

Table 1: Summary of study descriptive characteristics.

Author(S) & publication year	Country	Aims of the study	How was the data collected?	What version of GTM was used?	Was the use of GTM justified?	What was the role of GTM?	Was the role of researcher discussed reflexively?
Jones (2002)	UK	Examine the managerial implications of establishing and developing Friends groups as a form of community involvement in the management of urban parks	Data has been collected by three separate methods: personal interviews with a range of council officers and Friends group members, analysis of council and other documentation, and non-participant observation	Glaser (1978, 1992)	Yes	The chosen methodology for collecting and analyzing the data in this case study has been that of grounded theory	Yes
Machemer and Kaplowitz (2002)	USA	Systematically analyze characteristics of TDR programs that correspond with successful program implementation	Approximately 1600 pages of documents, 10 hours of interview tape and 50 pages of transcripts/interview notes concerning the 14 selected cases were assembled and analyzed	Strauss and Corbin (1990)	Yes	The analysis of the data collected based on an iterative grounded-theory approach	No
Silverman (2003)	USA	Examine the promise and limits of using planning advisory boards to augment citizen participation	The data come from 11 of telephone interviews. In addition, archival materials, census data, and documents were collected	Glaser and Strauss (1967)	No	A systematic methodology employing grounded theory and theoretical sampling techniques was used	No
Manzo (2005)	USA	Explore the nature of people's emotional relationships to places	in-depth interviews were conducted with 40 participants	Strauss and Corbin (1990)	No	This empirical research uses a grounded theory approach,	No
Clarke and Agyeman (2011)	UK	Center on the ethnic and cultural interpretations of environmental dis/engagement among black and South Asian communities in Britain	Researchers conducted 10 focus groups and 18 in-depth interviews	Strauss and Corbin (1990)	No	The analytical strategy employed in research was grounded theory	Yes
Kornberger and Clegg (2011)	Australia	Focus on the relation between strategy-as-practice and its power effects in the context of a strategy project	The data collection comprised three elements: written documents; 20 interviews; attending public events, community forums, strategy workshops and meetings	Glaser and Strauss (1967)	Yes	In this study grounded theory suggested itself as a fruitful analytical approach	Yes
Mazumdar and Mazumdar (2012)	USA	Focus on the role of home gardens in the lives of immigrants.	An ethnographic research was conducted which included observations of 16 home gardens and unstructured open-ended interviews with 28 immigrants	Glaser and Strauss (1967)	Yes	A "discovery of grounded theory" approach was used to capture emergent themes arising from the data	No
Samuel and Stubbs (2013)	China, Singapore and UK	Explore the legacies from the greening of the Olympic Games through an analysis of Beijing 2008, Singapore 2010, and London 2012	Primary data were collected through 19 semi-structured interviews supplemented with direct observation; and secondary data from publicly available source	N/A	No	Grounded theory techniques were used to code and analyze the data and draw out themes	No
Anguelovski (2013)	Spain	Analyze how activists use their environmental endeavors as tools to address stigmas attached to their place, control the land and its boundaries, and build a more transgressive form of democracy	Data collection consisted in semi-structured interviews. The author observed numerous meetings and engaged in participant observation of projects focused. Last, she collected data from secondary sources	N/A	No	The author analyzed data using grounded theory and the software Nvivo	No
Dunlap et al. (2013)	USA	Explore both the meanings participants of an urban garden project ascribed to place and the sentiment they attached to those meanings	Data were principally generated from participant observation and 11 semi-structured interviews. In addition, various documents served to further illuminate Urban Patchwork's role in fostering participants' sense of place	Charmaz (2006)	No	Guided constructivist approach to grounded theory, analysis of the data entailed a method referred to as constant comparative analysis	No
Khirfan and Jaffer (2014)	UAE	Examine the knowledge transfer process with particular emphasis on the authority hierarchies formed and their impact on the adaptation of transferred knowledge	Data collection from primary sources commenced with a keynote speech that was offered by the lead Vancouverite planner in Abu Dhabi. The primary data sources also included six in-depth interviews with other transfer agents. Additionally, numerous secondary data sources were consulted	Glaser and Strauss (1967)	Yes	The study adopted a grounded theory approach	No
Banerjee and Hine (2014)	Northern Ireland	Explore the interrelationship patterns between travel behavior, urban form, socio-economic influences and	This paper reports findings from 6 focus group discussions and 17 in-depth interviews	Strauss and Corbin (1998)	Yes	The constant comparative method of grounded theory	No

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		personal preferences				analysis has been adopted for this study	
Cerar (2014)	Slovenia	Define various types of local initiatives, and it especially studies the distinction between reactionary and contributive local initiatives and relates them to the notion of community	Data was collected from interviews	N/A	Yes	A qualitative method rooted in a grounded theory (GT) approach was used	No
Faehnle et al. (2014)	Finland	Investigate how public officials, decision-makers and stakeholders see the role of the input produced by residents' participation in informing the planning of the urban green infrastructure	Data were obtained using 33 semi-structured expert interviews. We augmented this data with secondary information sources.	Different versions include Charmaz (2006); Strauss and Corbin (1997) and Goldkohl and Cronholm (2010)	Yes	We applied the Grounded Theory approach to answer research questions	No
Hamin et al. (2014)	USA	Identify how small cities approach climate adaptation, the barriers they face in doing so, and the strategies that such cities develop to overcome those barriers	We undertake fine-grained empirical research on a sample of small communities in coastal Massachusetts by interviewing 18 community planners	Glaser and Strauss (1967)	Yes	Our research method follows a grounded theory approach	No
McLean and Borén (2015)	Canada	Analyze and understand the dynamics of how sustainability is governed locally, with a special focus on barriers to sustainability policy mobility.	The empirical material is primarily based on 18 interviews with key stakeholders	N/A	No	Inquiry into the case study itself was approached using grounded theory	No
Mingardo et al. (2015)	UK and Netherland	(1) To conceptualize parking policy in Europe; (2) To contribute to the discussion on the future of parking policy in European cities	Scientific and gray literature and the authors' own working experience and 10 discussions with experts and academics in the field	Glaser (1992)	No	The methodology used for this paper is inspired by grounded theory	No
Sellberg et al. (2015)	Sweden	Evaluated the ability of the Resilience Assessment Workbook to help urban areas incorporate resilience thinking into their planning practice	We adopted an in-depth case study design from interpretive policy analysis that used textual analysis, participant observation, and 6 in-depth interviews	N/A	Yes	Our data analysis was based on grounded theory	No
Carter (2016)	USA	Conduct ethnographic research with several environmental justice (EJ) organizations in Latino communities of Los Angeles, California	This paper is based on three months of intensive field work with environmental organizations. I interviewed leaders of 12EJ and community development organizations in the area. I also observed and participated in community planning meetings, environmental education classes, public demonstrations, community garden projects, and other activities	N/A	No	Recorded interviews were coded and analyzed thematically using a grounded theory approach	No
Coslovsky (2016)	Brazil	Examine how prosecutors and public defenders enforce urban planning laws in the metropolitan region of Sao Paulo, Brazil	The study entailed the collection of three types of data: (a) 24 interviews with key informants; (b) direct observation of public officials; and (c) written records	Glaser and Strauss (1967)	No	The research followed the tenets of grounded theory	No
Czepczyński and Sooväli-Sepping (2016)	Chosen location around the Baltic area	Study the discursive circulation of communism and its deconstruction in both rhetoric and forms conveyed in the cultural landscape	The study draws on fieldwork projects and in situ comparisons analysis of historical maps from 2005 and 2007–2012, complemented by formal and informal interviews and media reports	Charmaz (2000)	Yes	This study follows the ideas of grounded theory	Yes
de la Barrera et al. (2016)	Chile	Analyze factors such as preferences for green spaces over other leisure spaces, community attachment, the image of green spaces, social cohesion, and perceptions of safety in three socioeconomically differentiated neighborhoods	At least 60 users and 18 non-users were interviewed. Four onsite interviews with user groups within the green space were also performed	N/A	No	The analysis was based in the grounded theory	No
Liu and Kang (2016)	UK	Gain a greater insight into the factors that affect individuals' preferences and understanding of urban soundscapes	Data are collected from in-depth interviews with 53 local residents for two months	Glaser (1992)	Yes	GT is adopted to analyze the soundscape	No
Mrkajić and Anguelovski (2016)	Serbia	Ask how the political and socio-economic context of the transition has shaped sustainable mobility planning, especially cycling planning, and how local cycling	Our data collection consisted of local planning documents, policy reports, and specialized journals and maps. We also conducted 12 core semi-structured	N/A	No	We analyzed our data through grounded theory	No

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		stakeholders respond to the challenges that emerged during the transition	interviews				
Sanyé-Mengual et al. (2016)	Spain	Examine the promotion and inclusion of new forms of urban agriculture through the practice of urban rooftop farming and contributes to the nascent literature on the stakeholder and public perceptions of UA	We conducted semi-structured interviews with 25 participants. This data collection was complemented by secondary data collection, including maps, reports, and press releases	Corbin and Strauss (1990)	No	We analyzed the data through grounded theory methods	Yes
Stevenson (2016)	UK	Explore the nature of social capital arising from engagement in local festivals and the implications of this for the social sustainability of an emerging destination	The research presented here draws from the wider project. It is supported by attendance and observation of these festivals in 2009, 2010 and 2012 and 84 interviews and observations of local community meetings between 2008 and 2014	Glaser (1978, 1992,1993,1998)	Yes	This paper informed by grounded theory and the subsequent refinements and clarifications advocated by Glaser	Yes
Allen and Slotterback (2017)	USA	Answer two main questions (a) What are the limitations of typical participation processes used by planners relative to engaging immigrants? (b) What strategies are effective in engaging immigrants in planning and other sorts of public decisions?	We collected data from interviews and focus groups	Strauss and Corbin (1990)	No	The study followed a grounded theory methodology	No
Brand (2018)	USA	Explore African Americans' responses to urban redevelopment strategies that undermine their claims to urban space	Over 20 unstructured interviews and non-participant observations at neighborhood meetings and community events were the primary data for this research	Charmaz (2006)	No	Data was transcribed and analyzed using grounded theory	No
Ojeda-Revah et al. (2017)	Mexico	Investigate whether existing green space (parks) that complies with current legislation meets the expectations of potential users in two housing developments in Tijuana	Federal, state, and municipal urban development and environmental laws, regulations, and land use plans that apply to the municipality of Tijuana were reviewed. In addition we conducted 32 interviews	Strauss and Corbin (2002)	No	The analysis followed the steps suggested by grounded theory analysis	No
Read and Sanderford (2017)	USA	Examine the development of the Brightwalk community in Charlotte, North Carolina, to explore some of the tradeoffs municipalities make when engaging in public-private partnerships designed to support the production of mixed-income housing in urban neighborhoods	A single-observation case study involving a gray literature review and a series of semi structured interviews with ten individuals familiar with the project was chosen as an appropriate means	Strauss and Corbin (1998)	Yes	A semi-grounded theory approach was used	Yes
Siders (2017)	UK	Report on a qualitative case study of the creation and adoption of the 2011 London, United Kingdom, Climate Change Adaptation Strategy	26 Open-ended qualitative interviews formed the basis of the case study	Glaser and Strauss (1967)	Yes	The study used a planner-oriented grounded theory approach	No
Tewari and Beynon (2017)	Australia	Examine the vision statements and objectives of the private developers which underpin contemporary master-planning in the master planned estates (MPEs) of Point Cook	Two types of data were collected and analyzed. Firstly, data pertaining to the physical environment in the form of notes and photographs of streetscapes and landscaping was collected through physical observation. Secondly, qualitative survey questionnaire was designed and administered to the residents of Point Cook	Strauss and Corbin (1990)	No	Grounded Theory was adopted to analyze the responses obtained from the survey questionnaire	No
Willing and Pojani (2017)	Australia	Investigate the motivations of suburban residents for choosing this lifestyle, their level of satisfaction with a low-density, car-oriented environment, and their potential interest in embracing alternative living arrangements (i.e. compact urban settings)	Population interviews constitute the basis for this study. In total 22 people participated in an in-depth interview	N/A	No	Grounded theory was employed to guide the data analysis	No
Allen et al. (2018)	New Zealand	Consider the contention that higher density neighborhoods can lead to enhanced livability, and examines the idea and role of neighborhood to achieve this aim and policy goal	The article reports on the findings from fifty-seven in-depth qualitative interviews	Charmaz (2006)	Yes	The guiding methodological approach behind this paper is Constructivist Grounded Theory	No
Alotaibi and Potoglou (2018)	Saudi Arabia	Consider the wider impacts of the new public transport system in Riyadh City on urban form, economics, environment, social norms and culture	The analysis is based on 25 in-depth interviews conducted with transport experts and officials of relevant authorities	N/A	No	NVivo 9 qualitative software was used to analyze the data based on Grounded Theory	No
Baron and	Ethiopia	Conduct research on urban resilience in Africa has major	In total, 12 interviews with urban experts from Ethiopia	Glaser and Strauss	Yes	The entire interview process	No

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Cheremet (2018)		theoretical and methodological gaps. This can lead to problems when designing and implementing resilience strategies there. Understanding African perspectives can be a way of tackling these. The paper aims to discuss these issues.	are conducted.	(1967)		is understood as iterative and inductive, generating theory along the principles of the GT.	
Caldwell and Boyer (2018)	USA	Build a context- and time-sensitive explanation of how individuals adopt and sustain the practice of bicycle commuting in Charlotte	We interviewed 26 commuter cyclists	Strauss and Corbin (1998)	Yes	Conventions of Grounded theory methodology guided both the collection and analysis of data	No
Gonzalez-Mathiesen and March (2018)	Australia	Elaborate on the built and natural environment disciplines' potential to develop applied understandings of resilience, using the example of land-use planning design guides in wildfire-prone areas	The data collected based upon two main sources of data. Firstly, international policy and documentary information. Secondly, semi-structured face-to-face interviews	Strauss and Corbin (1990)	No	The documents and interviews were analyzed using inductive grounded theory methods	No
Ikalovic and Chiesi (2018)	Japan	Explore the multidimensional concept of home through the relationship of the self and the city.	30 semi structured interviews were conducted	Multiple Strauss and Corbin (1997) and Glaser and Strauss (1967)	No	A grounded theory approach as an inductive methodology was applied	No
Ingeborgrud (2018)	Norway	Depart from an assumption that visions may guide urban development work, and examine and compare national and local governments' visions of future sustainable cities in Norway	The article used a broad set of sources: 25 interviews; official documents from national and local authorities; shadowing two city planning agencies; and newspaper articles	Charmaz (2006)	No	The analysis was inspired by grounded theory	No
Keswani (2018)	India	Look at how urban space in a market precinct is negotiated through tactics of street vendors and strategies of the government	In the first phase of the data collection, 20 vendor interviews were completed. In the second round of data collection, an additional 50 vendors were interviewed	Charmaz (2006)	Yes	The grounded theory approach was chosen as the research method	Yes
Xiao et al. (2018)	UK	Explore indicators influencing people's pleasantness of smellscapes in a selected case	19 participants were recruited for smellwalking with semi-structured interviews	Charmaz (2006)	Yes	It took the grounded theory as a methodological and analytical	No

Table 2: Details of study methodological quality.

Author(s) & publication date	Did sampling follow the strategies of GTM?	How were initial concepts developed?	How did theoretical development progress after initial concepts were mapped?	How was the outcome of the research & how was it constructed?
Jones (2002)	Data collection commenced by means of a selective sampling approach. These senior officers identified a total of six separate Friends groups for observation and interviews. The leading personalities in these Friends groups have been interviewed on several occasions following the process of theoretical sampling	Three types of coding are used: open, selective and theoretical. As categories are generated the next incidents are compared to the category. This is known as constant comparative analysis of incidents which soon starts to generate theoretical properties of the category	Selective coding commences once the basic social process emerges and focuses on delimiting the coding to the main variable and its related categories and properties. Theoretical coding weaves the fractured story back together again by conceptualizing how the emergent codes can be integrated into a theory	The findings of the study have highlighted two major factors in managing community involvement through Friends groups: firstly, the critical importance of two-way commitment, and secondly the requirement to adequately manage Friends groups through the various stages of their developmental process. These factors are analyzed below. Theoretical saturation was not mentioned
Machemer and Kaplowitz (2002)	The 14 TDR programs were systematically selected based on their general characteristics, level of implementation, age and programmatic goals. The sample seemed appropriate and the inclusion criteria justified. Theoretical sampling was not reported	The data were iteratively analyzed (coded). The TDR programmatic elements in the data were identified and grouped into initial categories. These initial codes presented in a table. The researchers identified and documented 'evidence' or examples of each of these programmatic elements that illustrate in this table	The researchers used a selective coding process to systematically relate the major TDR themes and their elements to the data and to existing TDR literature.	The outcome was an evaluative framework that categorizes the TDR program as one of 13 elements under three themes and presented in a table. Like former table, this table includes examples of each theme and programmatic element..the final phase of the reported research used the developed framework to evaluate three well-documented TDR programs
Silverman (2003)	The sample was appropriate and the criteria were justified. It was reported that theoretical sampling was used but no information was provided to describe how. There was not a discussion to suggest that data collection and analysis occurred simultaneously	There was no reference to initial coding procedures used. Initial concepts and codes were not reported	The analytic procedures undertaken were not reported. There was no examples of the codes developed at any stages of the analysis	No core category was provided and no model or explanatory hypothesis was produced. The outcome of the study described as thick description in which the promise of advisory board and the limits of advisory board discussed. It was mention that saturation was achieved but no evidence was provided to support this claim
Manzo (2005)	Sampling procedure follows recommendation for strategic nonprobability sampling, rather than for representativeness for statistical generalization. The sample was restricted to certain fixed variables to allow some uniformity among participants for comparison. Theoretical sampling was reported	Data were analyzed using the open coding techniques typical of a grounded theory approach. Here, conceptual labels are placed on responses that described discrete events, experiences and feelings reported in the interviews	After open coding, a classification system was developed for these concepts based on a comparison of all concepts represented in the data. Using this system, responses to each individual question were analyzed across all participants. Next, each individual interview was analyzed across all questions to identify meta-themes that emerged within each interview. Finally, after content-analyzing all interviews, responses were examined for common meta-themes across all interviews. During this phase, the final "axial coding" was conducted. Significant themes in relationship to place were presented	The findings provided descriptive themes. The analysis reveals the diversity and richness of people's emotional relationships to places, indicating that place meaning develops from an array of emotions and experiences, both positive and negative. Moreover, findings demonstrate the socio-political underpinnings of our emotional relationships to places. No core category was presented. Theoretical saturation was not referred on
Clarke and Agyeman (2011)	The authors used theoretical sampling to select participants along other axes of social differentiation to ensure diversity. The selected sample was justified as presenting a wide range of community representatives and key actors facilitating sustainability policy	The process of open coding used to analyze initial interviews was not described in detail. The number of open codes was not reported and no examples of such codes were given	The authors used qualitative data analysis software (NUD.IST) designed to support theory building by coding, categorizing and subcategorizing the data and enabling constant comparison of data segments, which assists in identifying emerging themes and concept development. They also identified an 'in vivo' code (e.g. 'different mindset') that supports grounded theory as this is a participant defined category	In this research, there emerged one overarching theme that identified the 'different approaches to engagement'. Two subthemes are examined. The outcomes of the study were reported on as descriptive narratives of these subthemes. The authors conclude that their findings add theoretical and empirical insights to the existing literature on barriers and opportunities in environmental participation
Kornberger and Clegg (2011)	The selected sample was justified as presenting a wide range of contributors to strategy project. The criteria for inclusion were whether the person was part of the 2030 project team and/or whether they played a significant role in the strategy-making process. Theoretical sampling was not	In an iterative process, the data were analyzed and categories subsequently developed that informed further rounds of interpretation. Analytically, two key concepts emerged as sense making devices. First, how did different forms of knowledge mobilized in the process inform strategy-as-	Moving between theoretical frame and the data, researchers isolated episodes, quotes and observations that illustrated power/knowledge and performative effects in the strategy process. They did so initially by manually coding data that fell into the following categories: knowledge, strategy	No core category was provided. The findings presented as narrative that forms the basis of the article. Theoretical saturation was not reported.



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	reported	practice? Second, if strategizing is linked to specific power/knowledge regimes, what kind of performative impact does it have on its subjects and their interpretations, actions and decisions?	practice, time, space, body politic and public will. As they did so, new categories emerged (such as the aestheticization of politics) that were then included in analysis. Moving iteratively between categories and data, they translated data into the narrative that forms the basis of this article.	
Mazumdar and Mazumdar (2012)	Recruitment of participants was by means of “opportunity sampling” and “snowball sampling”. The selection of sample was justified but theoretical sampling was not used. No evidence of iterative data collection and analysis	Data analysis involved textualization of the data (conversion of the data into text form through transcription), reading and familiarization with the data, identification of portions that revealed about gardens, and coding of emergent aspects, ideas, and themes. No examples of these initial codes and concepts were presented	Initial codes organized into broader thematic categories. Four themes that emerged are: gardens as (a) sacred space, (b) cultural space, (c) ecological space, and (d) as family memorial space. These are described next. There was no discussion of how codes compared or selected to form themes	The findings presented using 4 themes, no core category was identified. Theoretical saturation was not reported
Samuel and Stubbs (2013)	Primary stakeholders of the OG were identified from the literature review. The participant sample is skewed towards Olympic representatives and government, who may provide a more critical perspective. Theoretical sampling was not reported. There was a discussion to suggest data collection and analysis occurred simultaneously	The transcripts were read over line by line and annotations that linked sections back to the research question and objectives were made on the margins of the transcripts (microanalysis). These annotations were informal code categories, which were then refined as further interview data were generated and annotated. Initial concepts and categories were not presented	Codes were grouped together and classified under new themes as patterns emerged within the data (second-level codes). Second-level codes were grouped together and further classified under separate themes (third-level codes). Where the interview data generated items that were unassignable, codes were modified to accommodate them or the items were placed under a general heading until they could be appropriately classified. Finally, four themes emerged from grouping the third level codes	The four determinants of green legacies presented that emerged from the interview data. No core category was identified. Major themes were reported in a descriptive narrative. Theoretical saturation was not reported on
Anguelovski (2013)	Participants identified through snowball sampling. The selected sample was justified as presenting with a wide range of participants. Theoretical sampling was not reported. There was not a discussion that data collection and analysis occurred simultaneously	Line-by-line and paragraph coding was used to generate initial concepts. Nvivo was used to assist in the data analysis. The numbers of open codes was not reported and no examples of such codes were given	Initial coding followed by focused and axial coding. There were no examples of the codes developed at any stages of the analysis. There was no discussion of how the codes compared or selected to form categories	Through this grounded theory, the author was able to build stories of activists and to understand their engagement in the neighborhood as well as their goals for its revitalization. In parallel, she used process-tracing techniques to explain decision processes that led from initial conditions of marginalization and degradation to positive outcomes for the activists. Last, she developed historical and analytic narratives to contextualize neighborhood mobilization and understand the role of the local history of marginalization and urban development projects in motivating activists. Saturation was not mentioned
Dunlap et al. (2013)	The sampling strategy used was not defined but the selected sample was justified. Theoretical sampling was not reported	Analyze commenced with open coding in which the first two authors read the field notes and transcripts, and then assigned short, descriptive codes to portions of data that were deemed significant in light of the research questions. Initial concepts were not presented	First two authors reviewed the accumulated code list, reconciled disparities in their characterization of the data and collapsed similar codes into a smaller subset of focused codes. Using these focused codes, the first two authors coded the data a second time and used the focused codes to sort the data into coherent categories. Following the focused coding process, the first two authors once again compared the coded transcripts and field notes in order to reconcile disparities.	The findings illustrate that participation in the gardening project shaped their place meanings and sentiment through two principal processes: (1) a sense of connection to the different garden plots through the resulting produce and the physical transformation of the site, and (2) a sense of connection to and identification with the community at large via links to other individuals who are involved in Urban Patchwork activities. Saturation was not referred
Khirfan and Jaffer (2014)	The sampling frame was specified and justified, but the sampling strategy used was not specified. The sample size was not justified. Theoretical sampling was not reported	The audio-recordings of the interviews were transcribed, and one by one the transcripts were compared to and paired with the relevant points from the detailed impression notes taken during and after each interview. Inadvertently, the pairing	The data from the secondary sources were then aligned with the emergent themes from the primary data, solidifying some and negating others. Eventually, the stronger themes were distilled out. The data were analyzed by devising a hierarchical	The outcome of the study presented as a theoretical framework. The article propose a model that maps the various levels of authority and links them to the knowledge flow between local acquiring agents and foreign transferring

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		revealed key themes in the data obtained from the primary sources, which chronicled the process of knowledge transfer, the insights into the challenges and interpersonal interactions between the transfer agents and various stakeholder groups	model which facilitated the visualization of the authority distribution and the interpersonal and professional transactions between agent types. Constant comparison among the collections and/or incidents was mentioned. The process involves continuous memoing, sorting, and resorting of the data and their visualizations. Eventually, the authors elaborated on the deducted themes, which led to their verification, and also to the induction and theory conception	agents. Saturation was not reported
Banerjee and Hine (2014)	A total of six focus group discussions were conducted (two from each case study area). The aim was to recruit residents from each of the selected case study areas. The groups were recruited using a list of community organizations, parent teacher associations, local clubs and other social groups. A total of seventeen in-depth interviews were. The sample was justified but theoretical sampling was not referred on	Initially the data are fragmented and examined, and conceptual labels are assigned after conceptualizing, comparing and categorizing the data. The whole process is data driven as the categories reflect the issues that are of importance and were discussed in the in-depth interviews and focus group discussions	Initial coding followed by the axial coding which then looks at the relationship between these conceptual labels and then links them with overarching categories. Finally, the selective coding involves the selection of a core category that links the overarching categories to generate an understanding of the interrelationship between the categories and also filling in categories that need further	Seven major overarching categories extracted from transcripts. These factor are not mutually exclusive and interdependency pattern. A table shows the interrelationships pattern and the following sections discussed these overarching categories in more detail. Theoretical saturation of the developed categories was mentioned
Cerar (2014)	In the research on the selected cases potential interviewees were theoretically selected. The selected sample was justified as presenting with a wide range of residents and municipality officials. The interviewing ended when saturation occurred, at the single case level	Analysis was conducted over three stages. Initial concepts were identified using open coding. No examples of initial concepts and codes were provided	The data gathered through interviews were analyzed by coding. First open coding took place in order to define concepts, then axial coding was performed and the process of coding ended with selective coding. The concepts were linked into substantial theories on which the conclusions were founded. Major categories of the research are formed, based on the theory studies and case studies. The categories were threat, expectations, structural possibilities and social capital	The differences in these two cases represent a foundation for the article's conclusions, which emphasizes the potentials for stimulating contributive participation. The outcome of the study presented as inductive reasoning with a loosely stated hypothesis. it concluded that participation in spatial planning is often triggered by the following main factors: perception of a threat, expectations of results, structural possibilities and a high level of social capital
Faehnle et al. (2014)	The group of interviewees was selected so as to be diverse in terms of actor roles, approaches to and experiences of planning. Theoretical saturation was not reported. There was not a discussion to suggest that data collection and analysis occurred simultaneously	Different procedures conducted to answer two main questions. Different techniques were used to develop initial concepts. Examples of initial concepts presented	To answer question 1, the authors summarized their observations into conceptual classes, re-evaluated these classes when proceeding with the analysis and gradually refined the classes and created linkages between different classes. This resulted in 18 classes. To answer question 2, the authors analyzed (2a) topics of residents' input and (2b) tasks in which residents' input can be incorporated in a planning process. They first identified from the data (2a) 59 topics of residents' input. The 59 topics and topics and the notions from the literature, were used abductively to produce an additional 9 general topic categories that group the original 59 topics. Finally, they used the notions from literature to organize the 9 topic categories into four more general themes. To produce the second part they identified the interviewees' notions on (2b) tasks in which residents' input can be included in a planning process. Eight tasks were identified. The classification of the notions into eight tasks was based on the data but inspired by theoretical discussions on tasks and phases of planning in literature on urban planning	The authors present a typology of ways of thinking concerning the role of residents' experiences and ecological issues in planning and a typology of the roles of resident's input in improving planning. The use of residents' input has the potential to improve planning in many ways, but its use remains case-dependent. Theoretical saturation was not referred

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Hamin et al. (2014)	The sampling frame was specified and justified. The authors focused on coastal. They then divided the state into three coastal regions to represent regional place identity. They randomly selected five communities in each region for interviews. All but one community planner agreed to be interviewed. Theoretical sampling was not reported	The authors recorded the interviews, fully transcribed them, and coded the results into a qualitative data analysis program (DeDoose). One of the authors and a research assistant dual-coded three interviews to ensure intercoder reliability. Examples of these codes were not presented	Once authors completed the coding using the patterns they found in the data, they reclassified the coded data based on findings from the literature review. This made findings more comparable with other research on climate adaptation implementation. There was no discussion to show that the analysis identified new concepts after initial coding	The final product of this study was a descriptive narrative interpretation of the data aligns with two specific questions of the study. Theoretical saturation was not mentioned
McLean and Borén (2015)	The interviewees were selected based on suitability and informed choice rather than a selection process concerned with generating a random sample. The sample was justified but theoretical sampling was not used	There was no reference to initial coding procedures used. No examples of initial concepts and codes were presented	The analytic procedures undertaken was not reported. There was no examples of the codes developed at any stages of the analysis	The outcome of the study presented was described as a thick description rather than a theory. Theoretical saturation was not reported on
Mingardo et al. (2015)	The type of sampling methods used was not defined. The sample and the sample size were not justified based on the study objectives. Theoretical sampling was not reported on. Recruitment stopped when saturation was achieved	There was no information to describe how initial concepts were developed. Initial concepts were not reported	The authors first generated concepts regarding parking policy based on the scientific and the gray literature and on the authors' own working experience. Next they discussed their ideas with several experts and academics in the field, and modified it if needed. After around ten such discussions, their theory building reached a relative saturation point; further discussions did not contribute further to theoretical development	The outcomes of the study were presented in three sections. First, the authors present the conceptual elements of parking policy, while in section two they propose a framework that explains how urban parking policy evolves. Section three suggests a different approach for parking policy. They conclude by discussing some of the major challenges that will characterize the future of urban parking and making suggestions for further research
Sellberg et al. (2015)	Sampling was done purposively. The key informants were chosen because they both had knowledge of one of the focus areas of municipal planning, and were involved to different degrees in the project. Therefore, they could answer questions. The sample size was not justified. There is no evidence to suggest that theoretical sampling was used	Following the strategy of grounded theory, the researchers coded the data into categories to move from empirical material to generalizations. First, they separated the data on contributions from data on challenges. Secondly, all the data was coded into categories based on themes that emerged while they reviewed the data multiple times, building on the memos written earlier in the research process	There was an iterative process of coding and recoding to find categories that both were readily applicable to the data, and provided explanation to it. The emergent themes on contributions were presented with examples in Appendix	The participants identified three main ways that the assessment contributed to existing municipal planning and management: 1. It provided a dynamic systems perspective; 2. It enabled a discussion about global and uncertain threats; 3. It helped implement and advance their sustainable development work. These major themes were reported on in a descriptive narrative
Carter (2016)	The author did not specify the sampling technique he used to recruit the study participants. The selected sample was justified as presenting leaders of 12 EJ and community development organizations in the area. Theoretical sampling was not reported	There was no information to describe how initial concepts were developed. Initial concepts were not reported. Atlas T. was used to assist in the data analysis	More advanced coding techniques were not reported. There was no discussion of how codes were compared or selected to form themes. Four major themes presented as differences between the two styles of organizing that articulates the New Latino urban environmentalism	To make sense of changing tendencies in EJ politics, the author presents a generalized descriptive model that compares an earlier yet continuing phase of EJ organizing, which he terms EJ 1.0, with a more recently developed phase, EJ 2.0. But there is no discussion of how final categories were selected in relation to lower order codes to build the model. Theoretical saturation was not mentioned
Coslovsky (2016)	To select potential interviewees, the author resorted to 'theoretical sampling'. After each interview he identified the people he intended to interview and the sources he wanted to consult next. Naturally, he made sure to reach out not only to individuals with whom prior interviewees had partnered, but also those who could speak on behalf of other, often antagonistic, groups or interests. It was mentioned that data collection, analysis and theory-building occurred iteratively	There was no information to describe how initial concepts were developed. The number of open codes was not reported on and no examples of such codes were given	The analytic procedures undertaken was not reported, although the author claimed that analysis followed standard qualitative practice from transcription to coding, analysis and write-up. There was no examples of the codes developed at any stages of the analysis	This article challenges a number of prevailing assumptions about the role of law in public affairs. The outcome of the analysis was presented as a new four-part perspective. Evidence for reaching theoretical saturation was provided
Czeczayński and Sooväli-	The type of initial sampling methods used was	There was no information to describe how initial	There was no discussion of coding procedures or	No core category was provided and no model was



Author(s) & publication date	Did sampling follow the strategies of GTM?	How were initial concepts developed?	How did theoretical development progress after initial concepts were mapped?	How was the outcome of the research & how was it constructed?
Sepping (2016)	not defined. It is not possible to ascertain whether theoretical, purposive or convenience sampling was used.	concepts were developed. No examples of initial concepts and codes were presented	any analytical techniques at any level of the analysis. There was no evidence to suggest that a theory was developed	produced, but it asserted that through examples from chosen locations around the Baltic area, the authors have with the help of grounded theory categorized the processes into five discursive practices of landscape cleansing, reinterpretation, and the functional and formal repositioning of former urban centers and structures of power. Theoretical saturation was not referred on
de la Barrera et al. (2016)	The sample for interviews was determined by a random selection of green space users as well as inhabitants who live close by (non-users). Maximum variation criterion was used in order to include the highest possible degree of age diversity and gender diversity between the two cases distinguished above (users and non-users). The sampling size and frame was justified. No evidence to suggest that theoretical sampling was used	Initial coding processes were not reported. Initial concepts were not reported. Atlas T was used to assist in the data analysis	The analysis procedures undertake were not reported except to ensure trustworthiness of the data analysis, the data from the observations and interviews was codified by one expert researcher. Progresses regarding the results obtained were presented several times to the whole team in order to garner feedback, allowing the expert researcher to iteratively improve the analysis. On the other hand, the researchers compared emergent theory with existing literature containing both conflicting and similar frameworks in order to improve the internal and external validity	The results were presented in the form of main similarities and differences between the neighborhoods. This main similarities and differences are described in detail. In addition, the summary of the main findings from the observations and interviews with users and non-users in each of the neighborhoods are analyzed and presented in a Table. Some quotations and observations were added. Saturation was not referred on
Liu and Kang (2016)	In this study, three types of approaches were considered to find representative interviewees: (1) street interview; (2) home-environment interview; and (3) office-environment interview. While the grounded theory approach would not require an exact sample composition representative of the actual population, there is a good balance of sample distributions. Theoretical sampling was reported. Data analysis occurred after data collection	A multi-step analysis technique was employed. At first, the data were broken down into discrete ideas, events, and acts. Each phenomenon was related to the public attitude towards the soundscape. The open-coding process enabled the development of themes that were grounded in the data itself. As examples, some labeled sentences about the future of sounds in the sorting memos are shown in a Table. The total labeled number was 218. After conceptualizing, the number decreased to 199. To a certain extent, the concepts became clearer through open coding	Axial coding occurred concurrently with open coding. In the data analysis step, the data were broken down into concepts and categories and then reassembled by axial coding. In the process of coding, a concept was defined whenever a certain phenomenon was mentioned by two or more respondents The next step was to gather these concepts into categories based on their similarities or differences. Therefore, 166 categorized items were generated. Once fairly developed categories emerged, selective coding was started. Through the above procedure, five main categories were generated.	Soundscape definition was the core category, and the major categories were soundscape memory, soundscape sentiment, and soundscape expectation. The relationship among them was characterized as moving forward from the past to the future. Some answers about the subconscious mind form the soundscape aesthetics. Details of the linkages among categories are presented. The properties and characteristics of the subcategories along a dimensional range were identified. It is not clear whether saturation was achieved or not.
Mrkajić and Anguelovski (2016)	In order to map out all of the relevant actors, the researchers used a snowball sampling procedure. No evidence to suggest that theoretical sampling was used	The process of initial coding was used to analysis interviews and field notes was not described in detail. The number of initial codes and concepts was not reported and no examples of such codes and concepts were given.	It was reported that theoretical development progressed by coding interviews and field notes into various nodes and sub nodes related to initial research question and grouping them by theme (i.e. planning history; local economic development; urban politics in transition; civic participation) Process tracing was used to better understand how specific external events and constraints (especially those linked to the transition) influenced different stakeholders involved in sustainable mobility planning in Novi Sad	The outcomes of the study was described as a thick description rather than a theory. No core category was presented. Theoretical saturation was not mentioned
Sanyé-Mengual et al. (2016)	As a preliminary analysis, the authors identified the potential stakeholders involved in the implementation of URF in Barcelona city. They also included potential promoters and opponents. The categories of stakeholders were chosen based on the key actors that the existing literature identifies in the urban agriculture and food planning community, on snowball sampling with	The transcripts and the field notes were open coded to identify key concepts and their relationships.. This data collection and analysis was complemented by secondary data collection, including maps, reports, and press releases	It is not clear how theoretical development progressed after open coding. There was no discussion to show that the analysis identified new concepts after open coding. The paper did not report that constant comparative method was used throughout the analysis	It was not clear how final themes and concepts were selected. The key concepts and relationship between them were discussed which provided theoretical density. Theoretical saturation was not referred on

Author(s) & publication date	Did sampling follow the strategies of GTM?	How were initial concepts developed?	How did theoretical development progress after initial concepts were mapped?	How was the outcome of the research & how was it constructed?
	initial key stakeholders, and on the use of media information on existing stakeholders. Participants represented the breadth of stakeholders' groups. Theoretical sampling was not reported			
Stevenson (2016)	Snowball sampling was used to identify key actors, uncovering networks within the local community and enabling the collection of stories from people within those networks. The sampling size and frame justified. It also provides more information about the interview process. Theoretical sampling was not reported	Transcriptions were initially evaluated by hand (using highlighter pens) to experiment with breaking down data into "distinct units of meaning". NVivo software was then used for open coding. During these processes, constant comparison between incidents and concepts was used to identify connections across the data. Initial concepts were not reported	Axial coding was used to develop an understanding of dynamic interrelationships between. This process united concepts and started to offer explanations which were interrogated and refined further through discussions with research participants and a further review of the research memos. Finally, in order to embed and understand the findings within the local context, policy and other local research documents were considered	The outcome of the study can be described as a thick description rather than a theory. No core category was provided. The final discussion is organized around three major themes. Theoretical saturation was not mentioned.
Allen and Slotterback (2017)	The sampling frame was specified and justified, but the sampling strategy used was not specified. No evidence of theoretical sampling presented. Data analysis occurred after data collection	There was no reference to initial coding procedures used. There was no examples to describe the content of the initial codes	There was no discussion of coding procedures or any analytic technique at any level of the analysis. It is asserted that the research identified key themes that emerge from data. There was no discussion of how codes were compared or selected to form themes	The analysis of interview and focus group data consisted of identifying key themes that emerged from the data about barriers to civic engagement, building access and trust in the Somali community, and effective engagement practices, processes, and formats. The results were presented as descriptive narratives in line with these key themes. It was not mentioned that saturation was achieved
Brand (2018)	The initial sampling technique use to recruit participants was not specified. Over 20 interviews were conducted but no evidence to suggest the theoretical sampling was used. There was not a discussion to suggest that data collection and analysis occurs simultaneously	The number of open codes was not reported and no example of such codes was given. There was no information to describe how initial concepts was developed	It is not clear how theoretical development progressed. There were no examples of the codes developed at any stages of the analysis. There was no discussion of coding procedures at any level of the analysis	The final product of the study was a descriptive narrative interpretation of the data. No core category was provided. Evidence for reaching theoretical saturation was not provided
Ojeda-Revah et al. (2017)	For the interviews, the authors recruited participants through purposive sampling. To increase variability in terms of participants' degree of utilization of the park, they followed two strategies to recruit participants: sampling at the parks and snowball sampling of residents in the buffer areas. No evidence to suggest that theoretical sampling was reported. There was a sufficient discussion that explained how data collection and analysis guide each other	Open coding was used initially. None of initial codes and concepts were presented	The authors conducted open coding of transcriptions of the first eight interviews and a first round of axial coding in which codes were grouped in thematic categories. The initial list of codes was then checked for redundancy and some codes were merged. Codes were checked against quotes for accuracy. A first set of preliminary results and new questions were developed and checked against 24 other interviewees. The steps of open, axial, and selective coding and discussion were repeated until all authors agreed on the conclusions	The outcomes of the study were described as a thick description rather than a theory. No core category was presented. Evidence for reaching saturation was provided
Read and Sanderford (2017)	The respondents were identified during the gray literature review and chosen based on their strong understanding of the transaction. Nonprobabilistic sampling was deemed appropriate. No evidence of theoretical sampling. No evidence of iterative data collection and analysis	There was no information to describe how initial concepts were developed. No examples of initial concepts and codes were provided	The process of developing categories from codes was not described. 5 major themes presented which serve as a foundation to examine the tradeoffs made by the City of Charlotte to bring the aforementioned public-private partnership to fruition	The results of the interviews conducted with individuals participating in the planning and development of the Brightwalk community yielded a number of interesting insights. In this study, for descriptive purposes, they organized around five common criticisms of similar mixed-income housing initiatives. Theoretical saturation was not reported on
Siders (2017)	Key informants were initially targeted for interviews; these key informants were then asked to recommend further contacts in a modified snowball sampling approach. Additional	Transcripts and notes were analyzed in the qualitative software package NVivo using open coding to identify emergent themes and patterns. Preliminary results were presented to 15	There was no discussion of coding procedures after initial open coding. There was no discussion of how codes were compared or selected to form categories	The findings provided descriptive themes upon which London Strategy was consciously developed as a vision-setting strategy and was successful in: raising awareness of cross-sectoral

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	respondents were also approached who were knowledgeable about the process but did not participate. Theoretical sampling was not reported	respondents during a second round of interviews, where respondents had the opportunity to comment on identified themes and overarching conclusions		risks, coordinating pre-existing adaptation efforts, validating stakeholder engagement, providing political authorization for use of resources and personnel, and creating continuity of purpose across changing political administrations. Theoretical saturation was not reported on
Tewari and Beynon (2017)	The type of sampling methods used was not defined, but it was asserted that various methods were adopted to engage participation to complete the survey. No evidence to suggest that theoretical sampling was used. Data collection and analysis appear to have taken place separately in a linear fashion	There was no information to describe how initial concepts were developed. The number of initial codes and concepts was not reported and no examples of them were given	There was no discussion of coding procedures or any analytical techniques at any level of the analysis. There were no examples of the codes developed at any stages of the analysis. There was no evidence to suggest that a theory was developed	The final product of this study was a descriptive narrative interpretation of the data. No core category was presented. Theoretical saturation was not reported on
Willing and Pojani (2017)	The selected sample was justified. The sample size seemed appropriate for this study which targets a rather homogenous population. No evidence to suggest that theoretical sampling was used. Data collection and analysis appeared to have taken place separately in a linear fashion	There was no reference to initial coding procedure used. No example of initial concepts and codes were presented. NVivo used to assist in the data analysis	The analytic procedures undertaken were not reported. In the authors' interpretation, the interview material reveals seven major themes. There was no discussion of how codes were compared or selected to form main themes	The themes or factors integrate into the conceptual model, as illustrated in a figure. While the precise weight or load of each factor cannot be calculated in a qualitative study, designing this model is useful in that it can serve as a starting point for future studies based on quantitative survey data. The authors assert ample space, adequate neighborhood amenities and accessibility, and perpetuation of the Australian Dream appear to be the most important themes. Theoretical saturation was not referred to
Allen et al. (2018)	Interviewees were recruited over a six-month period through mailbox letter-drops. The sample was justified based on study objectives, but the sampling strategy was not specified. The process of identifying potential case study developments and doing mailbox letter-drops continued until no new information was discovered and data saturation was reached	Open coding was used initially but the process of open coding was not described in detail. The number of open codes was not reported on and no examples of such codes were given	Data was coded according to a three-tiered constructivist grounded theory substantive coding process, including open, selective, and theoretical coding. There was no example of the codes developed at any stages of the analysis. There was no discussion of how the codes were compared or selected to form categories	The outcomes of the study described as a thick description rather than a theory. There was no discussion of how final categories were selected in relation to lower order codes. It was mentioned that saturation was achieved
Alotaibi and Potoglou (2018)	The type of sampling methods used was not defined. To recruit transport experts and officials of relevant authorities, seven main authorities play a major role in sustainability development for Riyadh city, especially in mobility, have been targeted for sampling. No evidence to suggest that theoretical sampling was used. Data analysis occurred after data collection	There was no reference to initial coding except that sentence by sentence or phrase by phrase analysis was used. NVivo9 was used to assist in the data analysis. There was no example to describe the content of the initial codes	There was no discussion of coding procedures at any level of the analysis. There were no examples of the codes developed at any stages of the analysis	The description of the study results followed the suggestions for quantifying qualitative data to be presented numerically in score or scale. There was no evidence to suggest that a theory was developed. Theoretical sampling was not reported
Baron and Cherenet (2018)	The participants are purposefully selected to highlight different positions within a discourse indicated, for example, by their profession, age and gender. Theoretical sampling was reported	The GT is developed in three basic steps. In the first step, the paraphrases are assigned with one or more codes the wording of which is as close to the paraphrases as possible. Codes are developed based on the interview text to increase sensitivity to the context. Atlas T was used to assist in the data analysis	After first step, by thematic comparison, the codes are aggregated, and their relationships established, but there is no theorizing at this stage. These two steps constantly influence each other, as do sampling and interviewing. In the third and last step – sociological conceptualization – the commonly shared knowledge of experts is condensed and categorizations formulated	The result is a hierarchy of codes, concepts and categorizations. At the end of the interviewing process, the original sample size of ten is increased to 12 to expand internal validity and to reach theoretical saturation
Caldwell and Boyer (2018)	The selected sample was justified as presenting a wide range of professionals and reflected national and local gender. The first author recruited research participants who either: (a) commute to	Open coding casts a wide net, and attempts to identify any relevant information pertaining to the topic at hand. During this phase of analysis, no item was too insignificant to code; references to	During axial coding, categories are created to link codes that were developed during the open coding process. Axial coding generated new themes. The final stage of coding—selective coding—	The finding provided descriptive themes. The authors find that, according to subjects interviewed, initiating and sustaining the practice of bicycle commuting involves the renegotiation

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	and from work by bicycle every workday; (b) commute to and from work by bicycle most days, or; (c) work from home, but have commuted to work by bicycle in the past, and use their bicycle for other utility purposes. It was reported that theoretical sampling was used but no information was provided to describe how	seemingly mundane topics, such as “cycling spandex” were coded as potentially relevant	formulates links between discrete themes. Selective coding represents an attempt to recognize how categories are related to and interact with one another, and finally generates a theory that can explain the phenomenon	of relationships between the cyclist and (1) the bicycle, (2) other local cyclists, (3) urban space, and (4) the workplace. Dynamics in these relationships are overlapping and simultaneous. Theoretical saturation was not referred on
Gonzalez-Mathiesen and March (2018)	Purposive sampling was used to select policy and documentary information and interviewees. In both cases, inclusion criteria set. The sample size was not justified whereas saturation was not discussed. Theoretical sampling was not reported. The study reported that data collection and analysis occurred simultaneously	Open coding was used initially. The number of open codes was not reported on and no example of such codes were given	Documents were analyzed with the three main coding types: (a) open coding; (b) axial coding; and (c) selective coding; to create categories, subcategories and preliminary core categories. The interviews were also analyzed using grounded theory method, through a similar approach. This data complemented the preliminary categories developed via the documentary analysis, to further develop definitive core categories	The research establishes nine fundamental principles that guide the design of settlements at the site and subdivision level. These provide an illustration of the range of issues and possibilities relating to land-use planning that, as a built form outcome facilitator, can contribute to the development of risk management in wildfire environments. The principles are organized under two categories: ‘acting on vulnerability’ and ‘facilitating response’. The theoretical saturation was not mentioned
Ikalovic and Chiesi (2018)	Purposive sampling was applied. It was mentioned that data collection and analysis were recursive process, but there was no discussion to show how the knowledge gained from each phases of data collection and analysis fed into next phases. Theoretical saturation was not reported	It was mentioned that audio recordings made during the interviews were transcribed. The data were conceptualized following the methodological guidelines by Strauss and Corbin (1997) and Glaser and Strauss (1967) but initial coding procedure was not reported. Initial concepts were not presented	The method was based on “selective coding,” where all categories were unified around a “core” category. The other categories stand in relationship to the core category as conditions, action/interactional strategies, or consequences. The conceptual labels coded during the analysis were classified into more abstract categories (nostalgia, temporality, others, and family) and from the relationships and interactions of the two core categories (field and accessibility) several characteristics of a “dispersed home” were explored	Two core categories, “field” and “accessibility,” are discussed. Within these, variations and interactions of subcategories are also specified. The category “field” emerged from the analysis of spatial characteristics and from temporal/psychological characteristics of home. The category “accessibility,” on the other hand, emerged from the analysis of the perceived social and psychological characteristics of home. Theoretical saturation was not referred to
Ingeborgrud (2018)	Purposive sampling was used to recruit administrators and politicians in national, regional and local governments. It is not clear how sampling size was determined, because theoretical saturation had not been discussed. No evidence of theoretical sampling	Initial concepts were identified using open coding. Initial concepts were not presented	The author developed open analytic codes, then combining similar codes to provide categories. They were further compared and explored by coding pursuing visions of future sustainable cities as well as how relevant actors argued regarding the realization of these visions. There was few examples of the codes developed at different stages of the analysis	Three topics dominated the discourses about urban sustainability in the newspaper articles were: (1) visions of the future sustainable city; (2) the responsibility for fulfilling these visions; and (3) management and mobilization of citizens. The author uses these topics to organize the analysis into three sections, where she accordingly outline, compare and discuss the visions of national and local stakeholders. Theoretical saturation was not reported on
Keswani (2018)	The sampling frame was specified and justified, but the sampling strategy used was not specified. No evidence to suggest that theoretical sampling was used. The data collection and data analysis were a concurrent and iterative process	Initial coding entailed a close reading of the recorded data. During this stage, the line-by-line coding technique was used and transcripts of each of the 70 interviews were analyzed. Codes emerged as the data were scrutinized and meanings found within it. Examples of these codes were presented.	Focused coding required making decisions about which initial codes help analyze and categorize the data. At this stage, the most useful initial codes were selected in each interview transcript. Some codes were brought together and others were dropped off. In the theoretical coding stage, it was possible to interlink the codes that had been identified in the focused coding stage. Examples of these process was presented	The study suggests a theoretical framework to understand the relation between the logic, decision and action of stakeholders to resolve the conflict between planning criteria and ground reality. Theoretical saturation was not referred on
Xiao et al. (2018)	Nineteen participants, e.g. randomly approached onsite and snowballing, following the theoretical sampling process which started with an initial sampling to address on the established research	The analysis followed the iterative process of coding and memo-writing. Line-by-line coding was used in the initial coding to gain insights into participants' attitudes and experiences and help	In the second round, focused codes were developed for further analysis by summarizing the most significant and frequent initial codes, such as familiarity, appropriateness, etc. Memos were	9 indicators emerged from participants' descriptions which contribute to their smellscape pleasantness. Meanwhile, four types of pleasantness were found according to dominant

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	<p>questions. The later sampling criteria changed to respond to emerged categories throughout the process until emerged categories saturated. Participants recruited are all able to smell and have a gender balance from a diverse age range</p>	<p>establish some analytic directions for the subsequent focused coding. In the initial coding stage, codes were mainly modifiers used by participants to describe features of smells, places, their feelings and evaluations, such as clean, fresh, happy, annoying, etc.</p>	<p>written along the process to categorize codes and compare emerged categories</p>	<p>indicators. A perceptual model has been developed based on the indicators which can be used to classify smellscape through their dominant perceptual features and evaluate smellscape qualities based on pleasantness. Saturation was not reported</p>



Table 3: The use or non-use of commonalities of various versions of GTM

Author(s) & publication year	Collecting/constructing data simultaneously with data analysis (N=17)	Coding the data at multiple layers (N=23)	Constant comparison method (N=15)	Writing memos (N=7)	Theoretical sampling (N=12)	Theoretical saturation (N=9)	Integration of theoretical framework within relevant literature (N=37)	Total
Jones (2002)	Yes	Yes	Yes	Yes	Yes	No	No	5
Machemer and Kaplowitz (2002)	No	Yes	No	No	No	No	Yes	2
Silverman (2003)	No	No	No	No	Yes	Yes	Yes	3
Manzo (2005)	Yes	Yes	Yes	No	Yes	No	Yes	5
Clarke and Agyeman (2011)	No	Yes	Yes	No	Yes	No	Yes	4
Kornberger and Clegg (2011)	No	Yes	Yes	No	No	No	Yes	3
Mazumdar and Mazumdar (2012)	No	Yes	No	No	No	No	No	1
Samuel and Stubbs (2013)	Yes	Yes	No	No	No	No	Yes	3
Anguelovski (2013)	No	Yes	No	No	No	No	Yes	2
Dunlap et al. (2013)	Yes	Yes	Yes	Yes	No	No	Yes	5
Khirfan and Jaffer (2014)	No	No	Yes	Yes	No	Yes	Yes	4
Banerjee and Hine (2014)	Yes	Yes	Yes	No	Yes	Yes	Yes	6
Cerar (2014)	No	Yes	No	No	Yes	Yes	Yes	4
Faehnle et al. (2014)	No	No	No	No	No	No	Yes	1
Hamin et al. (2014)	No	No	No	No	No	No	Yes	1
McLean and Borén (2015)	No	No	No	No	No	No	Yes	1
Mingardo et al. (2015)	Yes	No	No	No	No	Yes	Yes	3
Sellberg et al. (2015)	No	Yes	Yes	Yes	No	No	Yes	4
Carter (2016)	No	No	No	No	No	No	Yes	1
Coslovsky (2016)	Yes	No	No	No	Yes	Yes	Yes	4
Czepczyński and Sooväli-Sepping (2016)	No	No	No	No	No	No	Yes	1
de la Barrera et al. (2016)	No	No	No	No	No	No	Yes	1
Liu and Kang (2016)	No	Yes	Yes	Yes	Yes	No	Yes	5
Mrkajić and Anguelovski (2016)	No	No	No	No	No	No	Yes	1
Sanyé-Mengual et al. (2016)	No	No	No	No	No	No	Yes	1
Stevenson (2016)	Yes	Yes	Yes	Yes	No	No	Yes	5
Allen and Slotterback (2017)	No	No	No	No	No	No	Yes	1
Brand (2018)	No	No	No	No	No	No	Yes	1
Ojeda-Revah et al. (2017)	Yes	Yes	Yes	No	No	Yes	Yes	5
Read and Sanderford (2017)	No	No	No	No	No	No	Yes	1
Siders (2017)	Yes	No	No	No	No	No	Yes	2
Tewari and Beynon (2017)	No	No	No	No	No	No	No	0
Willing and Pojani (2017)	No	No	No	No	No	No	Yes	1
Allen et al. (2018)	Yes	Yes	No	No	Yes	Yes	Yes	5
Alotaibi and Potoglou (2018)	No	No	No	No	No	No	Yes	1
Baron and Cherenet (2018)	Yes	Yes	Yes	No	Yes	Yes	Yes	6
Caldwell and Boyer (2018)	Yes	Yes	Yes	No	Yes	No	No	4
Gonzalez-Mathiesen and March (2018)	Yes	Yes	No	No	No	No	Yes	3
Ikalovic and Chiesi (2018)	Yes	Yes	No	No	No	No	No	2
Ingeborgrud (2018)	No	Yes	Yes	No	No	No	Yes	3
Keswani (2018)	Yes	Yes	No	No	No	No	Yes	3
Xiao et al. (2018)	Yes	Yes	Yes	Yes	Yes	No	Yes	6

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