well suited for the argumentative process of urban design. By focussing on the generic aspects of design rather than specific physical design solutions, it is more robust towards the volatile and changing urban development process and the varying interest of its actors.

However, by nature of its second-order approach to design, it is generally more concerned with the performance of the built environment than with its concrete appearance. To the extent that aesthetic concerns are considered, as this approach is enabling but not authoring the built environment, aesthetic control is performed by means of design guidelines which are likely to be iconic – based on existing forms – or canonic – based on existing styles (Broadbent, 1973). It is therefore unlikely to foster genuinely novel design.

Furthermore, as this approach addresses an urban development process by which individual developers implement partial designs within the framework of an overall generic urban design, it has limited capacity to coordinate designs qualitatively on the more concrete level. This 'blindfold' mode of operation tends to direct design guidelines towards *avoiding* what is found undesirable, rather than towards *stimulating* what is found desirable. It restricts with regard to what cannot be done in

order to avoid conflicts of use and form, rather than to promote with regard to what can be done, in order to trigger potential synergy effects. This mode of operating by the smallest common denominator, therefore, renders the decision environment approach reactive, rather than proactive.

URBAN DESIGN AS LIVING ENVIRONMENT

Urban design may also be viewed as a means to shape the built environment as living environment. This view focusses on the needs and aspirations of the users and inhabitants of urban space. One of the central elements of approaches to urban design which focus on the built environment as living environment, is therefore citizen participation. Given the often meager performance of the built environment in this respect, this approach is often formulated as a critique, not only of the existing built environment, but also of established views of urban design and their institutional settings.

There is a broad variety of urban design approaches which seek to address the built environment as a living environment. Both private architectural firms, professional and grassroots organizations, as well as public institutions, have been engaged in this approach, which came about in the late 1960s (Batchelor & Lewis, 1985). The Regional/Urban Design Assistance Teams (R/UDAT) which were initiated in 1967 by the the American Institute of Architects, and its later Canadian (CAUSE) and British (CUDAT) offsprings, the American Community Design Centers (Batchelor & Lewis, 1985; Wates & Knevitt, 1987), the British concept of Community Architecture (Wates & Knevitt, 1987), as well as more recent approaches such as Community Planning Weekends and their German derivative *Perspektivenwerkstätte* (scenario workshops) (Zadow, 1997), and the similar American concept of Design Charettes (Kelbaugh, 1997), all represent variations of this approach.

Theoretically, the built environment as living environment has been the focus of architecture theorist like Appleyard (1981), Gehl (1987), and Hertzberger (1991). Within this line of urban design thought, urban space is viewed with respect to its capacity to foster the quality of life of its inhabitants. Its primary attention is therefore environmental issues, such as green space and traffic, as well as social issues, such as public space and the promotion of social interaction.

Alexander's A Pattern Language is an attempt to develop an empirically based, procedural theory for the creation of space – at all scales from a single room to entire regions – as living environment. Alexander's theory is based on a communitarian view of society and is highly critical of capitalism and consumerism. His ideas have therefore been criticized for being utopian in a contemporary societal context, and therefore of little use in practice (Dovey, 1990).

Two early, and often quoted examples of participatory design processes are Erskine's 1968 redevelopment scheme for the Byker district in Newcastle, England, and Kroll's 1970 student housing complex at the Catholic University of the Louvain Medical School in Brussels, Belgium (Trancik, 1986; Wates & Knevitt, 1987). Contrary to later examples however, the idea of user participation, in these cases, was introduced 'from above' and did not spring from the users themselves, and thus the 'vehicle' for

participation, or the rules of the game, was conceived by the designers (Broadbent, 1984). In the Belgian case, participation was total, leaving it entirely to the participants to formulate the design (within a basic structural framework designed by the architect). However, the wish for total participation and the withdrawal of the designer from the role of professional advisor led to a number of professionally and technically bad solutions, which ended up making the design less acceptable to the users, than if the designer had guided the process from a professional point of view (ibid.).

The British community architecture approach to urban design emerged as a distinct approach in the mid 1970s, out of discontent with the inability of conventional planning and architecture to address citizens' needs and aspirations concerning the built environment. The top-down structure of the conventional approaches was criticized for being too narrow in scope, focussing mainly on technical and functional issues, resulting in a built environment which was poorly fit as a living environment. Contending that the inhabitants of the built environment are the most qualified in defining the requirements of a good living environment, the remedy to meet the shortcomings of conventional approaches was seen as citizen participation. As such the community architecture approach was formulated as a critique, not only of the outcomes of conventional approaches, but also of the process of generating these outcomes (Wates & Knevitt, 1987).

An approach to urban design based on citizen participation raises a number of issues. While citizens may be able to formulate their requirements to the built environment, they lack the professional skills to generate solutions which can address these requirements. The lack of professional insight also makes it difficult to assess technical and organizational aspects of urban design, as well as the potentials for, and limitations to, their aspirations. The process of participation in itself is both complex and difficult, and therefore requires both citizens and professionals to develop attitudes, skills and techniques, which can accommodate this process. As putting local inhabitants in charge of their own environment implies the delegation of control over the urban development process from the development industry and local government

Figure 7.4
Who should decide and how? By means of a gameboard with interactive pieces, political, cultural and business leaders take part in a planning game workshop in Aarhus, Denmark

to the citizens, it has structural implications for these institutions. But most crucially, as this implies a redistribution of power, the participation of people in the creation of their own environment is inherently a political issue (ibid.).

In order to accommodate these issues, the community architecture approach implies a redefinition of the role of the professional, a reorganization of the organizational framework for the urban design process, an inclusive definition of design objectives, as well as the use of a variety of design, communication and information techniques.

As the objective of the community architecture approach is to accommodate citizens' needs and aspirations, the role of the design professional is to operate as a catalyst and interpreter of these needs and aspirations, rather than to produce prescriptive designs. As the judgment of good, is what is good in the eyes of the users, the approach therefore has no aspirations to 'high design' or 'high art'. Lay formulations of goals for urban design are often vague and unarticulated. The designer's role is therefore to concretize and articulate these goals. As there are both technical, economic and legal limitations to the scope for design, it is also the role of the professional designer to convey these limitations to the users, in order to reach realistic solutions.

The concept of R/UDAT was developed in the late 1960s as a response to the increasing urban problems in many American cities, as a means '… to help the citizens of each urban community articulate their goals and participate in the job of making urban environments better and more satisfying places to live in.' (Batchelor & Lewis, p. 1). It is based on the observation that citizens and local governments with a wish to change and improve their cities, often lack the ability to define clear goals and to turn ideas into action (ibid.).

The approach involves participation from both local politicians, the business community and citizens organizations, as well as individual citizens. The assistance team is put together of professionals from different fields; architects, engineers, sociologists, historians, or whatever is deemed relevant, depending on the nature of the issues at hand. The approach is therefore doubly inclusive, as it seeks not only to include a broad variety of local perspectives on the issues, but also to include a broad variety of professional angles on them (ibid.).

A fundamental tenet of the approach is, that urban design schemes should never be imposed on communities, but must emerge out of their own initiative. R/UDATs, therefore, are never foisted on communities, but are always invited. Another central element is to bring local actors together, who do not normally communicate with one another. The point is, through the exchange of potentially conflicting views and a process mutual learning, to develop a unified strategy for action. It is therefore a prerequisite for the success of this approach, that there is both a conscious will for change in the community – otherwise the R/UDAT will never get invited – as well as a basis for reconciliation of conflicting views. Otherwise it will not be possible to arrive at a common understanding, as a basis for action.

Contrary to early forms of participatory urban design, which often operated outside the institutional setting of public planning and urban design, design charettes, and their european counterparts, are increasingly being used by different public planning

and urban design bodies, to develop urban design strategies on a participatory basis. Much like the RUDATs, charettes constitute a forum for intense brainstorming and design formulation, involving a broad array of participant over a limited period of time.[3] This reflects the recognition, that urban design does not only encompass purely technical or aesthetic problems which can be resolved by professionals, but affects the lives and businesses of many people, whose voices must be heard in order to make the design most widely acceptable and hence viable.

The participatory urban design approach has both strengths and weaknesses. The inclusiveness, both in terms of issues and stake holders, improves the ability to target design objectives, as well as design strategies, thus making the design potentially more viable. By bringing together different stake holders, it is possible to formulate both concrete and qualitative goals, thus rendering the design process proactive rather than reactive. Furthermore, the close linkage between actors and design objectives increases the action potential, and hence improves the probability for actual change.

On the downside, the approach makes little sense if the potential stake holders do not participate in the process. Stake holders are generally more inclined to get involved over contested issues, making the approach most suitable for questions with a certain conflict potential. However, the higher the conflict potential, the harder it is to reach an agreement. This raises the issue of power. If some stake holders hold disproportionally more power, economically or politically (which is often the case), they will be less inclined to enter into constructive dialogue. The participatory approach therefore also relies on a relatively even distribution of power among the participants.

Finally, the participatory approach to urban design sets different requirements to professional designers as well as institutional structures, than other design approaches do. In addition to design skills, including different professionals and lay people in the design process requires high organizational, communicative and educational skills by the urban designer. And when the design process is participatory rather than technical or aesthetic, it requires a more direct involvement of the professional body, whether a consultant or public planning office, in the actual context of place and people.

[3] There are a number of fanciful explanations as to the origin of the word 'charette'. The most persistent, and meaningful, is, that formerly when the architecture students at the École des Beaux-Arts in Paris submitted their assignments, the works were collected and brought to the professor on a cart (charette). If someone had not completed the assignment, his fellow students would help him completing it while running along the charette. This obviously led to a collaborative design process where decisions had to be made in very little time.

CONCLUSION

The different methodological approaches to urban design which have been described in this chapter, are intrinsically linked to their definitions of design objectives. Each approach, by nature of its objectives, leads to its own focus of activity. Furthermore, the viability of each different approach is dependent on the societal context in which it operates.

The aesthetic approach to urban design is interested in the built environment as form for form's sake. The object is the objective. As there is thus nothing outside urban form itself, the focus of this approach is the masterplan. The success of this approach must therefore be measured by the extent to which urban development is in accordance with the masterplan. Any deviation from the masterplan subtracts from the quality of the design by its own measure, and too many deviations ultimately causes the design to collapse. The aesthetic approach is therefore highly dependent

on power of implementation. However, it has a strong potential for generating genuinely novel design.

The decision environment approach is based on a broader definition of objectives. As the formulation of objectives is transparent and argumentative, it is open to democratic scrutiny. By virtue of its process orientation and focus on generic design objectives, it is also more responsive to the reality of the urban development process. However, it is unlikely to foster genuinely novel design. It is also unlikely to trigger potential synergy effects, as it is reactive, rather than proactive.

The living environment approach, on the contrary, is proactive, as it is participatory and links actors with design objectives and strategies. It values design on the basis of the needs and aspirations of its users, rather than to aspire to 'high design' or 'high art'. It is thus highly dependent on the voluntary commitment of citizens. It also constitutes a radical challenge to established ways of carrying out urban design, as well as to the professionals and institutions of urban design.

Whereas the aesthetic and the participatory approaches are similar with respect to their first-order relationship to design, they differ significantly in the way they relate to power. For the aesthetic approach, strong unilateral power is to some extent a prerequisite. The participatory approach, however, cannot function without an even distribution of power. The participatory approach is similar to the public sector approach, in the way it relates to the societal context of urban design. But whereas the public sector approach is reactive in its mode of operation, the participatory approach is proactive. And although the aesthetic and the public sector approaches both see design formulation as a purely professional activity, they are highly different what the nature of the design process is concerned.

The different approaches interlock in peculiar ways, as both similarities and differences coexist in the way they relate to one another. Although creative, technical and social approaches may be applicable to different aspects of the urban design process, as Madanipour suggests, a simple merger of the different views of urban design is not without obstacles. Whereas some elements of the different approaches can easily be combined, others are essentially at odds with one another.