3. THE 'UNGARDEN': WHERE IS APPROPRIABLE SPACE IN CURRENT PLANNING PRAXIS?¹

An analysis of the spatial dimension of territoriality reveals that open space which can rightly be described as yard or courtyard is not as readily provided in current planning praxis as might first appear. A main purpose for research in urban spatial morphology is to explore and develop tools to understand how urban design proposals are likely to have social outcomes. An inadequate understanding of the instruments of territoriality produces merely formal alterations which offer variety but not necessarily diversity. To reintroduce gardens and courtyards as sites of collective action requires looking critically at some past and current assumptions about how to produce approvable space for residents. What is not studied in this paper is the effect of privatization or disturbance of public space. This paper addresses the spatial scope of action for urban designers by analyzing current detail plans of ten Swedish proposals in order to assess their territorial performance. New measures to identify what are termed exposed, disturbed, and ambiguous spaces are an attempt to forego the ubiquitous terms semi-private and semi-public in favour of more precise and performative concepts. The empirical basis of this research is a previous study which used a questionnaire and site audits to gauge user perception of open space provided in residential complexes. Results in this paper indicate that of the ten proposals studied, few provide adequate private space for residents and that opportunities are frequently missed for providing spaces for collective action. A call for better understanding of the organizing principles affecting appropriation and sense of ownership is meant not as an indictment of current planning, but rather to illuminate some of the range of options available to the urban designer in considering territorial commons.

Keywords: territorial analysis, urban fabric, spatial appropriation, disturbed, exposed, ambiguous urban space

Introduction and scope

In a cursory glance at newly-constructed residential complexes, it appears that in spite of claims in the Stockholm City Comprehensive Plan² to promote the "block city" (kvartersstad), "urban" forms and city-like development, at the scale of the detail plan, unenclosed perimeter blocks with rather undefined yards are commonplace. The post war ‘freeing of the ground’ paradigm in which “constructed space no longer corresponds to the plot [and] there is no longer a clear relation between one building and another. . . [or] between buildings and streets or open spaces” seemingly still dominates the current Swedish planning context (Levy 1999, 82).

In the pre-modernist city, the public and private realms tend to be more or less legible and distinct, unlike the open residential compositions where yards or 'shared gardens' are left unenclosed. While the production of public and private space (and variations on the two) is implicit in any urban design undertaking, territoriality as an explicit result of certain urban form applications appears to be under-analysed as are the territorial consequences of urban form. Preliminary findings by Alexander Ståhle indicate that ambivalent or ambiguous territories where sanctioned use and ownership are not supported by the built form (due mainly to invisible property lines and unclear use and ownership rights) are especially abundant in post war modernist suburbs. Findings in Malmö and Stockholm confirm that the appropriation of courtyards is highly associated with the

¹ This paper was produced under supervision of Alexander Ståhle, PhD and main supervisor as well as Meta Berghauser-Pont, PhD the second supervisor.
amount of enclosure of these courtyards. This paper will therefore address the scope of territorial confusion in urban fabrics not yet constructed or only very recently constructed. Future research will explore densification strategies that include better responses to territorial emergence, proposing transformation according to the ‘credo’ formulated by Karl Kropf, that “having questioned, we can then ‘open up’ to the range of possibilities rather than accepting or rejecting the whole” (Kropf 2011, 407).

**Previous findings on the territorial performance of urban form**

The aim of this paper is to examine to what extent open configurations in residential housing areas (multifamily) have territorial consequences in light of what empirical research has shown matters to appropriation tendencies, or taking ownership of space (Minoura et al 2011). Stepwise regression of 308 respondents in Malmö indicate that certain perceptual effects can be influenced by the built environment. The questionnaire inquired into frequency of use, types of use, sense of ownership, conflict over space, clarity of boundaries etc. Questionnaire results were then entered into GIS for location-specific analyses seeking patterns in the user perception and urban form factors. This method allowed for more explicit correlations between data and the physical areas chosen for study in which "physical form serves as a reference aspect for coordinating a wider range of information...and more accurate understanding of the characteristics of the form, and, more importantly, its characteristics in use" (Kropf 2011, 401). For the purposes of this phase of the research, 5 questions were found to have the greatest potential in the ongoing research and for the specific purpose of assessing whether and how current detail plan proposals “deal with” territoriality. Fortunately, it was possible to isolate certain properties that appear to be more or less essential to creating the performative territorial type we here term courtyard allowing us to phrase a hypothesis about what makes a courtyard perform well. One significant finding is that use and appropriation do not have the same built form indicators, rather use appears to be contingent on the size of the yard, where small (below 200m²) enclosed courtyards were found to perform worst. For an appropriation measure, traces such as evidence of gardening, private furniture and children’s toys were audited on site. Appropriation, based on this study, is best supported by either enclosure, or by a spaciousness that ensures that competition over space is not a problem. In other words, large yards or courtyards serve use and appropriation best, small enclosed courtyards may serve appropriation, ensuring that competition over space is not a problem. In other words, large yards or courtyards serve use and appropriation best, small enclosed courtyards may serve appropriation, but small open yards have questionable utility when both appropriation and use are considered. In the site audit of appropriation traces, a distinction was made between intrinsic (clearly by private initiative, such as potted plants and bird feeders) and extrinsic traces (relating to use) and these were found to correlate with appropriation and use, respectively.

Here follow the findings providing most insight into territorial performativity along with the statistically significant correlating factors:

- Is the open space provided a courtyard? Predictors of a positive response to this question were a higher sense of ownership of the open space provided, greater ability to find peace & quiet, higher degree of enclosure of the open space, feeling the courtyard to belong to the residents, greater size of the courtyard and clearer boundaries.

Conclusion: A sense of ownership is supported in absolute terms by large, and more importantly, enclosed courtyards with clear boundaries to neighbours and to the public realm. A sense of ownership has a relational component in the sense that having a courtyard correlates with the perception that the open space was provided for the residents specifically (as opposed to the neighbourhood or population at-large).

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5 (a total of 28 case areas in both Malmö and Stockholm were analysed, however the Malmö questionnaire was supplemented by the thesis-project of an architecture student, Martin Losos, who conducted a similarly worded questionnaire on user-preference in Stockholm generating approximately 1600 respondents. Where possible, these findings were incorporated into the previous study.

6 Courtyard is used to denote the open space on property, whether configured as a closed courtyard or more open yard. In the earlier research, yard was used to denote open configurations in residential complexes, and courtyard used to denote situations where open space was at least 90% enclosed by buildings (primary boundary).
**Frequency of use**
Predictors of higher rate of use were socializing with neighbours, finding peace & quiet, and spontaneous meetings with neighbours indicating the social component has a strong bearing on use. However, floor area ratio or FSI (Floor Space Index, also known as Floor Area Ratio or FAR) has a profoundly negative effect on use, indicating that congestion has a negative impact on use.

Conclusion: Peace & quiet and engaging with neighbours support use as long as the FSI is not too high.

**Finding peace & quiet**
Predictors of a positive response to this question were spontaneous meetings/greetings with neighbours, finding the courtyard to be safe and greater size of the courtyard.

Conclusion: It is noteworthy that size correlates to finding peace & quiet, but not enclosure. This implies that other users are not an obstacle to peace & quiet per se, but that congestion can be. A finding further reinforced by the somewhat surprising fact that spontaneous meetings with neighbours is not an impediment to peace & quiet. Perhaps there is even an expectation of some social activity in a collectively used courtyard and a degree of tolerance with it as long as there is enough space for everyone. Later on, the relationship of size and disturbance of the courtyard will be elaborated on.

**Safety:**
Predictors of feeling safe in the open space provided (even at night) were the local accessibility measures as network integration at 2 axial steps (within 500 meters), sense of ownership, peace & quiet, and feeling the courtyard was for the residents had positive correlation, while radius 20 (e.g. the district scale) accessibility had a slightly negative correlation. Presence of outsiders or non-residents in the open space also had a negative correlation with feelings of safety.

Conclusion: Accessibility within the neighbourhood is a positive attribute from the standpoint of safety — a finding supported in multiple other space syntax research (Bill Hillier 2004). Other relational factors also enter into a sense of safety, such as ownership, finding peace & quiet and feeling residents had greater sanction to use the space in question. Although these relational aspects are not directly measurable, proxy measures are possible which will be discussed below.

**Appropriation:**
The single most important factor relating to the extent of traces of use and ‘inhabiting’ a courtyard through gardening or furniture is enclosure.

Conclusion: Enclosure facilitates appropriation or implicit ownership as well as an explicit sense of ownership, however very small courtyards risk being appropriated by few residents which may exclude other residents. At this scale, high appropriation and high use have an inverse relationship, where spaciousness is the crucial factor.

Some recurrent themes in the questionnaire results were that the conception of a yard or courtyard has both a social component and one relating to solitude (or peace & quiet). Evidently, open space that is more clearly set aside for the use of residents, as indicated by it’s size and enclosure (or other boundaries) perform well from a territorial standpoint. The role of the urban designer or architect then, is to translate such knowledge into better methods of analysis of collective open space and second, based on those results to condense the insight gained into tools and strategies practical in the design of open space. Compounding this is the fact that use and appropriation of space are not always supported by the same built form indicators. While it may not be possible to consider both in every proposal, certainly providing better information for decisions which optimize the conditions presented is. Especially in densification proposals where transformation of existing perhaps low-performing territorial situations presents an opportunity.

**Theoretical Framework**
The balance of solitary and social activity found to be important in the questionnaire of user perceptions illustrates clearly that there is something elusive about collective private space and that conceiving of such open spaces as either private or public is perhaps not helpful in order to understand their inner workings. However, the terms semi-private and semi-public are imprecise. Surely it is possible to dig a bit deeper to situate collective open space as urban phenomena? Understanding collective private space requires a better theoretical
foundation but also more precise operative analytical tools. In Social Justice and the City, David Harvey argues that it is “crucial to reflect on the nature of space” in order to understand urban processes. His tripartite division of space into absolute space, relative space and relational space in dialectical tension is useful because it considers what he calls relational geometries and the constant interplay of the different scales. In subsequent works he has positioned his tripartite division in relation to Lefebvrian conceptions of space as well as others (Harvey 1969; Harvey 2009; Harvey 2006; Lefèbvre 1991) but finds that “relational terrain is extremely challenging and difficult terrain in which to work” and that “measurement becomes more and more problematic the closer we move towards a world of relational space-time” (Harvey 2006, 124). If the relational terrain encompasses the realm of social responses to environment, how to go about tracing these back to absolute space and factors such as property, density and explicitly measurable properties is not immediately apparent. However, by way of relative space, in which configurative analyses such as network integration in space syntax can be sorted, certain proxy measures seem able to ‘bridge the gap’ in a manner of speaking (Bill Hillier and Hanson 1989; Bill Hillier 1999). I would argue that making use of Harvey’s concepts becomes easier in combination with a morphological approach to the different levels of scale. Urban morphologist Karl Kropf credits urban morphologists Caniggia & Maffei and Saverio Muratori (1910–1973) with recognising that “developmental regularities or generic processes at one level of scale give rise to emergent forms at another level that can be recognized and formulated into conscious design ideas” calling it “the interplay between the emergent and the planned” (Kropf 2003, 2011). While the morphologist is generally more interested in understanding “the connection between the network pattern of routes and the patchwork pattern of tissues” (Kropf 2011, 402), in this research, connections also need to be sought between the relational findings relating to perceptions of open spaces and absolute and relative components.

Table 1 below is an attempt to use Harvey’s absolute, relative and relational space to structure and position the analysis. The questionnaire themes are to the far left with correlating variables from the empirical study of user-preference (Minoura et al 2011) in the following column. Variables possible to measure either absolutely or by proxy measures (such as network integration) are placed in the appropriate columns where those pursued further within the paper are indicated in bold (plus/minus indicating whether a positive or negative correlation was found). At the bottom of the table, morphological categories of scale are entered, as well as urban form aspects outlined by Kevin Lynch in Good City Form to the extent that Harvey’s divisions seemed appropriate. These are discussed from a morphological perspective by Kropf (Lynch 1984; Kropf 2011, 399).

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Variables found to correlate in stepwise regression: (predictors)</th>
<th>Absolute space: (directly measurable)</th>
<th>Relative space: (proxy measurable)</th>
<th>Relational space: (perceptional effects)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conception of having a yard or courtyard</td>
<td>+ sense of ownership + belongs to residents + peace &amp; quiet + enclosure + open space size + boundaries clear</td>
<td>+ open space size</td>
<td>+ enclosure</td>
<td>+ sense of ownership + belongs to residents + peace &amp; quiet</td>
</tr>
<tr>
<td>Frequency of use</td>
<td>+ greet neighbours + peace &amp; quiet + socialise with neighbours - higher FSI</td>
<td>- OSR</td>
<td>+ entrances within prop integration (2) 500M + socialise with neighbours</td>
<td></td>
</tr>
<tr>
<td>Possibilities for peace and quiet</td>
<td>+ greet neighbours + safe environment + open space size</td>
<td>- OSR + higher FSI</td>
<td>+ entrances within prop integration (2) 500M</td>
<td>+ safe environment</td>
</tr>
<tr>
<td>Safety</td>
<td>+ integration (radius 2) 500M + integration (radius 20) 500M - non-residents present + belongs to residents</td>
<td>- integration (radius 2) 500M</td>
<td>+ enclosure + integration (2) 500M - integration (20) 500M</td>
<td>+ belongs to residents</td>
</tr>
<tr>
<td>Urban morphology as method according to Kropf</td>
<td>Patchwork pattern of tissues (External private spaces)</td>
<td>Network pattern of routes (Routes &amp; public spaces) (Social Dimension)</td>
<td>Uses, activities, movement flows of energy/materials</td>
<td>Perceptual &amp; qualitative aspects</td>
</tr>
</tbody>
</table>

Kevin Lynch’s urban form aspects (in Kropf) | Built form. Topography & natural features | Uses, activities, movement flows of energy/materials | Perceptual & qualitative aspects | |
Table 1 is a matrix of Harvey’s Relative, Absolute and Relational Space with the correlating variables from the empirical study of user-preference in Malmö (n=309 respondents). Variables possible to measure either absolutely or by proxy measures (such as network integration) are placed in the appropriate columns and those analyzed as part of this paper are indicated in bold and plus/minus indicating a positive or negative correlation. (Radius 2 integration rather than radius 20 was used since this local network integration correlated more strongly).

What the table above is an attempt to illustrate is how a system both of analysis and categorisation of territorially performative types can begin to take shape. What is proposed is to look at specific planning proposals in recent detail plans using the variables above. The table suggests that some variables are more related to absolute space and others to relative space. The scalar difference between Kropf’s pattern of tissues and pattern of routes also says something about whose vested interest is represented. For instance, absolute space generally and attributes such as enclosure, open space size and FSI specifically, have effects primarily at the scale of the property and thus represents the perspective of the sanctioned user. Kropf implies that ‘external private spaces’ (in this case collective private spaces) belong in this category. Relative space, in turn is related to the routes and public spaces or in this study, network accessibility (integration at radius 2) but also the proxy measures of exposure and entrances within a property. These last two need clarification: exposure is explicitly the vantage point of the outsider or public-at-large onto the open space on private property. To the extent that property lines are not manifested materially, or where only secondary boundaries like fences and hedges define the space, then exposure by outsiders to those using the space will be greater. An assumption is here made that exposure impacts solitude (peace & quiet) negatively, as congestion appears to and that clear borders are somewhat compromised by exposure even over fences or hedges. Entrances within a property are also considered a proxy measure since we cannot know for sure but only surmise that neighbours will run into each other more often if entrances are inside the yard or courtyard or outside it simply due to the added traffic it generates in the open space by both residents and non-resident visitors. Furthermore, entrances at the perimeter of the property or site have an impact on the livability but also on the ‘public character’ of patches of space as where building set-backs create a front yard. This is also a working hypothesis – namely that entrances have the effect of sanctioning not only residents, but also visitors to enter a space (at least with regard to the front yard located more or less in the ‘public realm’). Finally, the interplay of these measurable factors and proxy attributes generate perceptional effects and underpin what Kropf terms the social dimension located in relational space. As a study of emergences, of how sites of collective action can be facilitated, this is proposed as the theoretical framework for the interplay of territorial potential of space (absolute, relative and relational) at the different scales of analysis.

Figure 1. By sanctioning access, an entrance can stabilize what would otherwise be a disturbed zone. Such portals in the public-private interface can and should be used more consciously in recognition of this capacity. The example to the left shows disturbed space within the public realm but on private property (Hammarbyhöjden, photograph Alexander Ståhle). The example on the right shows disturbed space within a shared courtyard (Stockholm inner city, photograph by author). Note that a zone of movement near the building façade on the right essentially eliminates the disturbed patches similar to those evident in the example on the left.

The approach taken is a morphological one, since the aim of research is to find tools to analyze urban design proposals or plans. It is argued that a performative assessment must tie into the social consequences of certain design decisions, such as building set-backs, location of entrances, enclosure, Floor Area Ratio (FSI) or enclosure of courtyards in order to acknowledge that the question is not just one of space, but also of ‘place’.
The very idea of collective private space is enigmatic and has inherent ambiguity due to overlapping public and private realms. But the notion of privacy is also multifaceted, encompassing ideas of “secrecy (information known about an individual); anonymity (attention paid to an individual); and solitude (physical access to an individual)” according to Ali Madanipour (Gavison, in Madanipour 2003, 37). While solitude can be compromised by congestion as previously discussed, anonymity is perhaps premised on it. However, it is also important to recognize the domain of the urban designer, that “urban fabric is the material that urban designers must learn to master, not just as a formal exercise but to serve human purposes — to serve life” (Kropf 2011, 405). Yet, while the approach is an urban morphological one, rather than categorization or a morphological typology, a territorial typology will be ventured. Karl Kropf (Kropf 2011) argues that urban tissue can be used as an operative planning tool, however where he refers to typological characteristics as providing a framework for design decisions, this paper proposes going further, to an evidence-based performance assessment of territorial effects.

Definitions and Measures

Measures were divided into absolute and relative or proxy measures in accordance with table 1, which were tied to the question of whose interests or vantage point are affected by urban design choices made at that scale. Absolute measures (representing the point of view of the resident, or the 'sanctioned user') are enclosure, size of the open space and FSI (or Floor Area Ratio). Relative measures (representing the point of view of the stranger or general population, the 'unsanctioned user') are r2 integration (proxy measure of centrality) and entrances inside the property for the role that they play in pulling people in.

In order to operationalize the measures, some assumptions were made and new measures were deemed necessary to be able to analyse the open space on a micro-material scale. The enclosure measure was outlined in paper 2 but here developed further to include not only primary enclosure (e.g. by buildings) but also secondary enclosure (e.g. by fences, hedges) generally indicated on the detail plans or illustrations for each proposal (see Figure 2). The procedure is outlined in paper 2. However, within the open space on private property there exist territorial variations, so in order move from a general characterisation of the open space to characterising zones within the property, a greater precision was sought.

Perimeter exposure relates to enclosure but includes secondary boundaries (see illustration above) and represents the degree to which the perimeter permits exposure whereby users in the courtyard/yard are subject to the potential gaze of those in the public realm. To capture the effect of that gaze into the open space, an exposure measure was devised. According to Jan Gehl, "at a distance of about 22-25 meters, we can accurately read facial expression and dominant emotions" however "the experience only becomes interesting at a distance of less than 10 meters" (Gehl 2010, 34). Since it is the perspective of the user and not the potential observer that is of interest here, 10 meters seemed too little, so 20 meters was buffered from the ‘public realm’ into the

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7 The performative categories proposed relate indirectly to these aspects of privacy, such that disturbed space may be said to compromise solitude, exposure may be said to compromise secrecy and anonymity might be said to be compromised when the non-disturbed space is not spacious enough to accommodate many users at once.
properties analyzed. The resulting zone (minus buildings) was called simply exposed. It represents the tacit 'control' that the knowledge one might be observable is likely to exert on an individual using the courtyard.

Exposed space.

Disturbed space.

Ambiguous space (overlap exposed + disturbed)

Non-disturbed space (remaining space)

Figure 3 illustrates the measures disturbed (5 meter buffer around buildings), exposed (20 meters buffered into the property from the public realm), ambiguous (overlap of disturbed and exposed) and non-disturbed (remaining open space) as mapped using GIS. The photo examples do not correspond to the maps but illustrate each condition (photos by Alexander Ståhle and author).

The implicit 'supervision' of building imposed on the adjacent territory is called disturbed in order to differentiate it from the co-presence intervisibility, described as exposure above. Disturbance is thus defined as the 5 meter buffer around a building\(^8\) that is more or less claimed by the building (see Figure 3). In a paper on ambivalent territories, Alexander Ståhle argues that 10 meters represents a disturbed zone around buildings and uses this to quantify disturbance of public space by private buildings (Ståhle 2008). In this study, this has been reduced to 5 meters. This zone of disturbance is intended to capture the unlikelihood of the space in question being appropriated by anyone except a resident. The disturbed zone exists both within the property and into the public

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\(^8\) There is a Swedish praxis of not building closer than 4,5 meters to a property (PBL). Explicitly this is for reasons of fire safety (preventing the spread of fire), but in urban tissues buildings of course abut one another. Where free-standing slab buildings compose the (sub)urban tissue, a minimum of 10 meters between buildings is standard practice.
realm. Extensive photo documentation (Ståhle 2008) shows that where shared private space is concerned, residents generally do not appropriate the space immediately next to the facade unless their own apartment is on the other side. The building in effect exerts a ‘control’ on the ground immediately adjacent. It is not uncommon for the buffer to be used for access to the different points of entry to the apartment buildings; however the patches in-between do not always invite use.

Ambiguous space is the name given to the overlap of exposed space and disturbed space. A prior analysis of post war modernist areas in Stockholm found as much as 14 -15% of private property open space to be consumed by what is there termed ‘private pseudo-property’ but derived in roughly the same manner (Ståhle 2008). The ambiguity derives from being private (legal status), but simultaneously ‘controlled’ by it’s exposure to the public realm and ‘disturbed’ by the privacy of the buildings. In use-terms, ambiguous territories send confusing messages about who is sanctioned to use the space. In the questionnaire findings, enclosure and clear boundaries was found to correlate with conceptions of having a courtyard. Thus, legibility appears to be a key factor in assessing territories.

Finally, nondisturbed space is the term used in this study for the remaining open space in the study areas which are neither exposed, disturbed, nor ambiguous (Figure 3). Nondisturbed spaces can perform as private space or as commons (if defined clearly) or perform as more public spaces (if connected to the public realm). Whether the courtyard functions as a social institution (commons) depends also on the size of the space being appropriate to the social body using it. The size of the nondisturbed space left after all other disturbances were accounted for, was taken for the most usable portion of the yard or courtyard.

Table 2 below shows the variables as sorted in Table 1 but with the addition of the new proxy measures outlined above, (in red).

<table>
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<th>Relational space: (perceptional effects)</th>
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<tbody>
<tr>
<td>Conception of having a yard or courtyard anonymity?</td>
<td>+ sense of ownership + belongs to residents + peace &amp; quiet + enclosure + open space size + boundaries clear</td>
<td>+ enclosure + open space size</td>
<td>- disturbance - disturbance - exposure</td>
<td>+ sense of ownership + belongs to residents + peace &amp; quiet</td>
</tr>
<tr>
<td>Frequency of use</td>
<td>+ greet neighbours + peace &amp; quiet + socialise with neighbours - higher FSI</td>
<td>+ enclosure; - GSI - higher FSI</td>
<td>+ entrances within prop + integration (r2) 500M</td>
<td>+ socialise with neighbours</td>
</tr>
<tr>
<td>Possibilities for peace and quiet</td>
<td>+ greet neighbours + safe environment + open space size</td>
<td>+ open space size</td>
<td>+ entrances within prop + integration (r2) 500M</td>
<td>+ safe environment</td>
</tr>
<tr>
<td>Safety</td>
<td>+ integration (radius 2) 500M - integration (radius 20) 500M + non-residents present + belongs to residents</td>
<td>+ enclosure</td>
<td>+ integration (r2) 500M - integration (c20) 500M - entrances within prop - disturbance</td>
<td>+ belongs to residents</td>
</tr>
</tbody>
</table>

Table 2 is a matrix of Harvey’s Relative, Absolute and Relational Space with the correlating variables from the empirical study of user-preference in Malmö and incorporating the new measures exposure and disturbance in red.

The measures described above and the procedure used to quantify them amounts to a territorial inscription — that is of defining zones of space and describing the probable territorial character. Introducing new measures of disturbed, ambiguous and exposed space allows the subdivision to take into account the probable result of
configurations of buildings and open space as well as routes of access. As such, it accounts for not just the intended territorial subdivisions often asserted by boundaries, but also the perhaps unintended ones. Mattias Kärrholm, an architect whose research focus is territoriality in the public realm finds that ‘territorial complexity’ in fact hinges on access being subdivided (in time or space) to accommodate different uses, since “spatial rules and conventions enable us to act (and co-act) in different ways” (Karrholm 2009, 434). The subdivision proposed here effectively divides the open space on private property of each study area further into performative categories. The effect is that some smaller yards/courtyards shrink in terms of usable size to nothing, while some are better able to maintain their usable size due to an efficient use of the open space and more generous size to begin with. Although this method is obviously quite reductionist and oversimplifies conditions on-site, the aim is not to name territories for the sake of categorization, but rather to create a system of analysis. “Taking things apart, naming the parts and examining those parts in use gets us into the data . . . It also gets us closer to a position advocated by Richard Sennett in his book The Craftsman (2009). In a broader examination of the idea of craftsmanship, Sennett argues that a heightened understanding of the working material is an essential foundation for quality in the act of creation” (Kropf 2011, 404; Sennett 2008). For purposes of comparison and relative assessment, the method seems adequate, even if future refinement of it as instrument may be necessary. A future aim would be to perform large-scale mapping of entire urban districts.

The objects of study

The cases chosen for study are ten Detail Plans approved by the municipal planning authorities of Stockholm and Malmö (five in each city) between 2002 - 2012 and selected geographically in areas slated for densification by either city. Although detail plans have some inherent weaknesses as objects of study, such as being highly generalized two-dimensional representations “directed at the control of use rather than form” (Hall cited in McGlynn and Samuels 2000, 80) they do contain the vital information in terms of density, building footprint and open space on property.

Figure 4 shows the study areas in Stockholm.
To supplement the detail plans, illustration plans for each proposal were also consulted, all readily available on the websites of municipal planning agencies of either city\textsuperscript{10}. Using spatial analysis, both configurative (relative) and absolute properties are possible to analyze.

\textsuperscript{10} http://www.malmo.se/Medborgare/Stadsplanering--trafik/Stadsplanering--visioner/Detaljplaner/Detaljplaner-Innerstaden.html
http://insynsbk.stockholm.se/Byggochplantjansten/Pagaende-planarbete/PagaendePlanarbete/?searchtype=map

Figure 5 shows the study areas in Malmö.

Figure 6, study areas indicated in red. Top row Stockholm, bottom row Malmö. In each area, the most average in size and enclosure was selected for further analysis.
First, it should be stated that this study does not treat territoriability within the public realm (property), since the empirical data on which the territorial assessment is based only looked at resident perception of the open space near their residential buildings. Nor is single-family private property in detached housing areas included. The prior study mentioned was done in assorted residential typologies (28 in total) dating from 1907 to 2009. The case areas in this paper are from 2002-2012 and are in terms of size and enclosure quite different from the previously studied areas in which the questionnaire was distributed. Immediately apparent is the drastic jump in size of the detail plan proposals in this study — all are smaller than the average size of the previous study areas. This is likely reflective of the changing nature of development projects in both Stockholm and Malmö today — being a result of smaller-scale market-driven infill projects and redevelopment rather than the large-scale politically driven developments from the modernist era. Society has changed and there are also smaller parcels of available land for new development.

Figure 7 is an area comparison indicating the scalar shift compared with the previous study areas (Stockholm and Malmö ‘AVG THEN’ compared with Stockholm and Malmö ‘AVG NOW’). The large-scale developments of the past are not reflected in current planning praxis if the current study areas (‘AVG NOW’) are any indication.

Table 3 shows the average enclosure in this study and prior.

<table>
<thead>
<tr>
<th>ENCLOSURE</th>
<th>THEN</th>
<th>NOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOCKHOLM AVG</td>
<td>79%</td>
<td>44%</td>
</tr>
<tr>
<td>MALMÖ AVERAGE</td>
<td>28%</td>
<td>56%</td>
</tr>
</tbody>
</table>

More noteworthy perhaps is that the detail plan proposals are also less enclosed (Table 3). To some extent this is due to several slab-buildings rather than perimeter blocks in the Stockholm proposals. While it may be tempting to attribute this to the differences in context, as the Malmö development areas are scattered mostly within the inner city and the Stockholm areas are all just south of and outside the inner city limits, a density comparison reveals that the Stockholm areas are actually more dense overall (Figures 4 and 5 show the study areas locations in Stockholm and Malmö, respectively; Figure 6 shows the study areas in their respective immediate contexts). The specific proposals chosen however are remarkably comparable in terms of density, as Table 4 shows. Since the average FSI of the prior study areas (in Paper 2) was only 1,11 compared with an average of 2,37 in these study areas, it bears mentioning that drawing on the previous study has some limitations. However, given that we found frequency of use to decrease with an increase in FSI, it seems likely that use will be negatively impacted by the high FSI here as well.
Within each Detail Plan proposal, when there was more than one property, each area was divided into "properties" (based on the so-called 'egenskapsgräns' delimited on the plans) for further analysis. As a result, there are a total of twenty-five areas analyzed. In each area, the most representative property was chosen for further analysis. Figure 8 is a comparison of the ten selected areas in terms of more absolute area measures — namely Gross Floor Area, property area, open space on property (property minus building footprint) and courtyard area. Besides illustrating that there is a more or less constant relationship between these values in the Stockholm and Malmö averages (which are parallel), in the individual areas, there are some distinct variations.

Table 5 contains the data from the absolute measures and relative measures thus generated and used in the subsequent analysis.

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Table 4 shows some common density measures for the case areas both in their respective local contexts (within a circle of 500 meters diameter) and for the proposals alone (on property-level). For more on density measures see [Berghauser Pont and Haupt 2010].

<table>
<thead>
<tr>
<th>CONTEXT</th>
<th>FSI_500m</th>
<th>OSR_500m</th>
<th>GSI_500m</th>
<th>PROPERTY</th>
<th>FSI_property</th>
<th>OSR_property</th>
<th>GSI_property</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVERAGE OVERALL</td>
<td>0.97</td>
<td>0.52</td>
<td>0.29</td>
<td>AVERAGE OVERALL</td>
<td>237</td>
<td>0.30</td>
<td>0.45</td>
</tr>
<tr>
<td>STOCKHOLM AVG</td>
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<td>0.61</td>
<td>0.33</td>
<td>STOCKHOLM AVG</td>
<td>240</td>
<td>0.30</td>
<td>0.45</td>
</tr>
<tr>
<td>MÅLÖ AVG</td>
<td>0.61</td>
<td>0.33</td>
<td>0.21</td>
<td>MÅLÖ AVG</td>
<td>230</td>
<td>0.29</td>
<td>0.47</td>
</tr>
</tbody>
</table>

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11 Size and enclosure were averaged for the detail plan area and the ‘property’ closest to the average was selected for further analysis.
In order to make a consolidated territorial assessment of the study areas based on all the performance attributes analysed, three themes will be addressed — access, legibility and fit. In *Good City Form*, Kevin Lynch outlines five basic performance dimensions, including access, legibility (termed ‘sense’) and fit, or capacity. The results will be presented according to these three themes, but by an approximate order of scale, beginning with the relative measures (i.e. performance at tissue level) and progressing to absolute measures (i.e. performance at property level). First, what these criteria say about the general territorial conditions of the areas studied will be discussed. To clarify, each performance dimension is illustrated using a complementary measure which enhances the assessment. (A note: the diagrams are designed so that an increase on the x and y-axis can be read as increasing public character; hence a location near the origin may be considered more ‘private’ based on whichever theme analysed). To reiterate, these analyses are based on the conclusions of the previous study (Minoura et al 2011) in combination with the new measures, but use the theoretical framework based on Harvey’s absolute, relative and relational space. Following this more general assessment, the territorial ‘fitness’

Table 5 is the data used in the study. Stockholm areas identified in red, Malmö in grey.

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1 Kevin Lynch five basic performance dimensions are vitality (for support of human needs), sense (or legibility), fit (of capacity and form), access (as in accessibility of resources), and lastly control (Lynch 1984, 118). In a territorial assessment, control might be said to result from to the interplay of the other variables, especially access, legibility and to a lesser extent capacity.
of each area will be discussed on an area-by-area basis, looking at the ‘material substratum’ in terms of the new measures disturbed, exposed and ambiguous space.

**Access:**
The first general assessment of each area is based on the network accessibility and perimeter exposure (Figure 13). Area A.01 represents the condition of locational privacy, in which both network integration and exposure are low; H.23, I.24 and G.22 in contrast are well-integrated, but have a relatively low exposure to the public realm and thus afford some privacy with respect to both secrecy and solitude (approximately 40% or lower). In fact, network integration can be assumed to be less integral from the standpoint of territorial performance if the perimeter exposure is low. A wholly enclosed perimeter block creates an open space separate and distinct from the public realm. Areas like E.17 and J.25 illustrate the reverse condition: having a high exposure of near 80%, the low network integration means that these areas may still provide some seclusion and privacy by their location. However, the differences in character between yard and public realm are likely to be blurred, with consequences for the formation of group identity as elaborated below.

![Network Integration and Perimeter Exposure](image)

Figure 9, the theme of Access graphed as network integration (median radius 2 value for all axial lines within a 500 meter diameter circle with the study area at the centre) and perimeter exposure (unenclosed perimeter and secondary boundaries included).

Prior research found that the local network integration (radius 2) correlated to perceptions of safety and that presence of outsiders was found to have a negative association with safety. Safety is thus highly related to access. In the safety assessment, an assumption is that few inside entrances will limit the presence of outsiders within the property lines. Thus, areas G.22, I.24, H.23 and D.10 are likely to be perceived as safe locationally (due to the high local integration), a condition supported by a design with relatively few inside entrances. Areas A.01, B.04, F.19 and E.17 are less well-integrated but have few inside entrances, which can be surmised to be fairly safety-enhancing combination. Finally, J.25 has a good deal of exposure and moderate radius 2 network integration, which is likely to be compounded by many entrances inside the property, for a generally speaking less safe environment.

**Legibility:**
Legibility (or in Lynch’s terms sense) refers to "the degree to which the settlement can be clearly perceived and mentally differentiated and structured in space and time by its residents and the degree to which that mental structure connects with their values and concepts" and "is a strong support for group identity and cohesion" (Lynch 1984, 118). Assessing legibility entails progressing from relative to more absolute measures in the hopes that the material underpinnings may begin to say something about whether the potential for solitude indicated in the Access diagram (Figure 9) translates to something residents would recognize as a space constituting a courtyard. Recalling that the conception of having a courtyard and sense of ownership is supported by factors like enclosure, clear boundaries and a sense of belonging to residents suggests that the
combination of enclosure and Gross Floor Area may shed light on the general legibility differences between the areas studied. Gross Floor Area is a representation of the approximate number of residents and perimeter exposure indicates the degree to which boundaries are clear. Figure 10 shows that area J.25, while having potential for privacy locationally (see Figure 9), here exhibits a high Gross Floor Area in combination with high perimeter exposure (ie. unclear boundaries). Stated otherwise, area J.25 appears not to be configured in a way that will support resident perception of having a courtyard or promote ownership; however use may not be hindered by the design. It will simply perform more publicly in the exposed parts. G.22, H.23 and I.24 have moderate Gross Floor Area as well as perimeter exposure, falling in the middle of the graph and thus have potential to be perceived as courtyards by this legibility assessment. Area C.05, with a high resident population (approximated in the high Gross Floor Area), risks congestion which might undermine the sense of the courtyard belonging to residents in spite of relatively low perimeter exposure (circa 30%), thus fairly clear boundaries.

The combination of access and legibility has implications for whether the intended use group has any chance of controlling the open space of the residential complex. In performance terms, a large portion of the open space of area J.25 will be difficult to control due to a perimeter exposure of around 80%. To some extent E.17 has similar preconditions -- namely high exposure combined with what is likely to be less resident presence due to the low Gross Floor Area. The best performing areas with regard to controllability are the low-exposure areas G.22, H.23, I.24 and F.19 but less so A.01 and D.10 due to smaller resident populations.

**Fit:**

Territorial fitness in the most literal sense requires a match between the form and capacity of spaces ‘matching’ the pattern of actions of use, in accordance with Lynch’s use of the term (Lynch 1984). After all, there is no sense discussing relational attributes of space (like control) or relative ones (like access) without defining which space we are speaking of. So while access and control describe the potentiality of the context and configuration, the open space in question needs further definition. Figure 11 incorporates the result of the territorial inscription or mapping, based on the buffering technique outlined previously. This resulted in a nondisturbed territory measure for each area, i.e. the area remaining after exposed, disturbed and ambiguous buffers were accounted for. In this comparison, area J.25 stands out in terms of size, having upwards of 0.7 hectares of nondisturbed space in the studied proposal. The most remarkable result however, is that the Stockholm areas A.01, B.04, D.10 and E.17 and Malmö area G.22 have nearly no nondisturbed space. That is, by the criteria of fit, no space with a capacity to support use or appropriation remains. These then are densification proposals which produce open areas whose chance of performing the role of courtyard is highly compromised. In a study in the UK, Zako & Hanson found that contemporary schemes analyzed showed extreme site coverage, a finding consistent with these results (Hanson and Zako 2007). What little space was available is here turned into ambiguous space.
instead. The ‘waste-of-space’ made apparent in this analysis is something the initial open space area analysis (Figure 11) also implied. Small areas such as these might profit more from an acceptance of the limitations of a high site coverage and not attempt to produce commons-like spaces where the fit is not right. Rather, private gardens might be something to consider in similar proposals or even simply accepting that perhaps little more than a ‘scenic patch’ might feasibly be created.

The relative consistency with which F.19, H.23, I.24 appear to capture the combination of performance characteristics which balance relative privacy with an apparent capacity to house the social production of a courtyard is an interesting result which, to some extent validates the method used. Is it possible that the potential for courtyard as commons lies in precisely this bundle of performance attributes?

**Territoriality Analysis of the Detail Plans**

An in-depth analysis of the spatial dimension of territoriality reveals that open space which can rightly be described as yard or courtyard is not as readily provided in current planning praxis as might first appear. In fact, appropriable space is difficult to find in many current plans. The analysis will be presented as an area-by-area analysis, beginning with the Stockholm areas.

Figure 11 graphs the fit using Gross Floor Area as well as the nondisturbed size of the courtyard (from the territorial inscription).
Area A (and B) have no nondisturbed space for the use of residents. A 5 meter buffer around the building mass consumes the remaining property. Area A nestles a U-shaped building at the edge of a large nature preserve while area B inserts 3 slab-buildings into small existing parks. In B, there is only limited space provided around the slab building, much of which is swallowed by parking. It seems accurate to proclaim that providing recreational space for the use of residents was not a priority in the design of these proposals, even if area A is configured with a small courtyard-like space.

Evidently, the proximity to nature and parks are considered sufficient to supply recreational outside space. However, research shows that a yard or a garden is not complementary to a public green area (Grahn & Stigsdotter 2003). They are in economic terms different goods. Area A, while semi-enclosed, suffers from an open space too small to avoid exposure and building disturbance consuming the space is thus disturbed. Area B on the other hand suffers from the exposure that is inevitable when a yard has only one façade constituting a primary boundary. The limited outside space provided in both areas is unlikely to provide privacy and does not have a capacity or clear identity to serve in a collective or commons capacity. Admittedly, the low radius 2 integration value in area A (1.96) ensures that co-present outsiders will not be very intense, but in B it follows that exposure will be far greater due to a higher network integration (2.57).

**Prediction A:** The disturbed open space in area A will be appropriated by a few residents, rendering the remaining space highly disturbed and thus not a commons.

**Prediction B:** The nondisturbed space in area B will not be viewed as a courtyard by residents due to the low enclosure and high exposure in a fairly well-integrated context.

Areas C.05, D.10 and E.17 are alike in several regards. All use compositions of buildings to define semi-enclosed yards. C and D exhibit an urban design that creates territories where exposure is the biggest problem. (Recalling that ambiguous territory is both exposed and disturbed). All three areas have a lot of ambiguous space, particularly area E.17 (45%), space which might have been configured in a way that more supports the emergence of commons. What might have been a large enclosed courtyard of over 0.2 hectares in area C.05 is not likely to be used much due to the combination of high FSI and low enclosure.
**Prediction C:** C.05 is too exposed to the public realm to create the legible and distinct identity to facilitate a collective dynamic forming between neighbours, however the more enclosed blocks in area C might (see figure 8). With the addition of some secondary boundaries, a commons might emerge.

**Prediction D:** D.10 suffers from disturbed, ambiguous and exposed space in equal measure in a proposal which manages to reserve only 13% of the open space as nondisturbed space. With a (radius 2) network integration of 2,83 the character of the yard will be that of an exposed and therefore public-seeming yard.

**Prediction D:** The semi-enclosed yard may blend seamlessly into the adjacent park (separated by a bicycle path) but D is too exposed to the public realm and a block commons is unlikely to emerge.

**Prediction E:** E has less exposure but more disturbance, as a result of the small courtyard. Abundant and avoidable building set-backs amount to handing over their open space to the public realm, since such exposed spaces are not likely to provide privacy or solitude.

**Prediction E:** E misuses the open space available, wasting almost half as ambiguous space and will not result in commons because of the small size of the courtyard.

**Prediction F:** F, H and I were the highest performing overall in the territorial analysis and also have a similar territorial ‘profile’. Exposed and ambiguous space are minimized due to the buildings abutting the property line to a high degree. As an urban design strategies, these proposals effectively place half of the disturbed space in the public realm, on the sidewalk (where it can be argued to belong). There, a natural movement zone with entry points to the buildings can activate and thereby stabilize it the zone of disturbance. On small sites this is crucial to avoid disturbance on property.
**Prediction F:** A territorial commons is supported by the design and the social dynamics of a courtyard are likely to emerge.

![Diagram](image)

**G**

G is the study areas with the greatest perimeter enclosure when primary and secondary boundaries are considered (99%), meaning that ownership and courtyard perception are supported. The narrow plot makes full enclosure by building unfeasible, but given the limitations, the urban design reflects a strategy of using it’s open space most for the benefit of residents, understandable given the high FSI of 3.65. However, the thinness of the open space left is too exposed, resulting in a large portion of ambiguous space (35%). Here, a secondary boundary restricting exposure, such as hedges or even a plank might be a solution.

**Prediction G:** G is too small and too enclosed to encourage use, however ownership is supported. That said, a commons is unlikely to emerge unless the exposure is resolved by design.

![Diagram](image)

**H**

Area H has a territorial profile similar to that of F and I. Exposed and ambiguous space are minimized due to the buildings abutting the property line to a high degree (here, another property immediately to the south limits exposure on this side). Area H, however places a significant portion of open space into a square of public character and consequently has less nondisturbed space than both F and I. Ownership is supported by the high enclosure and use may be as well, since the FSI is not too high at 1.65, but more nondisturbed space would have been better.

**Prediction H:** Commons will likely emerge.

![Diagram](image)

**I**

I has the highest proportion of nondisturbed space of the proposals analyzed. Enclosure might have been better supported by another design than the infill high-rise point building in the middle (the perimeter building is
existing), but the current proposal does include a secondary boundary to the south. A closed block would perform better from the standpoint of ownership, especially given the relatively high FSI of 2.0.

**Prediction I:** A territorial commons is supported by the design and the social dynamics of a courtyard are likely to emerge.

**J**

Although they differ greatly in size, comparing D with J reveals some similarities. Both have equal share disturbed, ambiguous and exposed territories. J has far more nondisturbed space, both expressed as a percentage and as an absolute (0.7 hectares). However, the concern in this area is precisely that — very large open space tends to not invite a sense of ownership. Thus, it is likely that the large areas to the far left and far right of the plan will have a fairly public character, especially in light of the high exposure. As in D, the design makes the open space very public-seeming. While use may be supported, the three remaining courtyards in this proposal are not very large and have many inside entrances. It is tempting to consider how an urban design proposal with three large perimeter blocks and nondisturbed courtyards might have performed. Knowing what we now know, it does seem that an opportunity was missed to create large common courtyards here.

**Prediction J:** The large open space not enclosed by buildings will likely be used where exposure is not a problem. The enclosed courtyards are more problematic, combining enclosure with inside entrances means sense of ownership will be compromised. Presence of strangers will likely impact the conception of these as courtyards and commons are not likely to emerge.

**Discussion**

Figure 12 shows the open space area comparison again, but with the performatively generated ‘nondisturbed space’ instead of the ‘yards’ as defined on the detail plans, revealing that the Malmö areas overall fared far better in the territorial assessment. The smallest Stockholm areas are hardly appropriable in terms of size, but even a better performing area, like C was shown to have problems not related to size but to enclosure and congestion. In terms of efficiently using the open space available for the benefit of residents, the Malmö projects have a more or less constant relationship between open space and nondisturbed space. This ‘trend’ is due to a combination of greater enclosure of the Malmö areas, which minimizes exposure, and minimal building set-backs, minimizing disturbed space on property.
What is proposed in this paper is that the role played by measurable performance criteria and spatial properties actually can tell us something about how territories are likely to perform. In terms of supporting the conviction that one has a yard or courtyard in the first place and moreover in providing privacy, peace and quiet, safety and a collective social arena. While raising some questions about the exact measurements used in the disturbed and exposed buffers, specifically in terms of whether areas with little open space were fairly or unfairly disfavoured by the method, in several cases — most notably in Stockholm areas A.01, B.04, D.10 and to some extent in E.17 it is fairly evident that the open space provided risks being inadequate in terms of size but also enclosure (and clarity of boundaries). Such small territories may perform as private space or as a scenic patch to look onto, but as for serving the collective body of a residential complex, the capacity is weak and congestion may result. Was this the intended outcome, one is tempted to ask? Given the property size available, was this the best solution territorially, or one of missed opportunities? At this end of the spectrum, the idea of enclosing courtyards is probably futile since the empirical evidence from the prior study in Malmö revealed that very small courtyards are used infrequently even when enclosed, due to lack of sunlight and too great exposure from ground-floor apartments. Some residents may appropriate them to a high degree and feel strong ownership but if the size is below approximately 300 m² then the predominant response of residents will be to find other open spaces to serve their recreational needs.

This perhaps gets at the heart of the differences noted between Stockholm and Malmö in this analysis. Stockholm has an archipelagic urban tissue with a good deal of green areas in the development areas just outside the city limits, a fact which the conceivers of these detail plans seem well aware of. It is a misconception, however, that parks and nature serve the same general purpose as yards or courtyards (Grahn & Stigsdotter 2003). The park and the courtyard are different ‘goods’ and serve different social purposes, just as the kitchen cannot be exchanged by a restaurant, or the TV by a cinema. There are social dynamics and resident engagement embodied in the concept of a courtyard which require another type of open space setting, which the notion of appropriation more than use gets at. Using urban form to promote that sense of ownership, encourage neighbourly socialization and provide collective privacy is a more proto-urban as opposed to peri-urban response in that it implicitly is less reliant on off-property open space to serve all recreational needs. The Malmö examples (with the exception of J.25) appear to be better conceived from a territorial standpoint, even if there is room for improvement there as well. Acknowledging an urban context means providing territorial diversity, but not in the sense of differently shaped yards as the example below (Figure 13) suggests.

In the territorial assessment, the Malmö proposals perform better overall, with the exception of J.25. All have
more abundant nondisturbed space for residents to appropriate and with a capacity to provide the spatial underpinning for collective dynamics to form. However, 1.25 due to the very large open space and inside entrances will be perceived as public. At the same time, building setbacks ensure that the disturbed buffer around buildings ends up on property rather than in the public realm. It has been argued that the public realm can absorb the disturbed zone better than intended private space seems to. Anticipating and dealing better with the buffer zone in planning could for instance mean consciously avoiding disturbed space on private property, rather placing it in the public realm, incorporating it as a distinct movement zone. In a traditional urban fabric, the sidewalk tends to abut buildings and absorb this buffer zone, effectively making it public. Disturbed private space in turn, is an ideal site for private gardens if the nondisturbed space is too small to promote collective ownership.

What is missing from the discussion on urban territoriality (to the extent that there is one) is a comprehension of what factors are involved in creating appropriable space. Besides being the site of decisions about inclusion vs. exclusion, the boundary (whether materialized or not) exists as property line in legal terms. More often than not, this is the site of decisions about exposure, since a materialized boundary is either asserted by building (e.g. primary boundary) or by a fence or hedge etc. (e.g. secondary boundary) (Hanson and Zako 2007). Even fences can be used constructively to identify spheres without necessarily being harsh or exclusionary, according to Hajer & Reijndorp in *In Search for a New Public Domain*, who add that:

“... The symbolic significance of fences often sits uncomfortably with the principles of ‘fluid space’, openness, neutrality and collectivity found in modern urbanism. Replacing parks with communal green spaces is exemplary for the blurring of the concepts of public access and public domain in the work of the architects and urban planners of the modern school” (Hajer and Reijndorp 2002, 121).

In a similar vein, Richard Sennet has argued that a “fear of exposure” is the main problem of modern public space and that city dwellers have lost the ability to interact with each other as a result (Sennett 1992). If this is so, an illegible interface between public and private is certainly one dimension — one in which ambiguity confuses interaction. Exposure is (according to the method outlined here) a component which can be controlled in order to minimize ambiguity. Disturbed space in turn, can be dealt with through an urban design that plans for it. Where commons potential is very low, which some of the smaller infill projects included here exhibit, then a better strategy than introducing low-performing commons is to allow and design for private disturbed space to be appropriated by a few residents, for instance by direct-access to the space.

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What Figure 13 (above) indicates, with its variously shaped spatial configurations, is perhaps an as-yet unformulated sense from urban design practitioners that different types of spaces are needed. However, an inadequate understanding of the instruments of territoriality produces merely formal alterations which offer variety but not necessarily diversity. Such territorial diversity is what Kevin Lynch alludes to in *Good City Form*, when he refers to 'unfoldingness' (in a discussion on *sense* or of how meanings regarding 'place' are communicated). In so doing Lynch also brushes on the need for privacy:

“So there are two important qualifications to the ideal of good sense: first, that there are limits at which individuals may wish to deny further knowledge of their affairs, or beyond which the human mind is overloaded, and second, that a settlement should permit an unfolding creation of meaning, that is, a simple and patent first order structure which allows a more extensive ordering as it is more fully experienced, and which encourages the construction of new meanings, through which the inhabitant makes the world his own” (italics mine, Lynch 1984, 144).

Producing space for an unfolding experience is easier said than done, but having been on-site in a number of large enclosed courtyards from the 1910’s and 1920’s and seeing firsthand the intensity of appropriation and social dynamics at work, it would seem that this is the diversity we actually need to be creating. For the inhabitant to make the world his own, urban designers must dare to make choices that serve the collective on a micro-scale, to “face most directly the competing values” (Kropf, 398). The ambition in large-scale residential development in Sweden between the years 1930 -1990 was at times explicitly that of promoting a collective good (known as ‘Folkhemmet’) and the territorial effects of this paradigm can be seen in the “lawns and playing fields [in place of] parks and gardens” in some peri-urban areas (Levy 1999:82). To reintroduce gardens and courtyards as sites of collective action requires looking critically at some past and current assumptions about how to produce appropriable space for residents.

This paper presents spatial evidence that suggests that current planning praxis does not convincingly make choices about whose collective interests to design for: the population-at-large (with real or hypothetical claims on open space) or the resident population with rights to privacy and to ‘make space their own’ through appropriation. If what is at stake does not seem important or relevant, i.e. the choice between producing socially reinforcing commons on one hand versus difficult to appropriate territorial ambiguity on the other, it is worth remembering that “a voided condition of frightening sparseness, [is] shocking proof that so much can be organized by so little” (Koolhaas 2002, 150). A better understanding of the organizing principles affecting appropriation and sense of ownership is meant not as an indictment of current planning, but rather to illuminate some of the range of opportunities available to the urban designer in considering territorial commons.

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15 Sweden’s ‘allemansrätt’ or *right-to-roam*, for instance, is both legally sanctioned and socially practiced (Ståhle 2008).
REFERENCES