



Article

# Towards an Informal Turn in the Built Environment Education: Informality and Urban Design Pedagogy

Hesam Kamalipour 1,\* o and Nastaran Peimani 2 o

- School of Geography and Planning, Cardiff University, Cardiff CF10 3WA, UK
- Welsh School of Architecture, Cardiff University, Cardiff CF10 3NB, UK
- \* Correspondence: kamalipourh@cardiff.ac.uk; Tel.: +44-(0)292-087-74463

Received: 2 June 2019; Accepted: 30 July 2019; Published: 1 August 2019



**Abstract:** Informal urbanism, ranging from informal settlements to trading and transport, has become integral, but not limited, to the ways in which cities of the global South work. At stake here is the role of the built environment professions in responding to informal urbanism where a poor understanding of the complexities of informality can lead to poor design interventions. Providing a better understanding of how forms of informality work is then a key task for the built environment education, which arguably falls short in this regard. With a particular focus on urban design, we suggest that it is critical to move towards an informal turn in the built environment education to address informality and engage with the dynamics of informal urbanism. We first investigate the scope of urban design and then explore the ways in which urban design education can respond to informal urbanism in its curricula by developing an urban design program on informality as an illustration. The suggested approach can be considered as an initial step towards an informal turn in urban design education. We conclude that while urban design alone cannot solve social and economic problems, including poverty and inequality, its capacity to address the complex challenges of urbanization cannot be overlooked. Urban design education cannot remain isolated from the questions of informality anymore.

**Keywords:** urban design; higher education; informal urbanism; informality; urban design theory; urbanism; design studio; urban theory; urbanization; urban studies

#### 1. Introduction

Different forms of informal urbanism, ranging from informal settlements to trading and transport, have become integral, yet not limited, to how cities of the global South work. It has been estimated that more than half of the global population lives in cities and counting [1]. Cities have become centers of jobs and opportunities, stimulating rapid processes of urbanization and rural-to-urban migration. Resorting to informality in terms of housing, trading, and transport has become inevitable where formality falls short in meeting the needs and desires of the growing urban population. Forms of informality take place beyond state control to sustain livelihoods [2] (p. 218). While they generally remain undocumented and hidden on the official maps [3,4], they can challenge the tolerance of the state, and the burgeoning desire of the built environment professions to practice different levels of power over how cities work.

At stake is the role of the built environment professionals in keeping up with rapid processes of urbanization and responding to the complexities of informality. This is specifically important as certain upgrading practices appear to not be compatible with adaptive processes of informal urbanism [5]. Moving towards an informal turn in the built environment, education can be considered as an initial step in addressing the Sustainable Development Goal 11 (SDG 11), which is about making human settlements resilient and inclusive, among others. SDG 11 is perhaps the most relevant to

the New Urban Agenda, which was adopted at the Habitat III conference to guide sustainable urban development [6]. A key concern here is about the extent to which the built environment education has most effectively prepared the future professionals with critical thinking and skills required to respond to pressing urban challenges and engage with the complexities of informality [7]. Providing a better understanding of the ways in which different forms of informality work in cities is then a key task for the built environment education, which arguably falls short in this regard. With a particular focus on urban design, we argue that it is crucial to move towards an informal turn in the built environment education to address informality and explore the dynamics of informal urbanism.

In this paper, we start by interrogating the scope of urban design in relation to the other built environment professions, including architecture, urban planning, and landscape architecture. We then focus on urban design pedagogy to explore how it can incorporate informality into its curricula by developing a postgraduate urban design program on informality as an illustration. We discuss some key considerations in this regard and suggest that moving towards an informal turn in urban design education is critical to sustaining the future of urban design and its relevance.

## 2. Becoming Urban Design

Urban design has become integral to the ways in which urban transformations take place in cities. However, it is fairly new as a discipline in a quest for distinction in relation to the other built environment professions, including architecture, landscape architecture, and urban planning. In its burgeoning struggle to claim its territory as a discipline and profession, urban design has been appropriated by not only architects, landscape architects, or planners but also urban economists, geographers, social scientists, and environmental psychologists, among others. While it has roots in a number of disciplines, it is a challenge for urban design to resist becoming a contested ground subject to appropriation and encroachment in both theory and practice.

Urban design, for many, continue to inevitably work as a bridge between architecture and urban planning, a form of public policy, the architecture of the public realm, a restorative process, practices of placemaking, an initiative towards smart growth, a form of infrastructure thinking, and community advocacy [8]. Since its establishment as a discipline in the 1950s to respond to the urgency of providing a mix of design and planning skills for tackling some large-scale design challenges, urban design has struggled to clarify its role, authority and territory as it is arguably more of a 'way of thinking' rather than a discipline [9] (pp. 54–55). The more urban design remains ambiguous in terms of its definition, territory, agenda, goals, and limits, the more likely for it to become swallowed by other disciplines ranging from architecture to urban planning and geography.

The vagueness of urban design has been previously discussed by outlining seven ambiguities in terms of the scale it addresses, its visual/spatial emphasis, its spatial/social focus, the process/product relationships, different professionals/activities relationships, the public/private sector affiliations, and objective-rational/expressive-subjective processes [10]. While urban design may lack a comprehensive and well-established theoretical framework [11] (p. 265), it has been argued that reaching a broad definition of urban design—as a multi-disciplinary activity, and a conscious process of shaping and managing the built environment across scales—would be critical in responding to its ambiguities [10].

It has been assumed for a long time that architecture can most effectively become urban design due to a simple misconception that the city is a large-scale architecture. Most utopian thinking has also relied on an illusion of knowing how to design city futures by merely thinking about cities as imagined in isolation from how they work in reality. While the early conceptions of urban design have their roots in architectural thinking, urban design cannot be simply reduced to a type of large-scale architecture. Associating urban design with certain scales can be both confusing and misleading. Urban design does not necessarily deal with larger scales [11] (p. 266) as its considerations range from the local to the metro scale [12] (p. 186).

While architecture struggles to remain critical despite its 'silent complicity' [13], urban design can work as a political art to initiate speculative engagement with negotiating and reimagining urban

Sustainability **2019**, 11, 4163 3 of 14

futures [14] (p. 151). In this sense, dominant ideologies can be resisted by the capacity of urban design to create forms of space that redefine the direction of cultural and political developments [15] (p. 260). In reality, this includes a critical engagement with design intervention in the public realm, which has the capacity to enable or constrain the emergence of certain activities. Nonetheless, urban design has arguably worked as an 'instrument of power' from its inception to recover the lost credibility of architecture [16] (p. 170). It is then crucial for urban design to find its way out of what is called the 'bad parenting' of architecture, and the desire for originality [17]. Urban design cannot be reduced to working with 'typologies' as some idealized essences, while cities work across multiple scales interacting with each other from the local to the global [18] (pp. 258–259).

Urban design has emerged as a discipline to potentially bridge the gap between an artistic approach to the production of buildings and a systematic approach to planning. In the 1950s, urban design has been conceptualized in two ways—as a subset of urban planning with a focus on the urban form and creativity and as an emerging discipline with a wider scope than architecture, landscape architecture, and urban planning [8] (p. 19). Nonetheless, reaching an accurate definition of urban design is yet a difficult task. Where addressing the complexity of cities is a primary challenge for urban planning with its desire for predictability, it is important to explore how the liberating capacities of design can generate loose frameworks to allow for change and improvisation [19] (p. 205). It is critical for urban design to incorporate not only technical and aesthetical but also social, cultural, and political aspects to produce 'meaningful urban spaces' that allow for adaptation and change by their users [20] (p. 102). While 'urban designers design' with a particular focus on how the ground floor of the city works, it does not mean that they work in isolation from numerous actions that account for urban development processes [21] (p. 41).

Although there have been attempts to define urban design under the umbrella of landscape urbanism, it is critical to note that urban design cannot be reduced to a form of urban infrastructure produced through practices of environmental engineering. This does not mean that the environmental agenda cannot play a key role in urban design. Landscape urbanism conflates culture with nature while specific design disciplines, such as landscape architecture, have possibly addressed the focus of urban design on visual representation at the expense of limited involvement with social and ecological issues [22] (pp. 185–186). Drawing on the upstream intertwined civic goals of urban design, as outlined in terms of 'environmental health', 'a vital public realm', and 'development of creative milieus' [23] (p. 6), one can argue that landscape approaches to urban design are more engaged with the environmental agenda rather than the others. Focusing on shaping public space and enabling urbanity is at the center of urban design theory and practice. Urban design has the capacity to add value by improving economic viability, enhancing social advantages, and promoting environmentally supportive initiatives [24] (p. 80). It is crucial for urban design to move beyond its fixation on what is described as the 'quality' of life to engage with diversity, equity, and the ways in which the planet could survive [16] (p. 181). Nonetheless, the design is pivotal in the process of making diversity not only liveable but also preferable [17] (p. 185).

Urban design education has initially aimed to respond to those problems of the city geared to the quality of the built environment that could not be tackled by the other related professions, including architecture, landscape architecture, and urban planning [25] (p. 545). While urban design is by and large multiple and subject to a range of pedagogies, it is critical to prevent the experience of learning about how cities work taken over by forms of reduction [26]. Urban design pedagogy can become appropriated and modified by the other disciplines—including architecture and planning that potentially colonize urban design—when its education becomes structured merely based on professional and personal ideologies [27] (p. 223). The desire to 'add' urban design as merely a 'set of skills' to the built environment education can become a market-driven initiative to sustain the attractiveness and competitiveness of the other programs within the global market of education.

Sustainability **2019**, 11, 4163 4 of 14

#### 3. Informality and Urban Design Education

Urban informality can be broadly defined as unregulated practices that take place beyond the state control, yet often tolerated by the state as a safety valve to prevent insurrection [28]. It works as an asset for the urban poor to manage the condition of poverty and move beyond the regulatory order [29–31]. Informality is a complex and multidimensional concept, which has not been adopted in similar ways throughout the past decades [32]. While it has been referred to more as a practice than a territorial formation or labor categorization [33], the term 'informal' does not mean lacking form [34]. There are different forms of informality, producing a range of urban morphologies and socio-spatial conditions [35–39] (Figure 1). It is then crucial to explore the relations between informal and formal as processes of urbanism often mix informality and formality.



**Figure 1.** Processes of urbanism often mix informality and formality and there are different forms of informality, producing a range of morphological conditions. A mix of informal and formal urban morphologies in Caracas, Venezuela. Photo: Hesam Kamalipour.

Informality is not necessarily limited to the cities of the global South as forms of informality cut across a binary division between the cities of the global South and those of the global North. It incorporates both the insurgent practices of the urban poor and the systematic tactics of the urban rich [40] (pp. 98–102). Examples of informality in the cities of the global North include, but are not limited to, the temporary transformation of the front yards to accommodate micro-scale economies over the weekends, the appropriation of the roadsides by trucks offering food, and the self-organized practices of community gardening or transforming garages into places of live/visit [41] (p. 296). The distinction between 'informal' developments across the global South and 'formal' developments across the global North has become blurry [42] (p. 3). It is then critical to consider the entanglement of the global North and South since such constructed categories do not imply self-contained territories [43] (p. 4). Nonetheless, forms of informality embody a range of opportunities and challenges that require active engagement by the built environment professionals who might not have been trained to do so.

Sustainability **2019**, *11*, 4163 5 of 14

While the emergence and proliferation of informality in cities have become among the primary forces with considerable impacts on urban form and public life [44] (pp. 470–471), informal urbanism still fails to attract urban design theory, skills and attention [45] (p. 574). It is crucial for the built environment professions to respond to the inherent complexities and contradictions of urban informality [46] (pp. 447–448). It is also important for urban design to expand its scope to not only include the magnificent civic places but also to address the ordinary urban environments and informal settings where everyday life takes place [44] (p. 476) (Figure 2). The broad scope of urban design can then be reconsidered to encompass different stances ranging from a formal design of an urban product to self-organized processes of creation akin to informal urbanism [47] (pp. 400–402).



**Figure 2.** Urban design needs to engage with ordinary settings where everyday life and activities take place. Informal appropriations of public space in Pune, India. Drawing: Hesam Kamalipour.

Different forms of urban informality have largely remained not only invisible on official maps and from the gaze of the formal city [48] but also underexplored in urban design education. There is only an emerging body of knowledge on incorporating informality in the built environment education [45,46,49–52]. It has been pointed out that developing courses on urban informality can most effectively expose students and instructors to the ways in which different forms of informality work in cities and make them visible [46] (p. 449). It has also been argued that informality needs to be incorporated into planning education by introducing a course, which draws on the related academic literature on urban informality as well as fieldwork-based research [46]. The benefits of developing such a course for planning students include making informal economies visible, providing a better understanding of their nature and scale, reaching uncommon stakeholders, and developing a better grasp of the related regulations in policy recommendations [46] (pp. 449–451).

As long as urban design education fails to engage with the dynamics of informal urbanism to provide a better understanding of how informality works in cities, design interventions remain contained within a narrow framework of making a binary distinction between formal and informal. Formalization then becomes a serious policy intent to restructure property relations for enabling control as well as accumulation [53] (p. 118). Research can play a key role here as developing innovative approaches to intervention requires new analytical thinking and techniques [54]. It is then pivotal for urban design pedagogy to effectively respond to the questions of informality and design intervention

Sustainability **2019**, *11*, 4163 6 of 14

to respond to pressing urban challenges. In what follows, we explore how an urban design program on informality can be developed and discuss some key considerations in this regard.

#### 3.1. An Urban Design Program on Informality

Figure 3 shows a one-year postgraduate program in urban design with a particular focus on informality. This is by no means a prescriptive solution, but rather an illustration of a specific way to address informality in urban design education. While one-year postgraduate programs in urban design do not represent the variety of postgraduate urban design programs across the world, they are, however, one of the primary models. The developed program is organized in three semesters from Autumn to Summer. The main subjects include Urban Design Studio I (Autumn) and II (Spring), Informal Urbanism, Urban Design Theory, Research Methods, and Final Design Project. The program includes two Field Study Visits—a national visit in the Autumn semester and an international visit in the Spring semester. Urban Design Theory, Research Methods, and Informal Urbanism subjects will start in Autumn and end in Spring. A key consideration in the proposed program is to establish lateral connections among different subjects (Figure 3).

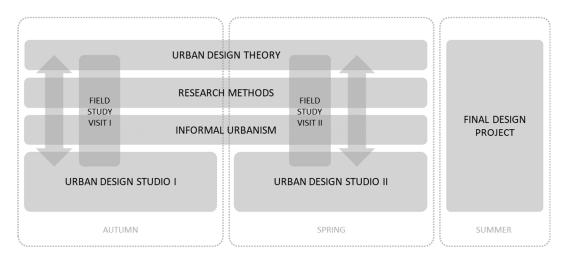


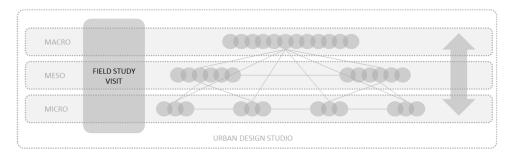
Figure 3. An urban design program on informality.

### 3.1.1. Urban Design Studios on Informality

Urban design studios on informality engage with how forms of informality work in cities to explore a range of design intervention scenarios in relation to different contexts. A particular focus would be on knowledge-building, teamwork, spatial thinking, design creativity, and effective communication [55]. Figure 4 shows how a framework can be developed to facilitate multi-scalar thinking in design studios. Establishing lateral connections plays a key role here as well. As shown in Figure 4, a cohort of about 12 students can be structured in relation to different scales to establish both vertical and horizontal connections throughout the process of design. The proposed structure is neither fixed nor prescriptive, yet it can be considered as a way of enabling a mix of rhizomatic and hierarchical relations. While the studio works as a team at the macro scale, the students collaborate in smaller yet interrelated groups at the meso and micro scales. In this way, design decisions and scenarios will be discussed across different scales within and between groups. The benefits of establishing a horizontal network in facilitating lateral debates and discussions have been previously outlined in the context of design studio [56] (p. 103). The focus of the first Urban Design Studio can be on informality in public space by drawing on evidence from a national Field Study Visit. The second Urban Design Studio can explore how urban design can engage with practices of upgrading by drawing on evidence from an international Field Study Visit. While the issues of access and safety become critical in coordinating such Design Studios, practices of incremental housing, informal accretion and possible transformations can be simulated

Sustainability **2019**, 11, 4163 7 of 14

using games as well [51]. Both Design Studios can explore the understudied aspects of informality, including regulatory responses and spatial solutions to most effectively accommodate informality [41].



**Figure 4.** Incorporating multiscale thinking into an urban design studio on informality by enabling a mix of vertical and horizontal relations across different scales throughout the process of design.

The role of Design Studios is significant in providing urban designers with a better understanding of how urban informality works and the ways in which they can most effectively approach intervention [49]. An Urban Design Studio can be attached to a live project to incorporate meaningful participatory processes of design and community engagement as well. Moving towards the growing format of 'living labs' in Urban Design Studio as an emergent type of pedagogy—which is based on the co-development of design scenarios and collaborative practices of learning to engage with real-life challenges—is also promising when it comes to the integration of informality and formality in self-organized settlements to avoid demolition [25] (p. 546). Design Studios on informality can also expose the future urban designers to the limits of design interventions in addressing poverty and inequality and enable different degrees of control and flexibility in design scenarios to meet the complex requirements of informality [49] (p. 6).

Design studios can become research-based by adopting an evidence-based approach to design intervention scenarios. Responding to informal urbanism through creative practices of design needs to be informed by a sophisticated understanding of the dynamics of informality. This relies on a more nuanced understanding of how forms of informality work in relation to urban morphologies and public space [57,58]. A transition from focusing on the outcome of design to the process of design is then crucial to enable incremental and multifunctional interventions across different scales and stages of development. The task is to think about the extent to which the productive capacities of informality can be harnessed through design interventions.

Developing multiple design scenarios to engage with informal urbanism in design studios cannot take place in isolation from the related stakeholders and limited exposure to the local knowledge. Allocating design studios to imaginary and extraordinary projects can become problematic where about one billion people inevitably resort to informal settlements [59] and creatively manage the conditions of urban poverty in the absence of the built environment professionals. Collaborative design studios can be challenging to manage [60], but quite rewarding in terms of working at the intersections between different forms of knowledge to inform the development of design scenarios. Considering the potential impacts and unintended consequences of different design interventions can become a key skill to learn in design studios on informality. This includes exploring the extent to which design intervention can contribute to income generation to sustain livelihoods.

Addressing informality in urban design education requires a critical engagement with participatory processes in design studios. Moving up towards 'citizen control' on the ladder of participation [61] has arguably been a burgeoning ambition among the built environment professionals. While there is nothing new about pointing out the significance of adopting a participatory approach in design, there is scope for discussing certain considerations concerning its implementation in urban design studios on informality. The emerging transition in the role of urban designers—from the key decision-makers to facilitators—incorporates challenges at the intersections between local and expert knowledge. For urban design to sustain as a profession, it is crucial to move beyond what community activists

involved in planning processes already know about the ways in which cities work and how to act within them [62] (p. 250). A sophisticated awareness of the shared body of knowledge in urban design is necessary, but not sufficient when it comes to implementing participatory processes. Overlooking the relation of an intervention at a given scale to other scales can possibly threaten public interest without considering its potential impacts on smaller and larger scales. The desire of a community to produce forms of gating cannot be simply pursued because of undertaking a participatory approach. Urban inclusion can become exclusionary in the absence of multi-scalar thinking where the interest of the target group takes over the broader public interest. This is the point that urban design studios on informality can effectively enable multi-scalar thinking to prepare the future urban designers for an effective engagement with participatory processes as participation does not always lead to urban inclusion.

### 3.1.2. Theory Subjects and Research Methods

The subjects of Urban Design Theory and Informal Urbanism provide the theoretical framework of the program (Figure 3). While both subjects explore a range of theories related to urban design and informality, they are by no means isolated from practice. It has been argued that critical engagement with the role of theory in the process of design is useful for both studio pedagogy and urban design practice [63] (p. 263). Figure 5 shows how research methods and theory subjects can enable the confrontation of the introduced theories with reality by accommodating several units of short Field Study Visits between lecture and seminar sessions. The ideas introduced in each lecture can be confronted with how reality works to encourage a more focused discussion of the Field Study Visits in the seminar sessions. Lateral connections between theory subjects and Design Studios can enable a more critical approach to design interventions.

Moving towards an informal turn in urban design education can be facilitated by allocating specific theory subjects to discuss informality. As shown in Figure 3, Informal Urbanism can be developed as a new subject with a comparative approach and a particular focus on the challenges and capacities of informality in the processes of making and remaking cities. The content of this subject can incorporate a range of topics including the conception of informality, informal settlements, transport, and trading, typologies and morphologies of informal settlements, visibility, slum tourism, formalization, and upgrading. The focus can be on exploring the relations between informal and formal in cities to avoid making a binary distinction between informality and formality and overlooking the in-between conditions. While most of the related literature on informal urbanism valorize the large scale over the small, it is then crucial to explore the micro-scale process of self-organization and incremental production of space.

The subject of Research Methods introduces a range of methods in urban design including urban mapping, which plays a key role in undertaking the task of producing 'spatial knowledge' through multi-scalar urban analysis [64–66]. It has been argued that sophisticated spatial thinking is necessary for understanding and responding to informality [41] (p. 300–301). The subject provides the skills required for undertaking an independent research project in urban design with a particular focus on different forms of informality.

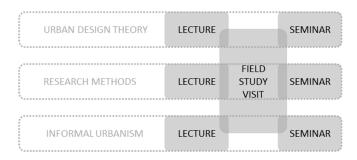


Figure 5. Incorporating joint Field Study Visits in theory subjects.

Sustainability **2019**, 11, 4163 9 of 14

Urban Design Theory is integral to urban design education. This is the point where the shared body of knowledge in the field is critically discussed to provide a better understanding of how cities work before jumping into any conclusion about the role of urban design in the processes of development and transformation. While urban design cuts across a range of disciplines and can become informed by urban thinking, urban design theory cannot be simply replaced by most urban thinking, which tends to valorize the large scale [67]. Urban design relies on a strong use of case studies, looking hard at cities, and adopting multiple methods [68]. Drawing on relevant theoretical frameworks and diagrammatic thinking can play a key role in exploring the ways in which places work at the intersections between spatiality and sociality [69].

The Urban Design Theory reading lists have been previously analyzed across universities in the UK, US, and Australia to identify the common texts and the shared body of knowledge in the field [70]. What strikes us is that informal urbanism and the questions of informality have largely remained absent from the frequent readings across different universities. With a few exceptions, most of the urban design readers are also limited to cities of the global North. It is only recently that specific sections have been allocated to informality in the key readers and textbooks in urban design [2,40,71,72]. Such a transition is important for sustaining urban design education by addressing informality and shifting the gaze out of the cities of the global North to the cities of the global South where the future of urbanism lies [73]. Informality is not merely limited to cities of the global South, yet the shared body of urban design knowledge about such cities is quite limited to effectively engage with the complexities of informal urbanism [74]. The future of urban design thinking relies on its capacity to deterritorialize the existing shared body of knowledge in the field.

Reading seminars can enable critical reflection by exposing the related theories to how cities work in reality. Reading lists can play a crucial role here to initiate discussions about the role of the built environment professions in general and urban design in particular in responding to informal urbanism. While the related readings provide a setting to discuss the shared body of knowledge in the field, theory and methods subjects cannot remain isolated from the real world.

## 3.1.3. Field Study Visits

Fieldwork plays a key role in moving towards the informal turn in the built environment education by confronting the shared body of knowledge with the conditions of the real world. In the context of design studios, managing a balance between Field Study Visits to the cities of the global North and those of the global South is critical to encourage comparative approaches to the narratives of development. While traveling studios may range from forms of slum tourism to collaborative learning experiences, they can play a key role in providing a better understanding of how informality works in the real city [26] (p. 556). As discussed, informality is not necessarily limited to the cities of the global South, and there is a range of evidence showing how it has become integral to the cities of the global North [75–77]. As shown in Figure 5, short Field Study Visits can also become pivotal in theory and methods subjects to pose relevant debate questions, challenge theories, test their relevance to design intervention, and draw connections across subjects.

Relying on secondary data cannot replace Field Study Visits when the narratives of urban design interventions become promotional to propagate certain viewpoints. Data richness, accessibility, and environmental concerns need to be considered as the relevant criteria for rethinking the aim and scope of the Field Study Visits in the related programs. Field Study Visits offer a unique opportunity to examine and refine theories and methods of investigating urban informality. Critical thinking can then be encouraged by enabling exposure to different narratives about particular development projects. Collecting primary data can become a part of Field Study Visits to enable active engagement with the complexities of informality in the processes of urban transformation.

While data availability is thoroughly changing the ways in which urban design research can be done [78] (p. 691), one of the key challenges of addressing informality in urban design education is the availability and accessibility of reliable and up-to-date data on forms of informality across

Sustainability **2019**, 11, 4163 10 of 14

different scales and cities. Informal urbanism, ranging from informal settlements to transport and street trading, has mostly remained undocumented—particularly at the micro scale where everyday life and adaptations take place. It is simply not possible to draw on secondary data, which is generally unavailable, outdated, or not collected at the micro scale when it comes to informality. Hence, collecting primary data on how different forms of informality work becomes necessary, yet challenging and resource-intensive. Undertaking fieldwork then needs to become integral to urban design education and research activities that tend to explore forms of informality with a focus on the micro-scale appropriations of space and increments of change.

#### 4. Conclusions

In this paper, we have pointed to the importance of incorporating informal urbanism into the built environment education with a particular focus on the ways in which the capacities and challenges of informality can be addressed in urban design pedagogy. We have started by investigating the scope of urban design in relation to architecture, urban planning, and landscape architecture. It has been outlined that reaching a clear-cut definition of urban design is indeed a challenging task due to its ambiguities and the looseness of its territories. Our discussion on the scope of urban design has then been followed by exploring the ways in which urban design education can engage with the questions of informality. We have illustrated how an urban design program on informality can be developed at the postgraduate level. The primary focus of the developed program has been on responding to informality in urban design education through establishing lateral connections across subjects, enabling multi-scalar thinking, incorporating joint Field Study Visits, developing thematic design studios, and drawing on national and international Field Study Visits based on the criteria of accessibility and data richness. The developed program is by no means prescriptive or fully comprehensive, yet the suggested approach can be considered as an initial step towards an informal turn in urban design education. The implementation of the developed program remains at once a key limitation of the work and a task for future research.

The suggested approach incorporates several characteristics that tend to make it distinctive from conventional urban design pedagogy. Establishing lateral connections across subjects enables a more sophisticated relation between design studios and the subjects on theory and methods. The aim is to encourage research-based design interventions in studios to critically explore the 'space of possibilities' for adaptation and change [79]. Understanding the macro-scale socio-political and socio-cultural contexts is necessary, yet by no means sufficient to approach design intervention where a poor understanding of urban morphologies can lead to poor design interventions [80]. The theory subjects cannot remain contained within the critique of capitalism and the macro-level political economies. Informal urbanism can be linked to macro-level geopolitical and economic forces, yet forms of urban informality are not necessarily problems or consequences of capitalism [67]. The task is to engage with 'design-level theories' that address the level at which design interventions take place [81], provide a sophisticated spatial thinking to respond to informality [41], and avoid the valorization of the macro scale over the micro [67].

Moving towards an informal turn in urban design education relies on deterritorializing the existing boundaries of knowledge, which by and large originated in the global North. The attempt is not to fall into optimistic or pessimistic views on informal urbanism, but rather to explore the ways in which informality works across different scales and contexts. A sophisticated understanding of how places work puts us in a better position to approach design intervention [82] (p. 8). The task then is to look hard at cities [83], adopt multiple methods [68], explore theories 'beyond the West' [84], and avoid forms of reduction [26]. Reflection in the absence of confrontation with actual places can open doors to prejudice and ideologies. The aim is not to simply apply the theories originated in the global North to formulate design recipes for practice, but rather to explore the dynamics of informality through close encounters before jumping into any conclusion about how informal urbanism should be addressed.

Sustainability **2019**, 11, 4163 11 of 14

While urban design alone cannot solve social and economic problems, including poverty and inequality, its capacity to respond to pressing urban challenges cannot be overlooked. Urban design can most effectively engage with forms of informality, which have become integral, but not limited, to the cities of the global South. Reaching a sophisticated understanding of the dynamics of informality in relation to public space, urban morphology, and place identity is particularly at stake where most literature on informal urbanism tends to valorize the macro scale. Urban design education can play a key role in equipping the future urban designers with the knowledge and skills required to address the complexities of urbanization with a focus on informality to sustain livelihoods. The built environment education cannot remain isolated from the questions of informality anymore.

**Author Contributions:** Conceptualization, H.K. and N.P.; writing—original draft preparation, H.K.; writing—review and editing, N.P. and H.K.; project administration, H.K.; funding acquisition, N.P.

Funding: This research was funded by the WSA Research Grant, Welsh School of Architecture, Cardiff University.

**Acknowledgments:** The authors wish to thank the editor of this Special Issue, Professor Paul Jones, and the anonymous reviewers for their time, incisive critique, generous support, and helpful suggestions.

**Conflicts of Interest:** The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

#### References

- UN-HABITAT. State of the World's Cities 2008/2009: Harmonious Cities; Earthscan: London, UK, 2008.
- 2. Dovey, K. Urban Design Thinking: A Conceptual Toolkit; Bloomsbury: New York, NY, USA, 2016.
- 3. Patel, S.; Baptist, C. Editorial: Documenting by the undocumented. Environ. Urban. 2012, 24, 3–12. [CrossRef]
- 4. Robinson, J. Global and world cities: A view from off the map. *Int. J. Urban Reg. Res.* **2002**, *26*, 531–554. [CrossRef]
- 5. Jones, P. Formalizing the Informal: Understanding the Position of Informal Settlements and Slums in Sustainable Urbanization Policies and Strategies in Bandung, Indonesia. *Sustainability* **2017**, *9*, 1436. [CrossRef]
- 6. Trundle, A.; Stephan, A.; Henderson, H.; Kamalipour, H.; Lowe, M. Habitat III is Over, But Will Its New Urban Agenda Transform the World's Cities? *The Conversation*. 2016. Available online: https://theconversation.com/habitat-iii-is-over-but-will-its-new-urban-agenda-transform-the-worlds-cities-67432 (accessed on 2 February 2019).
- 7. Kamalipour, H.; Trundle, A.; Stephan, A.; Henderson, H.; Lowe, M. When Planning Falls Short: The Challenges of Informal Settlements. *The Conversation*. 2016. Available online: https://theconversation.com/when-planning-falls-short-the-challenges-of-informal-settlements-68982 (accessed on 2 February 2019).
- 8. Krieger, A. Territories of urban design. In *Urban Design Futures*; Moor, M., Rowland, J., Eds.; Routledge: London, UK, 2006; pp. 18–28.
- 9. Marshall, R. The Elusiveness of Urban Design: The Perpetual Problem of Definition and Role. In *Urban Design*; Krieger, A., Saunders, W.S., Eds.; University of Minnesota Press: Minneapolis, MN, USA, 2009; pp. 38–57.
- 10. Madanipour, A. Ambiguities of urban design. Town Plan. Rev. 1997, 68, 363. [CrossRef]
- 11. Sternberg, E. An Integrative Theory of Urban Design. J. Am. Plan. Assoc. 2000, 66, 265–278. [CrossRef]
- 12. Rowley, A. Definitions of urban design: The nature and concerns of urban design. *Plan. Pract. Res.* **1994**, 9, 179–197. [CrossRef]
- 13. Dovey, K. The Silent Complicity of Architecture. In *Habitus: A Sense of Place*; Hillier, J., Rooksby, E., Eds.; Ashgate: Aldershot, UK, 2005; pp. 283–296.
- 14. Sommer, R. Beyond Centers, Fabrics, and Cultures of Congestion: Urban Design as a Metropolitan Enterprise. In *Urban Design*; Krieger, A., Saunders, W.S., Eds.; University of Minnesota Press: Minneapolis, MN, USA, 2009; pp. 135–152.
- 15. Cuthbert, A.R. The Form of Cities: Political Economy and Urban Design; Blackwell: Malden, MA, USA, 2006.
- 16. Sorkin, M. The End(s) of Urban Design. In *Urban Design*; Krieger, A., Saunders, W.S., Eds.; University of Minnesota Press: Minneapolis, MN, USA, 2009; pp. 155–182.

17. Talen, E. Bad Parenting. In *Urban Design*; Krieger, A., Saunders, W.S., Eds.; University of Minnesota Press: Minneapolis, MN, USA, 2009; pp. 183–185.

- 18. Soja, E.W. Designing the Postmetropolis. In *Urban Design*; Krieger, A., Saunders, W.S., Eds.; University of Minnesota Press: Minneapolis, MN, USA, 2009; pp. 255–269.
- 19. Greenberg, K. A Third Way for Urban Design. In *Urban Design*; Krieger, A., Saunders, W.S., Eds.; University of Minnesota Press: Minneapolis, MN, USA, 2009; pp. 201–207.
- 20. Loukaitou-Sideris, A. Cracks in the city: Addressing the constraints and potentials of urban design. *J. Urban Des.* **1996**, *1*, 91–103. [CrossRef]
- 21. Lang, J. Comments on 'The Place Shaping Continuum: A Theory of Urban Design Process'. *J. Urban Des.* **2014**, *19*, 41–43. [CrossRef]
- 22. Gunder, M. Commentary: Is Urban Design Still Urban Planning? An Exploration and Response. *J. Plan. Educ. Res.* **2011**, *31*, 184–195. [CrossRef]
- 23. Childs, M.C. A Spectrum of Urban Design Roles. J. Urban Des. 2010, 15, 1–19. [CrossRef]
- 24. Carmona, M.; De Magalhães, C.; Edwards, M. What value urban design? *Urban Des. Int.* **2002**, *7*, 63–81. [CrossRef]
- 25. Butina Watson, G. An international perspective on urban design education. *J. Urban Des.* **2016**, *21*, 545–547. [CrossRef]
- 26. Dovey, K. On learning urban design. J. Urban Des. 2016, 21, 555–557. [CrossRef]
- 27. Cuthbert, A.R. A debate from down-under: Spatial political economy and urban design. *Urban Des. Int.* **2005**, *10*, 223–234. [CrossRef]
- 28. Neuwirth, R. Stealth of Nations: The Global Rise of the Informal Economy; Anchor: New York, NY, USA, 2012.
- 29. Dovey, K. Informalising Architecture: The Challenge of Informal Settlements. *Archit. Des.* **2013**, *83*, 82–89. [CrossRef]
- 30. Simone, A. City Life from Jakarta to Dakar: Movements at the Crossroads; Routledge: New York, NY, USA, 2009.
- 31. Peimani, N.; Dovey, K. Motorcycle mobilities. In *Mapping Urbanities: Morphologies, Flows, Possibilities*; Dovey, K., Pafka, E., Ristic, M., Eds.; Routledge: New York, NY, USA, 2018; pp. 119–128.
- 32. Bunnell, T.; Harris, A. Re-viewing informality: Perspectives from urban Asia. *Int. Dev. Plan. Rev.* **2012**, *34*, 339–348. [CrossRef]
- 33. McFarlane, C. Rethinking Informality: Politics, Crisis, and the City. *Plan. Theory Pract.* **2012**, *13*, 89–108. [CrossRef]
- 34. Brillembourg, A.; Klumpner, H. Introduction. In *Informal City: Caracas Case*; Brillembourg, A., Feireiss, K., Klumpner, H., Eds.; Prestel: Munich, Germany, 2005; pp. 16–23.
- 35. Kamalipour, H. Forms of Informality and Adaptations in Informal Settlements. *ArchNet IJAR Int. J. Archit. Res.* **2016**, *10*, 60–75. [CrossRef]
- 36. Dovey, K.; King, R. Forms of informality: Morphology and visibility of informal settlements. *Built Environ*. **2011**, *37*, 11–29. [CrossRef]
- 37. Kamalipour, H.; Dovey, K. Incremental Urbanisms. In *Mapping Urbanities: Morphologies, Flows, Possibilities*; Dovey, K., Pafka, E., Ristic, M., Eds.; Routledge: New York, NY, USA, 2018; pp. 249–267.
- 38. Dovey, K.; Kamalipour, H. Informal/Formal Morphologies. In *Mapping Urbanities: Morphologies, Flows, Possibilities*; Dovey, K., Pafka, E., Ristic, M., Eds.; Routledge: New York, NY, USA, 2018; pp. 223–248.
- 39. Kamalipour, H. Urban Informalogy: The Morphologies and Incremental Transformations of Informal Settlements. Ph.D. Thesis, University of Melbourne, Melbourne, Australia, 2017.
- 40. Tonkiss, F. Cities by Design: The Social Life of Urban Form; Polity: Cambridge, UK, 2013.
- 41. Loukaitou-Sideris, A.; Mukhija, V. Conclusion: Deepening the understanding of informal urbanism. In *The Informal American City: Beyond Taco Trucks and Day Labor*; Mukhija, V., Loukaitou-Sideris, A., Eds.; MIT Press: Cambridge, MA, USA, 2014; pp. 295–304.
- 42. Kickert, C.; Arefi, M. Introduction. In *The Palgrave Handbook of Bottom-Up Urbanism*; Arefi, M., Kickert, C., Eds.; Palgrave Macmillan: Bessinstock, UK, 2019; pp. 1–12.
- 43. Miraftab, F.; Kudva, N. Introduction. In *Cities of the Global South Reader*; Miraftab, F., Kudva, N., Eds.; Taylor and Francis: Hoboken, NJ, USA, 2014; pp. 1–6.
- 44. Loukaitou-Sideris, A. Addressing the Challenges of Urban Landscapes: Normative Goals for Urban Design. *J. Urban Des.* **2012**, *17*, 467–484. [CrossRef]

45. Mukhija, V. Urban design for a planet of informal cities. In *Companion to Urban Design*; Banerjee, T., Loukaitou-Sideris, A., Eds.; Routledge: London, UK, 2011; pp. 574–584.

- 46. Mukhija, V.; Loukaitou-Sideris, A. Reading the Informal City: Why and How to Deepen Planners' Understanding of Informality. *J. Plan. Educ. Res.* **2015**, *35*, 444–454. [CrossRef]
- 47. Marshall, S. The kind of art urban design is. J. Urban Des. 2016, 21, 399–423. [CrossRef]
- 48. Kamalipour, H.; Dovey, K. Mapping the visibility of informal settlements. *Habitat Int.* **2019**, *85*, 63–75. [CrossRef]
- 49. Loukaitou-Sideris, A.; Mukhija, V. Responding to informality through urban design studio pedagogy. *J. Urban Des.* **2015**, *21*, 577–595. [CrossRef]
- 50. Hunter, W.; Schulenburg, A. Crafting a methodology for urban design in development: Between research, pedagogy and practice. In *Explorations in Urban Design: An Urban Design Research Primer*; Carmona, M., Ed.; Ashgate: Burlington, NJ, USA, 2014; pp. 249–260.
- 51. Owen, C.; Dovey, K.; Raharjo, W. Teaching Informal Urbanism: Simulating Informal Settlement Practices in the Design Studio. *J. Archit. Educ.* **2013**, *67*, 214–223. [CrossRef]
- 52. Rios, M. Learning from informal practices: Implications for urban design. In *The Informal American City: Beyond Taco Trucks and Day Labor*; Mukhija, V., Loukaitou-Sideris, A., Eds.; MIT Press: Cambridge, MA, USA, 2014; pp. 173–192.
- 53. Porter, L. Informality, the Commons and the Paradoxes for Planning: Concepts and Debates for Informality and Planning. *Plan. Theory Pract.* **2011**, *12*, 115–120. [CrossRef]
- 54. Forsyth, A. Innovation in Urban Design: Does Research Help? J. Urban Des. 2007, 12, 461–473. [CrossRef]
- 55. Macdonald, E. Designing the urban design studio. In *The Urban Design Reader*; Larice, M., Macdonald, E., Eds.; Routledge: New York, NY, USA, 2013; pp. 595–600.
- 56. Inam, A. Designing Urban Transformation; Routledge: New York, NY, USA, 2013.
- 57. Kamalipour, H. Mapping Urban Interfaces: A Typology of Public/Private Interfaces in Informal Settlements. *Spaces Flows Int. J. Urban Extra Urban Stud.* **2017**, *8*, 1–12. [CrossRef]
- 58. Kamalipour, H. Urban Morphologies in Informal Settlements: A Case Study. Contour J. 2016, 1, 1–10.
- 59. UN-HABITAT. The State of the World's Cities Report 2006/7: The Millennium Development Goals and Urban Sustainability; Earthscan: London, UK, 2006.
- 60. Kamalipour, H.; Kermani, Z.M.; Houshmandipanah, E. Collaborative design studio on trial: A conceptual framework in practice. *Curr. Urban Stud.* **2014**, 2, 1–12. [CrossRef]
- 61. Arnstein, S.R. A Ladder of Citizen Participation. J. Am. Inst. Plan. 1969, 35, 216–224. [CrossRef]
- 62. Kaliski, J. Democracy Takes Command: New Community Planning and the Challenge to Urban Design. In *Urban Design*; Krieger, A., Saunders, W.S., Eds.; University of Minnesota Press: Minneapolis, MN, USA, 2009; pp. 237–252.
- 63. Inam, A. From Dichotomy to Dialectic: Practising Theory in Urban Design. *J. Urban Des.* **2011**, *16*, 257–277. [CrossRef]
- 64. Pafka, E.; Dovey, K. Urban Design Pedagogy. In *Mapping Urbanities: Morphologies, Flows, Possibilities*; Dovey, K., Pafka, E., Ristic, M., Eds.; Routledge: New York, NY, USA, 2018; pp. 268–277.
- 65. Dovey, K.; Pafka, E.; Ristic, M. (Eds.) *Mapping Urbanities: Morphologies, Flows, Possibilities*; Routledge: New York, NY, USA, 2018.
- 66. Peimani, N.; Kamalipour, H. Where Gender Comes to the Fore: Mapping Gender Mix in Urban Public Spaces. Spaces Flows Int. J. Urban Extra Urban Stud. 2016, 8, 19–30. [CrossRef]
- 67. Dovey, K. Uprooting critical urbanism. *City* **2011**, *15*, 347–354. [CrossRef]
- 68. Dovey, K.; Pafka, E. The science of urban design? Urban Des. Int. 2016, 21, 1–10. [CrossRef]
- 69. Kamalipour, H.; Peimani, N. Assemblage Thinking and the City: Implications for Urban Studies. *Curr. Urban Stud.* **2015**, *3*, 402–408. [CrossRef]
- 70. Foroughmand Araabi, H. A typology of Urban Design theories and its application to the shared body of knowledge. *Urban Des. Int.* **2016**, *21*, 11–24. [CrossRef]
- 71. Banerjee, T.; Loukaitou-Sideris, A. (Eds.) Companion to Urban Design; Routledge: New York, NY, USA, 2011.
- 72. Banerjee, T.; Loukaitou-Sideris, A. (Eds.) *The New Companion to Urban Design*; Routledge: New York, NY, USA, 2019.

Sustainability **2019**, 11, 4163 14 of 14

73. AlSayyad, N. Urban Informality as a "New" Way of Life. In *Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia*; Roy, A., AlSayyad, N., Eds.; Lexington: New York, NY, USA, 2004; pp. 7–30.

- 74. Dovey, K. Informal urbanism and complex adaptive assemblage. *Int. Dev. Plan. Rev.* **2012**, *34*, 349–367. [CrossRef]
- 75. Mukhija, V.; Loukaitou-Sideris, A. (Eds.) *The Informal American City: Beyond Taco Trucks and Day Labor*; MIT Press: Cambridge, MA, USA, 2014.
- 76. Hou, J. (Ed.) *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*; Routledge: New York, NY, USA, 2010.
- 77. Arefi, M.; Kickert, C. (Eds.) *The Palgrave Handbook of Bottom-Up Urbanism*; Palgrave Macmillan: Bessinstock, UK, 2019.
- 78. Moudon, A.V. An alternative pedagogic model for doctoral research in urban design. *J. Urban Des.* **2016**, 21, 690–701. [CrossRef]
- 79. De Landa, M. *Philosophy and Simulation The Emergence of Synthetic Reason*; Continuum International Publishing Group: London, UK, 2011.
- 80. Marshall, S.; Çalişkan, O. A Joint Framework for Urban Morphology and Design. *Built Environ.* **2011**, 37, 409–426. [CrossRef]
- 81. Hillier, B. Space and spatiality: What the built environment needs from social theory. *Build. Res. Inf.* **2008**, *36*, 216–230. [CrossRef]
- 82. Kropf, K. The Handbook of Urban Morphology; John Wiley and Sons: Hoboken, NJ, USA, 2017.
- 83. Jacobs, J. The Death and Life of Great American Cities; Random House: New York, NY, USA, 1961.
- 84. Edensor, T.; Jayne, M. (Eds.) Urban Theory beyond the West: A World of Cities; Routledge: London, UK, 2012.



© 2019 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).