

Title: What do Urban Designers need to Know and Where to Find it?

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Abstract: This essay reviews the writings of several authorities about analytical approaches to the physical urban landscape (Hough, Jacobs & Appleyard, Moudon, Whyte, Conzen). It is appropriate to compare the different approaches advocated for by these authorities, by assessing how they might assist competent Urban Designers and Planners to do their work.

What do Urban Designers need to Know & Where to Find it?

By Joel Cayford

Introduction

Search the phrase “Urban Design” in Google and it registers more than 2,000,000 hits. Exploration of these indicates how broad and all-encompassing the field of urban design has become, and illustrates the multi-disciplinary nature of urban planning and design. Whole libraries of books have been written on the subject. Most self-respecting universities have added urban design to their architecture or planning departments. And hundreds of academics now ply the globe presenting learned papers on the subject. It is no wonder that would-be urban planners are either put off by this complexity, or choose to apply themselves by specialising in just one or two practical approaches, hoping no-one will challenge them.

In this essay I examine several papers and ask the question: how useful are their findings to practical urban planning and design. Auckland University Planning Academic Dr Bruce Hucker teaches that the practice of planning – in most fields of planning, not just urban planning - consists of providing answers to five questions:

- Where are we now?
- Where have we come from?
- Where do we want to go?
- How are we going to get there?
- How will we affect people and environment along the way?

I test the practical utility of the findings of recognised Urban Design academics: AV Moudon, A Jacobs & D Appleyard, MR Conzen, WH Whyte, and M Hough; as expressed in selected referenced papers and writings, against the above planning practitioner questions.

Moudon

In the introduction to her article *A Catholic Approach to Organizing what Urban Designers Should Know*, (Moudon, 1992), the author asserts: “Urban design is a professional, primarily prescriptive field that relates only sporadically... to substantive enquiry and theory”, and that the purpose of her article is to provide a framework for research which is: “deemed essential to guide urban design practice.” This honesty and clarity of purpose is close to my own in writing this essay, and that is why I have chosen to start with it.

In her article Moudon poses the question: “what should urban designers know?” and describes her paper as: “an attempt to pull together the significant body of existing knowledge”. While Moudon acknowledges that she herself is a practitioner of typomorphology, the article reads as a broad and inclusive account of many other urban design fields of knowledge, and also spells out nine distinct approaches to enquiry or research that she recognises as useful to urban design practice.

Moudon presents an urban design knowledge framework drawing from a variety of disciplines including history, sociology, psychology, anthropology, geography, architecture, landscape architecture, and urban planning, and a broad range of research methodologies. She states: “In truth, all research and theories are partial: they address some, but never all the issues faced by the designer.” (p332, Moudon) And: “Only when considered together do ... research and ... theories begin to yield a more complete set of information to the designer.”

In other words, according to Moudon, there is no urban design silver bullet. Instead there is a toolkit of disciplines and enquiry methods that provide comprehensive knowledge to address particular urban design questions.

Further, Moudon separates the practice of “designing cities” from “understanding cities”, and analyses the types of information that might be needed for each of these activities. She notes that to understand a city, it is necessary to understand the past and the present, to know what was there and what is there now, and to consider what changes or forces might have been present. She asserts that these are essentially descriptive activities, whereas to design a city very different actions are needed on the part of the urban designer, who will need to look into the future, to say what outcomes should be achieved and what should be done to achieve those outcomes. These are essentially prescriptive activities.

However, Moudon asserts (p334, Moudon) that the relationship: “between practice and historical knowledge remains elusive at best, and so far seemingly capricious and idiosyncratic. Careful assessment must precede jumping to practical conclusions.” She points out that: “...the gap between knowledge and action is not an easy one to bridge.” (p334, Moudon). She is critical of the brothers Krier who, she writes: “have peeked into a prototypical medieval town for identifying the antidote to the ills of modern design theories.”

Moudon is clearly sceptical of the state of urban design knowledge in terms of its reliability as a basis upon which to plan for the future. The bulk of the paper concentrates on the practice of “understanding cities”.

This practice is described in three levels by Moudon which I summarise in the following paragraphs. The first of these levels relates to the research strategy adopted. Three types of research strategy are described: the literary strategy which includes reading other work, delving into archive information, and interviewing people with relevant experience so as to prepare an account of what is observed or what happened in a particular urban environment; the phenomenological approach which pretty much is determined by how the researcher feels about what happened in a way more akin to an artist’s interpretation of what is experienced; while the positivist approach owes more to science and a belief that there are cause and effect relationships in all urban

outcomes, that it is only necessary to root out those rules, and that future planning will be a simple matter of applying them.

The second level of “understanding cities” practice recognised in Moudon’s paper relates to the way the research is conducted, to the type of inquiry or investigation that is carried out by the researcher to obtain the facts, knowledge, or information that is then analysed or otherwise interpreted. Two main research methods are identified. The first of which is open-ended and descriptive and is primarily based on historical evidence such as plans, maps, drawings, photographs, paintings, newspaper articles and such like. The second is termed “empirical-inductive” where research is focussed on a particular activity, and where the researcher observes that activity and collects specific information about it, with a view to developing a theory about that activity. The latter research method is one of the main tools used to inform any positivist research project. (A good example of a positivist research project informed through an empirical-inductive approach is the data collection and associated computer modelling used in transport planning - sometimes known as the “predict and provide” approach.)

Part of this second level research of “understanding cities”, are two other distinctions that can sometimes be important in assessing the origins of the research. The first of these relates to the extent the research focuses on the physical environment – such as data collection about buildings, plots and streets - or whether it focuses on the conditions of the people and communities who live there by gathering sociological data for example. The second relates to the source of the information gathered – whether it is collected from so-called independent professionals, or whether it is unmediated data collected from ordinary people themselves (by such as means as personal interviews or video film of actual behaviour).

The third level of “understanding cities” suggests nine research areas to concentrate upon for urban design best practice. The author notes (p337 Moudon): “All information concerning urban space and form will be useful. Yet search for breadth must nonetheless be constrained for the sake of practicality.” She recognises that while all things and all disciplines might be said to have a bearing on urban planning, that it is necessary to give the urban planner’s role manageable and reasonable boundaries.

It is interesting to note that she specifically excludes from these research areas any consideration of development finance, marketing, economic theory or of urban political theory, on the basis that these matters: “relate only marginally at this point to the powers of urban designers.” However it is my belief and experience that these matters do relate to the work of urban designers, who are often involved in the policy process, and are therefore involved in steering a course through conflicting interests – some political, some economic, and others pertaining to the staging and financing of development.

Moudon then presents those nine research areas, providing references to useful academic work that has been done. Her conclusion (p344, Moudon) brings these areas together into a very useful summary that I include and enlarge upon, below:

1. **Urban History Studies** (described above, and see Conzen, below) offer critical assessments of various design processes and explain their resulting forms.
2. **Picturesque Studies** combine different interpretations of the built environment's visual attributes. For example commentators present pictures and their own accounts of what is good and bad in an urban environment – essentially phenomenological.
3. **Image Studies.** This research focuses on examining and analysing the pictures that ordinary people have or make of their urban environment as a method of understanding what is important to them. An especially phenomenological method.
4. **Environment and Behaviour Studies** where observations are used to measure and describe interactions between people and their environment, and in some cases make predictions. (See WH Whyte, below, as an example of this research).
5. **Place Studies** is based on a collection of individualistic studies which seek to create theories of place based on people's relationships with their environments. Place studies is included by Moudon in her list of "things to research" for urban designers, but she is nonetheless a little troubled by this method describing it variously (p341 Moudon) as: "these studies ... appear as the black sheep of environment-behaviour studies", and: "place studies include a great variety of research, which because of its personal bent, is difficult to categorize further", and commenting on associated academic papers: "the common trait of these works is their highly individualistic character...". (See Jacobs & Appleyard, below, as an example of this type of research according to Moudon). Place studies work tends toward the prescriptive.
6. **Material Culture Studies** consider objects (such as buildings and streets) as reflections or manifestations of the cultures and societies that build them.
7. **Typology-Morphology Studies** is not so much about architectural style, as it is about the relationships that exist between buildings and each other, and between buildings and the spaces that surround them such as streets, gardens, parks. Together these studies create an understanding of something termed: urban fabric or urban grain, and especially how that changes over time, and the social and economic forces that shape such change. (See Conzen, below, as an example of this type of research approach).
8. **Space-Morphology Studies** is apparently based on research "to uncover fundamental characteristics of urban geometries". Moudon appears a little sceptical about including this research approach in her urban design toolkit however, assessing various papers (p343 Moudon) as: "...quite complex and difficult to understand..", and: "the work is laden with controversy", and noting that: "typology-morphology grounds analysis ... on the history ... of space, while ... space-morphology remains essentially a-historical".
9. **Nature-Ecology Studies** examine the relationship between the city and the natural environment, including such issues as air pollution, climate, water, soil, noise, vegetation and wildlife. These studies are a response to the growing public concern about sustainability, the need to provide for ecosystems, and the imperative of recognising that natural resources are finite. (See Hough, below, as an early example of this type of research approach).

So, how might this knowledge framework assist the Urban Planner and Designer answer the planner's five questions? My assessment is that Moudon's analysis strongly supports the use of a toolkit of research studies that can be relied upon to address three questions: Where are we now? Where have we come from? How will we affect people and environment along the way? However, while her analysis shows that some urban design research approaches do address the other questions: Where do we want to go? How are we going to get there? – she expresses doubt as to their reliability.

Jacobs & Appleyard

In the introduction to their paper: *Toward an Urban Design Manifesto*, the authors Jacobs & Appleyard comment on its origins noting that their students had suggested they write a manifesto: “something better to help guide our work and perhaps the efforts of others as well – an assertion of what was right.” They responded to that challenge and wrote the paper, which they introduce in these words: “What follows, then, is an assertion of what urban places ought to be.”

Without reading further, noting that the intent of the work is purposely to look forward and to advocate the right thing to do, this research work fits into the Place Studies research type described in Moudon's paper. It is an attempt at answering the planner's questions: Where do we want to go? How are we going to get there?

The paper begins (p113, Jacobs & Appleyard) with a strongly worded personal critique of the Charter of Athens summarised as: “..housing was to be removed from its traditional relationship facing streets, and the whole circulation system was to be revised to meet the needs of the automobile...”, and the authors' opinion: “we are less than enthralled with what .. the Charter of Athens ...movement has produced in the way of urban environments. The emphasis was on buildings and what goes on within buildings ... not on the public life that takes place constantly in public spaces.” The authors are also critical of the Garden City movement, noting that: “the emphasis has always been on ‘garden’ as much as or more than ‘city’”. Interestingly, the authors wonder whether these two movements - which were both partly a reaction to the perceived negative qualities of slum areas of cities post industrialisation - ended up by: “throwing the baby out with bath water.”

The authors note the emergence of new thinking about the experience of urban living, one that recognises: “the sights, sounds, feels, and smells of the city, its materials and textures, floor surfaces, facades, style, signs, lights, seating, trees, sun, and shade...”, and note their support for this approach which they describe as having “humanized” the vocabulary of urban design.

The manifesto section of this paper is divided into three main parts: a description of the problems observed in modern urban design; the statement of a number of goals which are deemed: “essential for the future of a good urban environment”, and a set of ideas for “how the fabric or texture of cities might be conserved or created to encourage a livable urban environment”.

The problems of modern urban design, noted by the authors may be summarised as:

- Living environments surrounding homes and buildings that frequently feel dangerous, polluted, noisy and anonymous.
- Large scale developments and massive transportation systems that tend to make people feel small, irrelevant and unable to exercise the sort of control over their lives more likely to be present in smaller scale communities.
- Decline in public life caused by increasing privatisation of transport systems (private car) and reduction in the number of public places where people can meet easily.
- Decline in mixed communities and activities caused by cultural groups forming urban enclaves, by increasingly specialised land use zonings, and by the car enabling people to live far from the services they need.
- Destruction of heritage and over-commercialisation of natural places.
- Feeling of reducing community involvement in cities, and a growing sense of alienation.
- Sense of growing injustice, where the rich get richer, and poor get poorer, and where each group lives and works is more and more obvious, different, and separated.
- Planners have lost their beliefs, as they give way to more and more public consultation, and are less active in advocating for what is the right thing to do.

The essence of this statement of urban problems is one of personal perception and feelings, it is primarily concerned with how people feel about where they live. Many of the perceptions may be able to be measured in some way, though here they are stated as home-truths. This thinking is indicative of the phenomenological research strategy – though in this case the authors bring a considerable amount of professional detachment to inform their personal viewpoint. (“Allan Jacobs at one time was director of the City Planning Commission of San Francisco and pioneered the integration of urban design into local government planning, producing a plan that is recognised as giving San Francisco some of its best places and, two decades later, still stands as a model of its kind...”, quoted from the citation noted by The Committee for the 1999 Kevin Lynch Award to Allan Jacobs.)

The authors then present a number of goals they deem as essential for the future of a good urban environment. These are stated as:

- “Livability;
- Identity and control;
- Access to opportunity, imagination and joy;
- Authenticity and meaning;
- Community and public life;
- Urban self-reliance;
- An environment for all:

There is a good deal of passion in the paper, fleshing out what each of these goals actually means, without providing anything in the way of definition or any measures that might enable the would-be planner to know if they had achieved these goals through their efforts in their city. The authors note (p116, Jacobs & Appleyard) that: “these goals for the urban environment are both individual and collective, and as such they are frequently in conflict. The more a city promises for the individual, the

less it seems to have a public life; the more the city is built for public entities, the less the individual seems to count...”.

In stating these goals the paper helps planners with the question: Where do we want to go? In its final section – An Urban Fabric for an urban life – the paper engages with the question: How are we going to get there?

This section of the paper contains many ideas which the authors indicate have been drawn from years of experience of the field of urban planning. Their strongest recommendation bears restatement here. They state that five physical characteristics must be present in order to achieve the manifesto paper goals. They assert that five characteristics are essential pre-requisites of a sound urban environment. They are:

- “Livable streets and neighbourhoods;
- Some minimum density of residential development as well as intensity of land use;
- An integration of activities – living, working, shopping – in some reasonable proximity to each other;
- A man-made environment, particularly buildings, that defines public space (as opposed to buildings that, for the most part, sit in space);
- and many, many separate, distinct buildings with complex arrangements and relationships (as opposed to few, large buildings)”

The authors then provide further discussion, clarification and definition, without going to the level of prescription one might expect to see in Town Plan controls. They note the public process that might be expected to formulate such detail which would take into account the specifics of any city’s location. The paper explicitly notes that it excludes consideration of major transportation systems, open space, the natural environment and other matters. It is clearly not intended as a comprehensive directive, but as a contribution, one which is drawn from considerable professional experience.

The author’s prescription provides an urban planner with useful guidance in addressing the question: How shall we get there? – assuming one supports the aspirational goals set out by the authors.

Conzen

Though this author notes in his paper that he was working “almost alone” in his research effort to build a geographical theory of towns – and was therefore vulnerable to criticisms that his approach is personal and phenomenological - his contribution toward preparing a systematic approach to town plan analysis and aspects of the built environment has a rigour and functionality that has transcended such comment, and is being taken more and more seriously by the urban design and planning community.

In the introduction to his paper *Urban Morphology: A Geographical Approach* Conzen explains the thinking that led him along that research path, and summarises his criticism of the state of research into urban settlements. A key criticism was his belief that current research into urban settlements over-emphasised practical urban planning approaches answering questions such as: “what should be done”, and: “what will work”, and his belief that there was a treasure trove of information available to

assist an understanding of the historical evolution of cities and how they had changed and developed – which was being completely neglected.

He argued that towns today embody the physical equipment – buildings and streets for example – that are used by the people who live there to function and to meet many of their needs. He further argued that as these needs and requirements change over time, so does the urban landscape – in other words that the urban landscape is subject to historical change and development. This is not a characteristic that is particular to any one town, but is shared by all towns and cities – though how they change may well differ, according to the different forces or cultures in effect over time.

Conzen notes that among the more common features or characteristics of towns – especially English towns – is the presence of an old town centre, which may have been present for several hundred years. He notes also the presence of what he calls fringe belts – which are areas of the urban environment without the same density of development observed in adjacent residential and commercial developments of the same period. Developing his analysis further, Conzen notes that Town Plans also change over time, and that Town Plan analysis provides very useful information to the urban planner. He also notes that historical information on land utilisation (ie plot coverage, building materials used), and activity type (retail, residential, park), can also assist in building a picture of the urban fabric or urban grain of a townscape.

In explaining the usefulness of such research in this paper Conzen notes: “Study of the successive plans of a town ... from the earliest possible date on will disclose the development of the town plan in terms of outward growth and internal change over time, provided the plans present the street system, plot pattern, and building coverage.” He also describes a number of types of change processes that are in play changing towns as they develop over time. These include: the outward growth of a town from its core; urban fringe belts (mentioned above); subsequent filling up of plots with buildings after the main building was erected; building replacement due to changes in functional needs; plot size change due to processes such as plot amalgamation; and central area redevelopment – where old town centres can be substantially changed.

This paper makes small mention of the notion of morpho-typology which is the study of commonly occurring element types that go to make up a townscape. This is a move toward a sort of urban geometry, one which builds on Conzen’s historical morphology idea, where a townscape might be analysed in terms of urban landscape pieces that share certain spatial characteristics.

In terms of the Planner’s questions, Conzen’s approach certainly addresses the question: Where have we come from? And if the goals of an urban planner include some guidance in regard to deciding what parts of the townscape to afford heritage protection, or how to conserve the urban-form of the town, or how to plan future development which is in accord with the historical evolution of the town – then Conzen’s approach to urban morphological research can also assist with answering the questions: Where do we want to go? How are we going to get there?

Whyte

In his paper *The Social Life of Small Spaces*, the author William H Whyte reports on a three-year first-hand observational study he undertook of how small urban plazas, parks and other such places are used by people. Interestingly he notes at the outset that the results obtained, mostly using time-lapse film recordings of people using the spaces under observation which were then painstakingly analysed: “should have been staggeringly obvious to us had we thought of them in the first place... we arrived at our eventual findings by a series of busted hypotheses....”.

Like Conzen’s paper, this work is essentially the work of one man, and it seeks to draw conclusions and make generalisations that might be applicable in other urban environments. One major difference however, is that the evidence or quantitative information that is relied upon by Whyte lacks the material substance typical of the town plan documentation sources used in Conzen’s approaches.

Whyte’s work is interesting, however. I suspect it would have made interesting watching at urban planning conferences of the day. It contains lots of pictures of people in public places, talking and sitting, and generally doing what people do during time out of work. But just how reliable or useful is it? My assessment is that the qualitative or phenomenological work reported needed to be supported or backed up by substantial quantitative data – probably based on interviews or questionnaires recorded over many days – so that there was more representative or comprehensive data in answer to questions like: what do you do and where do you like to go during your lunch hour – and why?

His analysis of the data he collected has informed his assessment as to what the principal needs of “successful” spaces are. He states these as:

- Seating
- Food
- Shops
- Toilets

This seems self-evident. I can’t think of a public space – or indeed an interior atrium – that does not have all of these amenities. His article mentions other factors likely to have an effect on spaces being successful in terms of attracting people, such as retaining heritage buildings, and “working with the grain of the city”, but only in passing, without much detail, and without any apparent research backing.

Overall, I felt this paper to be idiosyncratic and lacking substantial research. It is highly individualistic and of some interest, but too light-weight to be taken as a reliable guide by itself to urban planning decision-making. It goes a little way toward answering the planner’s question: How will we affect people and environment along the way? - but only a little, and is largely silent on the other four questions.

Hough

This reading is Chapter 1 from M. Hough’s book: *City Form and Natural Process: Towards a New Urban Vernacular*, which discusses conflicts in people’s perceptions of nature and advocates for a more environmental approach to urban design. The Chapter is entitled *Urban Ecology, a Basis for Design*. In it Hough

describes how ecological and human processes are modified by the city and argues that this changes urban dweller's feelings about the environment and their related values. He advocates that changed values based on better ecological understanding offer the hope of a better relationship between the urban environment and its natural context.

It is significant that this book was published in 1984 – over twenty years ago - long before today's preoccupation with environmental sustainability and ecological footprints. At the time of publishing, Hough's views would have been seen as self evident by his few staunch supporters, revolutionary by those with a degree of intellectual curiosity about what was happening in their urban environment, and romantic and impractical nonsense by the majority who would have dismissed his point of view as a call for a return to nature.

Hough writes: “weeds... represent the fortuitous communities of the urban environment... sewage lagoons perpetuate the process of decay and release of nutrients... garbage dumps and waste places attract small rodents... it is these natural systems operating within the city that are the basis of an ecological framework for urban design...” It would have been easy to laugh at him and dismiss his hypothesis.

Interestingly, he almost writes as an urban morphologist when he describes and analyses the: “symbiotic relationship that existed between land and rural settlement”, in pre-industrial cities, but I wonder whether it is reasonable to assert as he does, that these relationships: “hold crucial lessons for us today in our search for a relevant basis for form.” He argues that parks are only for amenity and recreation today, but they were used to grow produce in past times, ensuring some connection between town people and the natural environment. He is especially critical of the highly groomed lawn. But he ignores places such as Wormwood Scrubs in the heart of London – a wild place full of birds, rodents, insects, weeds and plants of all sorts. He ignores the living tradition of highly productive garden allotments in many cities. He ignores places like the Waitakere Ranges that functioned as city-park, as well as ecological storehouse, and natural catchment for Auckland's water supply decades before he put pen to paper. And he ignores the fact that “pedigree” parks and open spaces in cities are increasingly used to exhibit sculpture and to showcase other forms of cultural production such as the circus, outdoor theatre and concerts, that were previously the preserve of the landed gentry.

He also ignores the benefits that modern agricultural methods have brought including increased safety from disease, higher productivity, and greater diversity, than in the periods he romanticises in his writing.

In light of today's knowledge, twenty years after this writing, there are prescient ideas among his design principles. For example (p20 Hough) he writes: “The city's used or unwanted materials, its heat energy, garbage and stormwater, vacant lands, become useful resources at less environmental and economic cost when the right linkages are established.” He advocates letting the grass grow alongside roadside verges, to provide habitat for plant and animal diversity – and use less energy mowing lawns. He introduces the idea of rainwater collection, and home based closed loop and recycling systems for water, wastewater and food scraps. He advocates for wide ranging Environmental Education programs which are only recently commonplace.

His use in the book title of the words: “Toward a New Urban Vernacular” underscores the fact his vision seeks a return to the past. The word “Vernacular” connotes the native, the indigenous, the common expression in a particular locality – it harks back to old times, almost invoking the spirit of the noble savage at one with the land, ignoring much of what is good about today’s cities, and selectively representing the living conditions in towns and villages two centuries ago.

However it is hard to disagree with the sentiment expressed toward the end of Chapter 1, (p26, Hough): “...many of the problems generated by the city and imposed on the larger environment will have to be resolved within it. All the city’s environmental and spatial resources may then be drawn into an integrated management framework, to serve according to their capabilities, as producers of food and energy, moderators of climate, conservers of water resources, plants and animals, amenity and recreation...”.

In terms of the planner’s questions, my assessment is that Hough has had a go at answering all five, but because his research and perspective is so limited in this writing in my opinion, he fails to do any of them justice. However it is likely that his work is part of the body of work over the past couple of decades that has increasingly focussed attention on the need for modern western cities to clean up their acts, exhibit care for surrounding regions, conserve natural resources, provide more habitat for ecosystems, and generally co-exist in better harmony with nature.

Hough was ahead of his time, loved because he grew tomatoes instead of a lawn in his front yard, led by his heart and intuition, but lacked good data upon which to base his assertions about ecological decay and the environmental degradation caused per head of population living in western cities. Further, in my view his writing lacked credibility because it was unduly rhetorical, did not refer to the environmental and scientific improvements that have come about over the past two hundred years, and used examples that were of a somewhat parochial and particular nature.

Other Reading

Because Hough’s writing is over two decades old, in a field that has changed rapidly since, and which is clearly of great relevance today, I felt it useful to also consider the topical work of Yosef Rafeq Jabareen in his paper: *Sustainable Urban Forms – Their Typologies, Models and Concepts*. He analyses the concepts behind the notions of sustainable development and sustainable urban form, and summarises the arguments helpfully. I list the concepts here, with extracts from the arguments that I found compelling and relevant to my urban design toolkit:

- Compactness. He writes: “..goes hand in hand with with the goal of liveability and works to prevent commuting, one of the most wasteful and frustrating aspects of city living today...”
- Sustainable Transport. At pg 40 he quotes others’ arguments: “...sustainable urban form must be a form and scale appropriate to walking, cycling and efficient transport and must have a compactness that encourages social interaction...”

- Density. He summarises the point: “.. at certain densities the number of people within a given area becomes sufficient to generate the interactions needed to make urban functions or activities viable...”
- Mixed Land Uses. It appears the jury is still out on this concept. The idea is to “...stimulate the interaction of residents, by increasing pedestrian traffic and generally improving neighbourhood charm...” But he suggests that research data is not clearcut.
- Diversity. His emphatic assessment is: “..diversity of activity is essential to the sustainability of cities”. Quoting other authorities at pg 42: “...variety of housing types, building densities, household sizes, ages, cultures, and incomes...” and: “...the more intensively various and close-grained the diversity in an area, the more walking...”
- Passive Solar Design. Pretty much a no-brainer today. Using building design, street layout, vegetation, and transport design to reduce energy demand for lighting, heating, cooling and travel.
- Greening. He quotes authorities at pg 43: “...old approaches to urbanism are incomplete and must be expanded to incorporate more ecologically responsible forms of living and settlement...”

He presents four different urban forms which model sustainable development: neo-traditional development; urban containment; compact city; and the eco-city. Of these, he argues that the compact city approach achieves the highest score and is the best in terms of delivering on the sustainability concepts summarised.

Conclusion

Of the readings analysed in this essay, I would advise would-be urban planners to adopt the wide-ranging approach recommended by Moudon to appreciate how an existing urban environment was planned and functions now, to apply the principles advocated by Jacobs and Appleyard as part of future urban design activities, and to ensure design approaches which meet the sustainability criteria set out in Jabareen. Conzen’s morphological approach is acknowledged and accepted by Moudon, but for a fuller explanation of his research methods toward appreciating the historical evolution and spatial characteristics of an urban environment, he needs to be read and appreciated as well.

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