



Contextualism, Urbanism, And Informality: Developing A Proper Reading of Contextualism to Explain Informal Urbanism

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ABSTRACT

The urban informal development is undeniable reality of a great number of cities across the world. Hence, many urbanism studies have been devoted to this topic. These scholarships have used various theoretical frameworks to explain this phenomenon. However, no comprehensive theoretical base is available for the subject yet. Therefore, this study aims to formulate an alternative theoretical foundation relying on contextualist worldview capacities. The research has been conducted with descriptive-analytical methodology through the review of contextualist literature. The results of the study in the first step answer the questions about the origin, philosophical background, evolution process, approaches, and dimensions of contextualism. In the next step, the research developed a new reading of contextualism to be a suitable theoretical framework for informal urbanism studies. This reading explains informal urbanism relying on multiple ontologies, pragmatic and plural epistemology, mixed methodology, and inclusive-flexible analytical framework. In the theoretical dimension, the results have revealed the reductionism of the view promoting contextualism in urbanism, so have reformulated and customized it to explain informal development. In the scientific dimension, moreover, it proposed the reading of suitable policymaking for urban managers regarding the informal settlements. Such a platform is based on accepting contextual (local) realities and avoiding the mostly negative metanarratives.

Keywords: *Contextualism, Context, Urbanism, Informal Urbanism, Informality*

1. Introduction

Informal development makes up a considerable part of today's urban development. According to UN-Habitat statistics, more than one billion people live in informal settlements that 99% of this population lives in developing countries[1]. Such considerable reality has drawn the attention of researchers in many fields, including urbanism or urban planning, so various researches and explanations are available.

One extreme of this range comprises those studies with emphasis on negative aspects of this development[2–5], while other studies have gradually appeared that take development not only as an urban development mode but also have investigated and scrutinized[6–10]. Numerous studies have assumed the informal development truth looking for a suitable explanation for this phenomenon. This diversity in such studies is rooted in their different theoretical hypotheses.

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These studies have discussed and explained the informal development using critical Theory [11,12], structuralism[13,14], post-structuralism[15–17], postcolonialism[18,19], legalism[20], and pluralism[6] frameworks. Although these studies are valuable, urban planning theory does not have the required potential for explaining this phenomenon completely so Ananya Roy[21] posits that we have a weak understanding of informal development.

On the other hand, contextualism relies on the attempts of Stephen Pepper in the frame of a scientific worldview [22]. Given contextualism, each phenomenon is considered a current action that cannot be separated from its background in different social, cultural, economic, and social dimensions. Such a view has relatively a large capacity for explaining phenomena, so it has entered many scientific scopes, including urbanism. In the first phase, contextualism can be tracked in studies conducted by Alexander[23] and Colin Rowe[24] who emphasized the historical and physical contexts. However, other dimensions of the context were emphasized gradually, so the theoretical framework of contextualism has been developed in this scope and entered the informal development studies. In this case, it is possible to track the emphasis on the context and its role in informal development studies based on a sectoral and non-inclusive method among numerous studies. For instance, Alsayyad[25] carried out a comparative study on informal developments in the Middle East and Latin America and examined the social, cultural, and political features of different contexts of these two contexts. The political context and its features have been used in the study by Dener[26] to explain informal development in Yeni Shahir, Turkey. Moreover, Jones has explained the formation, structure, and spatial arrangement of informal settlements in Indonesia focusing on the social-cultural context[27].

The studies mentioned above (formal and informal urbanism) have emphasized one or more contexts. However, contextualism is not seen as a coherent theoretical framework in these studies, while it seems that contextualism has the potential for being used in urbanism, in general, and in informal development, in particular. Hence, the present study asks what are the features of a contextualism reading that

can explain informal development. Therefore, this study aims to identify the origin, evolution process, different approaches to contextualism in urbanism, and contextualism-informal development link using a descriptive-analytical review of relevant literature. Accordingly, the following sections include a literature review and research methodology. The research findings are then classified and completed based on the topics presented in the discussion. Finally, conclusions are provided as scientific and practical implications.

2. Literature Review

2.1. Context and Contextualism

Cambridge and Oxford dictionaries define context as the situation in which something happens and that helps you to understand it[28,29]. To Gültekin[30], context is the background, setting, framework, texture, and situation that surrounds an action or event. In This case, the context can be described as a combination of phenomenon/event for creating a whole. Therefore, context is a term that indicates the generation of objects by integrating all events/conditions. Moreover, the context can be a condition/framework in which, a phenomenon is understandable so that one cannot explain it accurately. This meaning in philosophy and epistemology has been formulated in many works[22,31,32]. Despite the apparent differences between these definitions, when the context is considered as a part of an event and phenomenon then these meanings are merged. In this way, context is a part of phenomenon formation and also a framework for understanding it.

On the other hand, American Psychological Association (APA) translates contextualism as a worldview asserting that the environment in which an event occurs intrinsically informs the event and its interpretation. Accordingly, knowledge is not the result only of the linkage between events, as in the assimilationist doctrine, but is also due to the meaning given to events by the context[33]. The Book "World Hypotheses: A Study in Evidence" by Stephen Pepper is one of the first works that has addressed contextualism in this way. Pepper classified all scientific worldviews into four groups: Formism, Mechanism, Organicism, and Contextualism[22]. As a worldview, contextualism then entered other scientific scopes, such as linguistics[34], behavioral

sciences[35,36], and so on. According to these works, macro contextualism is a view that understands/identifies, and interoperates the phenomenon because of context. In this case, however, context is not only a passive historical affair or perceptual framework but the context is present in the phenomenon evolution for the future, so it can explain various phenomena.

2.2. Contextualism in Urbanism

In the Modern Architecture Dictionary, Adrian Forti believes that the philosophy of contextualism has entered architecture and then urban design from the literal critiques [37]. In this lieu, Ghalehnoee [38] assumes that contextualism in urbanism/architecture has passed three generations. The first generation includes some contextualists such as Christopher Alexander[23] that are influenced by French philosophy and linguistics including the Semiotics, Semantics, and Structuralism concepts in urbanism. The first generation criticized modernist architecture-urbanism in the 1960s relying on these notions. The second generation in the 1970s focused on tradition, history, and culture to establish traditionalism and ecologism and to invent contextualism techniques in architecture and urbanism. The works of some theorists such as Schumacher[39], Jenks[40], Colin Rowe[24], Rapoport[41], and Rossi[42] are classified in the second generation. The third generation from the 1980s until now has emphasized environmental coexistence and sustainable development with a concentration on history, tradition, and indigenous culture. The attempts of this generation can be seen in the Green Architecture by Robert and Branda Vale[43], emphasis on solar energy by Thomas Herzog[44], sustainability by Burgess and Jencks[45], and Adam and Thomas[46]. This evolutionary process indicates that researchers have considered various examples and implications for contextualism over time or in a certain interval. These examples started with an emphasis on the history and body, tended toward cultural and social dimensions, and reached the environment.

2.3. Informal Development as a mode of urbanism

According to the available extensive literature on informal development, four paradigms exist in this scope[47–49]: Formal/informal

Dualism, Marxist Structuralism, Liberalist Legalism, and Mode of space production/urban development. In the dualism paradigm, the informality of an economic or physical sector is separable from its formality. Therefore, informal formalization is taken as a solution. This view was developed in the study by Keith Hart[50]. However, this view is criticized due to its inability to identify the complicated and nonlinear relationship between formality and informality[51]. Structuralism which is close to Marxism claims that informality originated from the unbalanced development of capitalism. Therefore, the global structure change and fair wealth distribution can solve this issue. Some theorists such as Castells[52], Harvey[53], and Davis[2] have contributed to the formulation of this view. However, this view has provided no suggestion for the local level and has only criticized the global structures. Rooted in liberalism/neoliberalism, legalism is another paradigm that explains informal development. This view considers informal development the outcome of complicated legal frameworks and bureaucracy of the government and formal economy. Therefore, this paradigm believes that government downsizing and non-interference can formalize the ownership of the poor, revive their assets, and solve their problems. Hernando de Soto[54] is one of the popular theorists of this view. However, it is doubtful whether the formalization of the poor's ownership is sufficient for overcoming informal development[48] because, like formal ownership, the current perceptual ownership leads to legitimacy production in many cases. Like an urban development mode, the informal development paradigm does not consider informality a case contrary to the formality but formulates it as an urban development method that creates separate and independent space [21], and even a new lifestyle[6]. Therefore, informal development is beyond a sector (economic or legal) entering all aspects of urban livelihood and produced its mode[55]. According to such altitude, informal urban development is a mode of urbanism, as various theorists[56–58] call it “informal urbanism”. Despite its capacities, this paradigm lacks the required and sufficient theoretical and operating instruments to explain various dimensions of informal urbanism[59]. Therefore, some attempts have been done to

provide suitable theoretical foundations for explaining the details of informal urbanism. For instance, Kim Dovey has used the Assemblage theory to explain the relations and reasons for the advent of this urbanism in different Southeast Asian countries [17]. Moreover, Lejano and Del Bianco have used Bourdieu's theory of action to explain the logic of informal urbanism in São Paulo[60]. In addition, Peter Kellett has used ecologism to find an adaptive base to explain informal urbanism and its process[61]. Streule et al. applied the theoretical foundations of participatory planning to formulate informal urbanism[62]. The way we open and researchers are trying to present a more proper explanation for this inclusive and undeniable phenomenon. In this way, Kim Dovey considers informal urbanism as the most critical challenge in the present time[17].

2.4. Informal Development as a mode of urbanism

Many studies have addressed context non-inclusive contextual views to present a suitable explanation for informal urbanism. Accordingly, Pojani[63] believes that what links Jakarta's *Kampungs*, Rio's *favelas*, *barriadas* of Lima, Kolkata's *bustees*, *Khlong* in Bangkok, and Johannesburg's *'shanties* that have different objectivities is the specific context that has created an infrastructure of these settlements. Moreover, Samper[59] believes that economic and social contexts must also be considered in the analysis of informal development patterns. Other researchers[64–66] have implicitly mentioned the importance of contextual formulation of informal development. According to this view selected by the present study, informal urbanism is a context-based phenomenon. It means that diverse context factors have contributed to the formation of informal development not as causal relations but as an interconnected and complicated set, and a new whole. Informal development then has become a part of the context, so that context appears in all aspects of it and context-informal development interconnection continues. In this way, context is not the single factor causing such type of

development but is part of its existence and is present in it all the time.

3. Methodology

This study tends to explore contextualism in the literature and formulate a reading of contextualism that is proper for informal urban development studies. To do this, several secondary objectives have been designed in the frame of secondary questions: what is the origin of contextualism? What are the philosophical backgrounds of contextualism? How is the contextualism evolution trend in urbanism? What are the different approaches to contextualism in urbanism? How can link contextualism and informal development?

According to the nature of the research questions, the answers have been given based on the descriptive-analytical methodology through a literature review to achieve the purpose of the study. The reason is that descriptive-analytical methodology, as explained by Shahsavari and Alamolhoda [67], is appropriate for answering the questions that begin with *What* and *can* link scientific fields and create theoretical models. On the other hand, descriptive-analytical methodology can use both quantitative and qualitative approaches. Regarding the exploratory nature of the objective of this study, however, a qualitative approach has been used in this research. Therefore, this study has used a descriptive-analytical method based on the qualitative narrative review.

To operationalize the methodology, the author searched the keyword “contextualism” through the academic-research documents recorded in the Web of Science database on 16/06/2023, in which 754 research papers were retrieved¹. The research results have been analyzed using the analysis instrument of that database based on the research area. The results (Figure 1) indicate that 39% of contextualism studies are related to philosophy (philosophy and history of philosophy) followed by 37% of studies on behavioral sciences² that constitute more than three-quarters of research. As shown in the figure, urban studies just had four papers which are few studies, so could not be used. Hence, this study has preferred a nonsystematic review

¹ The search was done just based on the keyword “contextualism” in the papers’ Topic in 16/06/2023 through Web of science core collection in the database of www.webofscience.com and data analysis was done based

on the Research Area using analysis instrument of Web of Science Database.

² Behavioural science including psychology, cognitive sciences, anthropology, economics, politics, etc.

to a systematic one because the systematic review is just limited to studies that directly investigate contextualism. Hence, those studies that have implicitly examined this topic, like the abovementioned research, are eliminated. Moreover, nonsystematic review provides the field for search through many databases that do not have an advanced search instrument, which

is highly important. Therefore, this study examined contextualism literature in different scientific scopes, and formal-informal urbanism relying on the qualitative descriptive-analytical method through narrative nonsystematic review. The research questions have been answered herein.

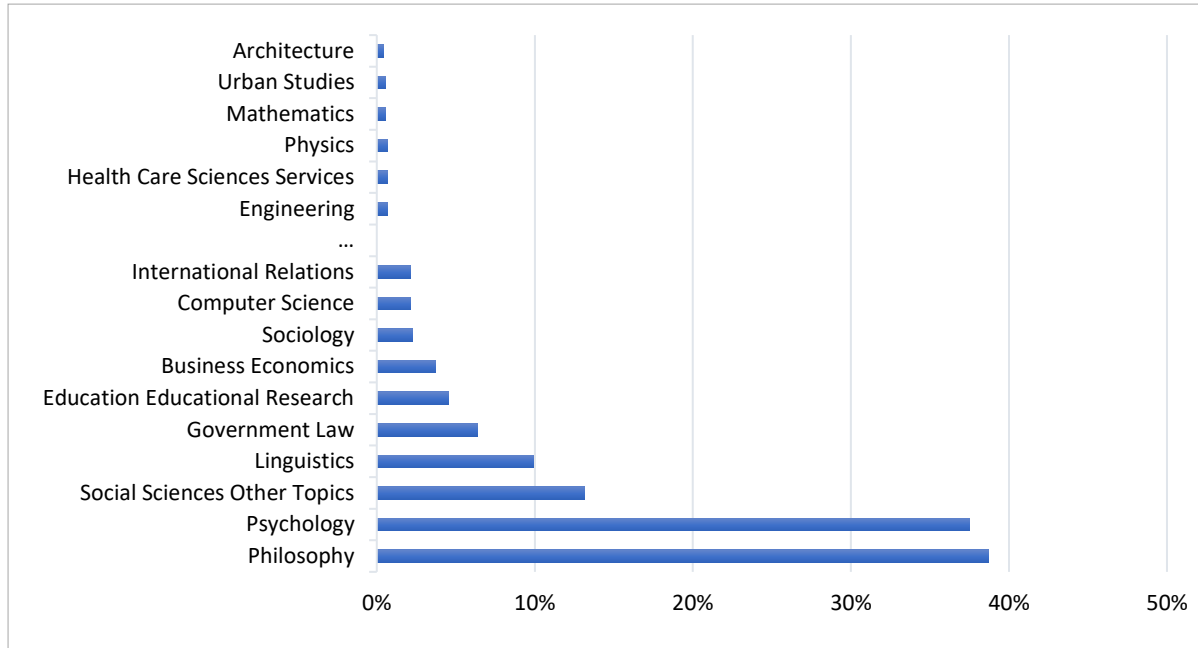


Figure 1: Frequency of contextualism studies in different scientific scopes (Authors)

4. Findings

4.1. Origin of Contextualism

Research findings (Figure 2) indicate that contextualism is not just a scientific approach but is considered a lived experience at first. Some types of contextualism indeed mean paying attention to and relying on the context have existed in different scopes of human life empirically and routinely from the past to now. Longman Dictionary[68] expresses that the term "context" which was derived from the Latin word "context" in Middle Ages was used in lingual discussion for the first time. This case has been approved by the Merriam-Webster Dictionary which has attributed its first use to 1568 [69]. Research results show that little background is seen among academic studies on contextualism. Steven Hayes explains in a paper[70] that these studies on psychology have been done at the same time as American Pragmatism emergence in the late 19th century but Steven Hayes[36] has the same opinion as many contextualist scientists such as Edward Morris[71], Eric Fox[35], Robin McKenna[72],

and Linda Hayes [73] in a relatively old paper [36] believing that mid-20th century (1942) is the first history that contextualism was formulated as a worldview and academic approach by Pragmatic American Philosopher, Stephen Pepper in the book "World Hypotheses: A study in Evidence."

Pepper[22] has used criteria for classifying the worldviews available in the world. The first one is a root metaphor that includes axioms and experiences as a reference for comparison used by an analyst. The second one is the truth criterion that is firmly linked to the root metaphor (comparison reference) providing a base for examining the validity, accuracy, and truth of a cognitive hypothesis. Hence, Pepper believes that any knowledge about each phenomenon can be achieved and classified based on these two criteria. In this way, the belief of a lived experience is obtained based on the right mind in contextualism, and the truth of that experience is confirmed based on the beneficial aspect of doing that belief in the same context. The reason is that contextualism

has interpreted each event as a current action that is not separable from its current/historical context. Moreover, a pragmatic approach is

adopted as the truth criterion of that event in contextualism.

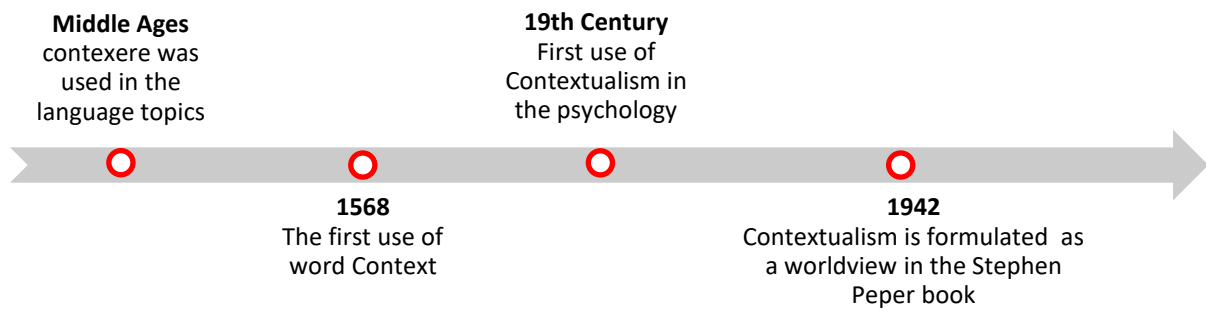


Figure 2: Origin and primary evolution of Contextualism (Authors)

4.2. Philosophical backgrounds of contextualism

Another part of the research findings indicates that contextualism relies on the postmodernism and pragmatism philosophies. In the first phase, many philosophers believe that understanding and knowledge are contextual issues[74], and a phenomenon cannot be known without paying attention to the context. Sumei Cheng argues a contextual concept of science. In his opinion, science philosophers have reached the consensus that reality is full of value. In this lieu, the authority of the traditional image of science believing that knowledge is a context-less science disappeared after the 1960s, so science is considered a contextual case[75]. Such understanding relied on the postmodernist rationality background. The reason is that contextualism is consistent with postmodernism in criticizing rationalist/reductionist macro-narratives on the one hand, and also in line with postmodernism in emphasizing the historical, cultural, social, and climate dimensions of phenomena as the context on the other hand. In confirming this understanding, Sadlounia et al. [76] found that contextualism is an inseparable part of postmodernism and the Gestalt school. David Ley emphasized the necessity of postmodernism and contextualism in the case of criticizing metanarratives and focusing on traditional-empirical-local knowledge[77]. In addition to the commonalities mentioned above, Gültekin emphasized the common conservatism of postmodernism and contextualism in other categories, such as tradition and local values more than in other case [30]. Also, Nabil Elhady[78] considered Jacobs' critics of modern urbanism as the

beginning of the disappearance of the modern era and the emergence of postmodernism mentioning the context as a part of the postmodernism attitude.

Secondly, the contextualist worldview evaluated the truth of a hypothesis based on its efficacy. In this case, truth evaluation is exactly placed in the pragmatism philosophy. Contextualism-pragmatism intersection has been identified in many studies. In long-standing research, Edward Morris explains that contextualism is indeed born by the pragmatism of Peirce, James, and Dewey. Contextualism is the modern example of philosophical pragmatism, he continues[71]. Steven Hayes et al. have described the application of pragmatism in evaluating understanding's truth [36]. In another research, Lars Mjøset, considers the philosophical infrastructure of contextualism in human sciences based on American pragmatism and European critical theory on the one hand, and based on positivism and poststructuralism on the other hand[79]. In terms of the pragmatism presence in the contextualist approach, W. Jacobs believes that pragmatism is used as a philosophy in contextualism but is considered an evaluation technique (truth of belief) [80]. In this case, even some theorists have mentioned both philosophies as backgrounds of contextualism. Hytten argues that postmodernists, like pragmatists, are skeptical of grand theories and claims of static knowledge, refuse to seek certainty, and believe that knowledge must be socially constructed[81]. The results of the analyzed findings of the study (Figure 3) explain the commonalities between postmodernism and pragmatism in shaping contextualism.

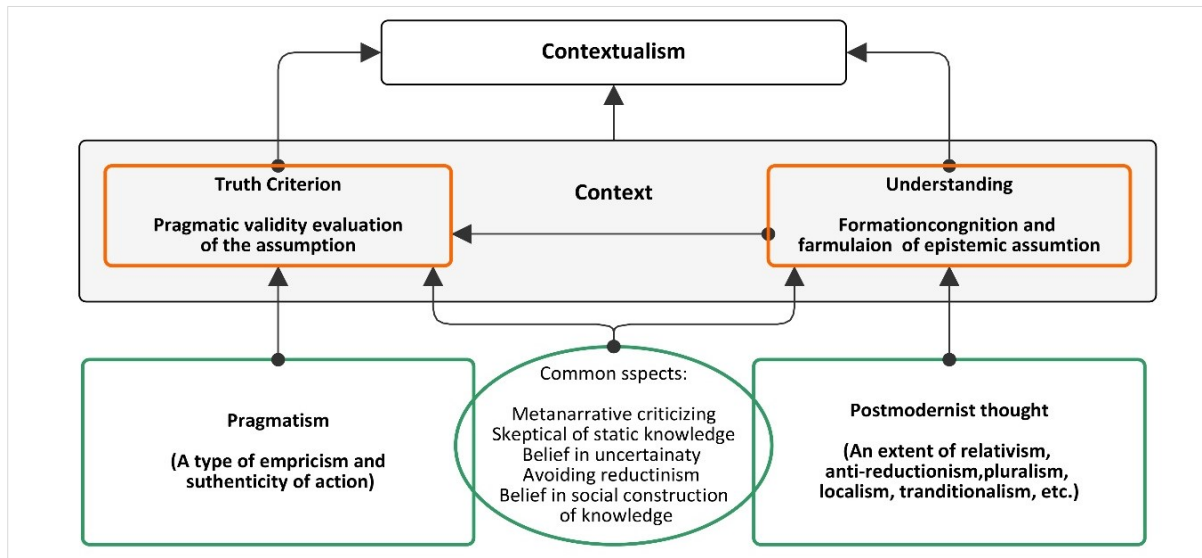


Figure 3: philosophical backgrounds of contextualism (Authors)

4.3. The Evolution process of contextualism in Urbanism

Other findings of the study show that contexts have been emphasized and considered actively and practically in traditional architecture and urbanism for centuries. However, Adrian Forty explains in the Historical Dictionary of Architecture that the philosophy of contextualism entered architecture and urban design from the literary criticism movement in the mid-20th century [37]. Quoted from Eliel Saarinen, Robert Cowan states, “Always design one thing considering it in a larger context. One chair in the room, one room in the house, one house in the neighborhood, and one neighborhood in a city” [82]. Many other studies[78,83,84] have confirmed the belief of Forty and Cowan about the entrance of contextualism in urbanism and architecture in the frame of criticizing modernist views.

The first significant advent of context and contextualism in architecture goes back to notes about form in 1964 written by Christopher Alexander. Alexander has used context as a synonym for the environment and wrote in the introduction of this book, "Each design issue

starts with the attempt for achieving fitness between two subjects: considered form and its context" [37]. Then, the terms "contextualism and contextualist" officially entered the Encyclopedia of Architecture and urban design in 1966 by Colin Rowe[37,82]. In an epistemological study of Architectural Theory during 1995-1965, Kate Nesbitt[84] explains that contextualism is used next to the postmodernism concepts in the frame of historicism, culturalism, semanticism, ecologism, and so on. These concepts have been used in some studies, such as Intentions in Architecture by Norberg-Schulz[85], Language of Post-Modern Architecture by Charles Jencks[40], Collage City by Colin Rowe and Koetter[24], and City Architecture by Aldo Rossi[42]. Contextualism has had many ups and downs in the literature of architecture/urbanism from its formation until now. In this case, Ghalehnoee classified this evolution in the frame of three generations[38]. However, research findings indicated that the evolutionary process of contextualism in urbanism can be summarized in five periods as reported in Table 1.

Table 1: The evolutionary process of contextualism in urbanism (Authors)

Period	Fundamental approach	Theorists and sample works
Formation, 1950s	Criticism of modern architecture and urbanism	Eliel Saarinen, Rogers, and Rossi
First period, 1960s	Emphasis on symbology, semantics, and structuralism	Christopher Alexander[23,86]

Second period, 1970s-1980s	Emphasis on history, culture, traditionalism, and ecologism	Schumacher[39], Rapoport[41], Colin Rowe[24], Stewart Cohen [87]
Third period, the 1990s until now	Emphasis on history, tradition, and ecological culture for coexistence with the environment and sustainable development	Robert and Branda Vale[43] , Herzog [44], Burgess and Jinks [45], and Adam and Thomas[46]
Evolution of the third period, post-2000s	Emphasis on indigenous-traditional institutes	Raul Lejano et al.[60,66,88,89], Salt and de Vries[90]

4.4. Various Contextualism Approaches to Urbanism

Another part of the results explains that contextualism in architecture and urbanism has shaped many meanings and samples for its design-planning philosophy from the entrance until now. For instance, a design and planning that is consistent with the physical environment [24], historical context [30], cultural dimensions [91], climate characteristics[92], indigenous knowledge[83], and even institutional structures[66] can be considered as some of the contextualism examples in this

scope. In addition, data analysis shows that architecture and urbanism researchers have used contextualism in different fields. For instance, Alexander[23] has used contextualism as an urban design method, while Hillier and Hanson[93] consider contextualism a kind of epistemology using it to explain the social logic of space. Table 2 reports the contextualism approaches in works of popular Western researchers based on two variables: “emphasized dimension” and “emphasized use.”

Table 2: Various types of contextualism in Western urbanism literature (Authors)

Researcher	Definition	Dimension(s)	Application(s)
Christopher Alexander [23,94]	Design must be a self-conscious attempt to achieve integrity between form and context (design environment) to create a whole.	Physical, social, and behavioral environment	Design method
Colin Rowe and Fred Koetter [24]	Contextualism creates the link, coherence, and positive coexistence or collage between buildings as the mass and spaces or the context to create a meaningful whole.	Physical	Perception method and design
Thomas Schumacher [39]	Contextualism is similar to an intermediary approach in urbanism that makes balance and reconciliation between traditional and modern urbanisms.	Physical, historical	Understanding and urbanism technique
Stewart Cohen [87]	As a design philosophy, contextualism pays attention to a set of determinants that must be considered in an inclusive architecture.	Physical, cultural	Design Philosophy
Rob Currier [95]	Any new building in the city must follow the general design of the city in terms of scale, type, architecture, and performance to shape a continuous whole.	Historical, physical, functional	Design method and urbanism
Amos Rapoport [41]	Rapoport has not directly addressed contextualism but discussed the relationship between cultural-social context and human-made environment.	Cultural, social, and psychological	Understanding and design
Bill Hillier and Hanson [93]	Spatial order and function depend on social and cultural goals, so understanding the spatial logic of a city depends on the knowledge of the social-cultural context of the city.	Social, cultural	Understanding and analysis method

Robert and Branda Vale [43]	They examined environmental context through green architecture design to reduce energy consumption without examining contextualism.	Environmental, physical	Design method
Burgess and Jenks [45] (As sample)	They did not directly examine contextualism but considered the environmental and ecological contexts of this approach in the compact city theory.	Social, environmental	Design and planning method

The Persian literature related to contextualism in urbanism is based on Latin references. However, it does not mean that contextual action in architecture and urban development has entered from west-north to the east/south but various researchers[96–98] have shown that contextualism has existed in architecture and

urbanism from the pre-modernism era in southern-eastern countries. However, contextualism has been used as a theoretical framework in many Persian works, which are reported as results of this part of the study in Table 3.

Table 3: Various types of contextualism in Persian urbanism literature (Authors)

Researcher	Definition	Dimension(s)	Application(s)
Novin Tavallaei [99]	Contextualism is a view in urbanism that considers context as a historical event so that the elements of the city are known, examined, and constructed in it.	Physical, historical, and social-cultural	Understanding, design and planning method
Mahta Mirmoghtadaee [100]	Contextualism is a view in urbanism that understands specific properties of a place and its use in contemporary design emphasizes creating lasting physical and non-physical values.	Physical, historical, and social-cultural	Understanding, design and planning method
Saadlounia et al. [76]	Contextualism in architecture and urbanism is similar to epistemological contextualism, understanding the meaning of place depending on its context understanding, and evaluating the design subject to its successful function over time.	Environmental, historical, cultural, and social	Understanding and evaluation instrument
Naghavi and Kiani [101]	Contextualist architecture is based on context and context is a phenomenon with four dimensions: spatial, time, physical, and human.	Physical, historical, cultural, social, and so on.	Design technique
mohammad ali banhashemi [102]	Contextualism is an inclusive approach to urban development and cohesion in different dimensions.	Physical-spatial, historical, social-cultural, semantic, and ecological	Urbanism technique
Hashempour, Nezhadebrahimi, and Yazdani [103]	Contextualism is an approach to knowing and recreating the historical context in a holistic method based on sustainability and identity principles.	Physical, historical, social-cultural, and environmental	Understanding and regeneration technique

4.5. Contextualism in informal urbanism

Findings indicate that contextualism has also been considered in informal urbanism. However, the nature of contextualism used in formal and informal contextualism completely differs. Contextualism in informal urbanism

indeed does not mean reliance on the inclusive and certain theoretical-cognitive framework of contextualism but means paying attention to the context and using it as a component to explain and identify the informal urbanism phenomenon. Moreover, research results show

that economic, social, and cultural aspects of the contexts have received more attention rather than other aspects. However, other dimensions of the context, such as environmental context have received less attention. Moreover, in the literature of informal urbanism, except for Lejano, the context has been explored through

some of its dimensions and contextualism has not been considered as an independent theoretical framework. Despite the reliance on contextualism even in the works by Lejano, its use has been confined to social-cultural/institutional contextualism.

Table 4: Contextualism and its various approaches in informal urbanism studies (Authors)

Emphasized dimensions	Highlighted approach	Source
Economic	The concentration of poverty, immigration for jobs, and deprivation as the most powerful contextual factor in informal development	[25,26,104–107]
Social-cultural, physical	Emphasis on ethical and relativity properties, as the factor producing and affecting the physical form	[60,65,108]
Governance	Emphasis on different dimensions of governance, such as corruption, government utilitarianism, inefficient policymaking	[62,109–111]
Legal	Paying attention to customary rules affecting the informal development	[104,112]
Political	Paying attention to political disagreements, party and electoral competitions in informal development	[26,113,114]
Historical, physical	Paying attention to the physical dimensions of informal development and comparing it with indigenous development	[61,115,116]
Physical, economic, and social-cultural	Paying attention to physical and spatial forms of informal development with emphasis on economic, social, and cultural properties	[27,59,117]
Institutional, social-cultural, physical	Using contextualism in informal development studies paying attention to institutional contexts	[60,66,88,89]

According to the analyzed findings of the study (Table 5), context's components have been addressed in traditional architecture and urbanism over centuries, and contextualism appeared as a scientific theme in different frames since the second half of the 20th century. In this period, like a pragmatic postmodernist approach, contextualism has confronted and criticized detraditionalization and modernist rationalism. Therefore, contextualism appeared as a traditionalist and history-based approach based on the physical dimension in the first phase. This approach then tended toward social-cultural aspects, entered the environmental issues and sustainable development in the 1990s, and interested in other social aspects such as institutes in recent

years. On the other hand, contextualism has had three different applications in urbanism. Contextualism has been used as a tool for understanding, design, urbanism, analysis, and evaluation. The case is more complicated and newer in the informal urbanism scope. In this case, few studies have used the exact term "contextualism." However, various dimensions of context such as contextual features have been reflected in some of the studies. On the contrary, the use of contextualism in informal urbanism studies has been just limited to cognition tools.

Table 5: Summarization of findings (Authors)

Period	Approach	Popular theorists	Dimension/ Application	feedback in informal urbanism studies
Formation 1950s	Criticizing modern architecture and urbanism	Saarinen, Rogers, and Rossi	Physical/ Tool for criticism and comparison	Not available
First period 1960s	Emphasis on somatology and structuralism	Alexander	Physical, social, and behavioral/ Design technique	Not available
Second period 1970s-1980s	Emphasis on the history, culture, tradition, and ecology	Schumacher, Rapoport, Colin Rowe, Cohen, Currier	Physical, historical, cultural, social, and psychological / understanding, analysis, urbanism	Indirect emphasis on the contextual factors affecting informal development
Third period From the 1990s until now	Emphasis on the tradition and ecology for sustainable (environmental) development	Herzog, Burgess and Mike, Adam and Thomas, Robert and Branda Weil	Physical, environmental/ Design technique, planning	As a tool for understanding: the study of informality physic based on the vernacular studies is proposed
Evolution of the third period after 2000	Emphasis on traditional institutes for sustainable (social) development	Raul Lejano, Salt and de Vries, Kim Dovey	Physical, environmental, and social/ understanding framework and planning	As a tool for understanding: emphasis on the study of economic, social-cultural, and physical contexts of informality

5. Discussion

According to research findings, contextual analysis has been a popular tool in various fields, particularly in linguistics and philosophy since the Middle Ages. In the realm of behaviorism and psychology, contextualism emerged as a scientific approach in tandem with American pragmatism. Eventually, Stephen Pepper fully developed contextualism into a comprehensive worldview which emphasis on context for understanding phenomena and evaluating hypothesis about it.

Therefore, contextualism posits that people make sense of the world around them based on their lived experiences and common sense. Eric Fox [118] offers an example of this phenomenon: humans brush their teeth to prevent decay, alleviate pain, and avoid the dentist. Through trial and error, individuals develop a set of axioms and common sense that inform their tooth brushing habits, including what materials to use, how often to brush, and where to focus their efforts. From a contextualist perspective, tooth brushing is

defined by its function - using a toothbrush and toothpaste - rather than any other methods. Additionally, hypotheses such as "brushing prevents tooth decay" are tested and either confirmed or rejected based on human experiences. Ultimately, contextualists believe that the truth and meaning of an idea lies in its utility rather than its adherence to reality or language.

By emphasizing pluralism, rejecting reductionism, and highlighting the uncertainty of science, postmodernism and pragmatism provided a favorable foundation for contextualism. These philosophies served as the foundation for contextualism's development, giving it greater traction in the years after the 1970s and enabling it to penetrate a number of industries, including urbanism. Contextualism thus arose in reaction to modernism's universality claim, which was criticized for frequently ignoring custom and culture. Rather, contextualism placed a strong emphasis on the social, cultural, and historical dimensions of cities; subsequently, this

perspective was extended to encompass environmental and socioeconomic dimensions as well. Nonetheless, this study's findings have shown that contextualism has taken a different course. The findings indicate that contextualism in urbanism is applied in a partial and incomplete manner rather than as a comprehensive worldview.

Based on the results of the study (Table 5), contextuality has been used as a tool rather than a worldview in urbanism studies except for a few studies [60,99,119]. In the literature of urbanism, contextualism has been indeed used as a tool for the design, planning, and analysis of status. Hence, this worldview has been limited to emphasis on the context components in the frame of the analysis, design, and planning. In summary, it seems that the contextualism available in the urbanism literature is the reduced type of a reductionist view towards the inclusive worldview of contextualism. Moreover, the results show that contextualism has been used as a tool emphasizing the body, while it is an instrument for creating correlation, fitness, balance, and conformity of a form, building, or even the fabric or surrounding environment. This study confirms that historical, social, cultural, and even environmental components of contextualism have been emphasized in some studies. However, these studies have also addressed other non-physical components in light of the physical dimension. For instance, Rapoport[41] emphasized cultural-social contextualism but finally discussed the relationship between these dimensions and the body of the city. Moreover, Bill Hillier and Hanson[93] emphasized the social components of the context while wanting to create a link between social structure and the physical dimensions of the city. Therefore, most of the non-physical contextualist approaches reach the body. Hence, it seems that contextualism has been used in a sectoral, partial, and non-inclusive way in its instrumental form.

On the other hand, as mentioned in the summarized results of the study (Table 5), contextualism is a new and fragile case in informal urbanism. Data analysis shows that the extension of contextualism to the studies on informal urban development requires a new formulation within two subjects. Firstly, as a tool, contextualism requires rereading. This hypothesis rereading discusses adding other

dimensions of the contexts to their available ones. Secondly, contextualism needs rereading in terms of its theoretical position. Extension of contextualism to informal development studies requires emphasizing contextualism as a worldview. In this lieu, ontological, epistemological, and mythological elements of contextualism must be formulated based on open informal development studies. These two subjects have been explained herein presenting some points about operating contextualism in the studies on informal urbanism.

According to the analyzed findings of this study, informal urbanism not only emphasizes the physical, historical, social/cultural, and environmental dimensions that were identified for contextualism in formal urbanism but also considers the economic, legal, and political components. Such understanding indeed originates from the importance of institutional (legal, political, organizational, etc.) and economic contexts in informal development. These two contexts have been intended in many studies on informal development (contextualist/non-contextualist). Some reasons have also been presented that indicate the importance of these two dimensions. In the first step, institutional context is considered a dimension influencing the space formation and urbanism trend. Many studies have asserted this case. For example, Salim Basim Hakim has explained the pattern of traditional urban development in Islamic countries by using Islamic customary rules[96]. Moreover, in a study titled "Learning from Tradition: the planning of residential neighborhoods in a Changing World," Abd Allah ibn Salam extracted the rules of customary development suggesting them for local development in the modern changing world[120]. Mashary Alnaim studied the form of urban development at different scales in traditional cities of Saudi Arabia based on the various institutes and foundations. He introduced religion and privacy rules, Shafa'a, easement, revitalization of the barren land, and other rules as the underlying notions that shape the development[121]. The examples mentioned above confirm that institutional contextualism must be considered in informal urbanism studies in addition to other contextualism approaches. Furthermore, economic context also plays a vital role in explaining informal urbanism. The economic context indeed can be

intrinsically a context for other contexts because economic factors leave substantial effects on shaping urban development within physical, social, cultural, and other dimensions. Manuel Castells[52], Mike Douglas[122] and David Harvey[53,123] have explained the role of global capitalism in accumulating the product-centeredness of cities, which marginalizes the poor. To Harvey, like Brenner and Marcuse think, cities are not developed for cities but profit and speculation play a vital role in this field [123,124]. Accordingly, cities are more assigned to the capital and rich classes of society, so the poor people do not have any share in this development, while, as explained by Mike Davis [2], they are recalled from village to city to play the production factor as inexpensive labor. Although such views have been criticized, economic contexts play an undeniable role in developing space and informal (even formal) urbanism.

In addition to the instrumental rereading of contextualism that was done in the rows above, contextualism must be considered a worldview or scientific paradigm on another level not just a method or too for analysis and design! Like Stephen Pepper who interpreted contextualism as a worldview in the second half of the 20th century [22]. Regarding its postmodernist philosophy, this understanding of contextualism allows us to address metanarratives, pluralism, traditionalism, ecologism, and an extent of cognitive relativism. From this point of view, urbanism is a multiple topic. It means that we do not have a single urbanism but different types of urbanism may exist. Therefore, the urbanism created based on the development plan by the official bodies is one of the urbanism types called formal urbanism. However, formal urbanism that shared points with power networks has gradually introduced itself as single urbanism preventing other types of urbanism appear. Given contextualism, however, what is constructed by people beyond the formal structure just for meeting housing and urban space needs in the cities (particularly southern cities) is another type of urbanism called informal urbanism. Therefore, contextualism indicates that urbanism has diverse types one of them is informal urbanism. In the epistemological dimension, contextualism assumes that knowledge is contextual. In this case, understanding and knowledge about a

contextual issue are based on the lived (pragmatic) experience. Therefore, context plurality leads to knowledge plurality. It is concluded that although informal development is a kind of marginal development in some northern countries and informal urbanism does not have a theoretical aspect, this development must be understood differently in southern countries where millions of people live in informal urban settlements. Many researchers [26,62,106,125] have formulated informal urbanism as an efficient, adaptable, affordable, and even cooperative context-based urban development relying on the lived experiences of southern countries. Therefore, contextualist epistemology of informal urbanism is an appropriate platform for the formation of plural knowledge providing an essential tool for preventing epistemological north-to-south generalizations. In terms of methodology, contextualism adopts a mixed approach. Contextualism indeed uses pluralist interpretive components and pragmatic mixed components simultaneously. For instance, it can use qualitative and quantitative approaches at the same time without any constraint to discover the planning process in informal urbanism. Such an approach leads to an in-depth exploration of informal urbanism and provides a suitable field for producing relevant knowledge.

According to the mentioned explanations, contextualism inclusiveness indicates its potential on the one hand, while this would be a serious challenge for operating and converting it to a certain analytical framework. The pragmatic aspect of contextualism as described provides more flexible and movable principles for each study allowing it to perceive creativities in the presence of "disorders" [126] in the complex, chaotic, and dynamic layers of informal urbanism. However, this issue makes the research far from positivist and predetermined frameworks making it highly unpredictable and unstructured. In this case, Naghavi and Kiani have explained that the most fundamental question for achieving context component is what elements can be "context" and in other words, what are the different dimensions of the context [101]? Fox asks whether a contextualist knows what dimensions and how must certain features of the context are appropriate for an acceptable description of an event. He considers that the answer is subject to

the analysis objective because the goal of analysis plays a determinant role in limiting the studied dimensions [35]. Therefore, previous parts of the study added economic and institutional contexts to the physical, historical, social, cultural, and environmental contexts but

the contextual dimensions that a contextualist uses in the analysis are not predetermined and are shaped based on the goal of research throughout the study, so they might be changed. The mentioned points have been summarized in Table 6.

Table 6: Contextualist worldview elements with emphasis on informal urbanism (Authors)

Contextualist elements	Explanation of informal urbanism
Multiple ontologies	In terms of contextualism, urbanism is a multiple truth. Hence, the existence and presence of various types of urbanism are provided. Therefore, formal urbanism is defined as what is built by official authorities consistent with the development plan in the urban development process, while another type of urbanism called informal urbanism is beyond the previous type and appears to meet housing needs and provide urban space in the cities.
Plural and pragmatic epistemology	In terms of contextualism, understanding, and knowledge are contextual issues rooted in lived (practical) experience. Therefore, context plurality leads to knowledge plurality. Hence, lived experience of cities in southern countries indicates that informal development can be theocratized like a context-based adaptable, affordable, and even participatory urban development mode. For northern countries, however, a kind of marginal development has been formulated.
Mixed methodology	In terms of contextualism, informal urbanism is a contextual case. Therefore, this development mode is a complicated, dynamic, and multifaceted reality. Hence, the discovery of this case requires flexible and pragmatic principles. Such properties are seen in mixed methodology. Therefore, a study on informal urbanism can be done as an element among elements of contextualist worldview through mixed and pragmatic methodology.
The inclusive and flexible analytical framework	Analysis of informal urbanism is done relying on the upstream elements of contextualist worldview in the study field in line with the goal of the analysis. However, physical, cultural-social, historical, environmental, economic, and institutional dimensions have been considered as presumptions, which are limited throughout the research process.

6. Conclusions

This study has been conducted to examine the worldview of contextualism and formulate a narrative of it that is suitable for explaining informal urbanism. Therefore, the research problem's parts are presented in the first step indicating the ascending number of studies on informal urbanism. However, an inclusive theoretical foundation must be provided for this topic. On the other hand, contextualism in literature has been used in different frames to understand the phenomena in diverse scientific scopes and urbanism. Therefore, this study rereads the theoretical literature on contextualism in different scopes and (informal) urbanism based on the descriptive-analytical methodology with a qualitative review-narrative approach. Research findings are presented in the following sections: the origin of contextualism, philosophical backgrounds, evolution trends in urbanism, different contextualism approaches to

urbanism, and the link between contextualism and informal urbanism.

Analysis of findings in the discussion frame indicates that contextualism is used in the reductionist and instrumental frames in urbanism. Contextualism indeed is applied as an instrument for design, urbanism, and sometimes for analysis. In this lieu, the underlying emphasis is just limited to historical, physical, social-cultural, and environmental dimensions of the context. However, this study has formulated the elements of the contextualism worldview with an emphasis on informal urbanism based on the contextualism worldview within an inclusive rereading of contextualism dimensions. This framework includes ontological, epistemological, methodological, and analytical elements.

Therefore, in terms of theory, this study has discovered the constraints that have imposed pressure on contextualism considering the philosophical origin of contextualism and its

initial form on the one hand, also identifying the current understanding of this view in (informal) urbanism on the other hand. These limitations have made the contextualism worldview just an instrument for design/urbanism losing its explanatory/exploratory feature for different urban phenomena, including informal urbanism. Therefore, in the new plan of contextualism capacities like a complete and independent worldview, this study has attempted to open a new window for informal urbanism studies that is mainly a contextual phenomenon.

In a practical dimension, the contextualism view provides the field for accepting a plurality of truths and criticizing the global metanarratives. Hence, executive authorities of couth countries cannot make policy and expect desired results based on the available explanations and interpretations in other contexts (northern, especially) for informal urbanism that are mainly negative. The reason is that informal urbanism in southern countries can be considered based on the context, cooperative, resilient, affordable, and accountable urbanism regarding contextualism. However, urbanism in northern countries is explained differently based on the context, so requires different practical measures.

It seems that this study experienced two limitations within two cases. Firstly, contextualism is intrinsically a philosophical topic, so it's better understanding requires group interdisciplinary studies with the cooperation of researchers from other disciplines, such as philosophy to reach a better formulation based on the cooperating and sharing of various learnings. Secondly, as a large-scale worldview, contextualism must become an analytical-pragmatic framework. To fill this gap by defining more testable measures and indicators, further studies are required.

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