Review on a Practical Approach of Sustainable Urban Design Strategy in the Perspective of Conflict in Shanghai

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Abstract: As the abstract of the main parts of a doctoral dissertation, this paper tried to show the overall study skeleton: a sustainable urban design strategy could be investigated from two domains, the space construction and the social action. In the perspective of "conflict", according to the urban development of Shanghai, five conflict fields were proposed and the relevant empirical studies were implemented, focusing on the above two dimensions and combined closely with the stage characteristics of urban development to explore practical approaches of sustainable urban design. Also, the content framework of sustainable urban design strategies was formed based on the above study and enumerated briefly.

1.   TWO DOMAINS OF SUSTAINABLE URBAN DESIGN STRATEGY: THE SPACE CONSTRUCTION AND THE SOCIAL ACTION

In the 21st century, according to the many conflicts and crises of cities, sustainable urban design is increasingly becoming an inevitable response, and represents the development orientation of urban design theory and practice. At the same time, its strategy should not just be limited to the development of the city itself but taken into a kind of process study, associated with the region's comprehensive factors including population, economy, society, resources, environment and others, to promote the natural and ecological balance, the social equality and healthy lifestyles, and the policy arrangements and action co-ordination, through which the innovation process for sustainable development can be advanced and wider research and discussion be stimulated.

For China, with an extensive land area and a long history, in the context of world economic structural adjustment and its own social transformation with the interactions of all of the globalization, urbanization, marketization and democratization (Wang Weiqiang, Wang Mengyong, et al. (2010); Yuan Yan (2008)), if there is no   clear grasp about its development phases, characteristics, mechanisms and so on, just considering the problems in

isolation, such research is not enough to add unique understandings of its methods of sustainable development. In this sense, with attention to four aspects, including the natural conditions, the economic model, the social conditions, and the system mode (*Figure 1*) of China, this paper tries to integrate the main objectives of sustainable urban design strategy into two domains of "space construction" and "social action" to study (*Figure 2*).
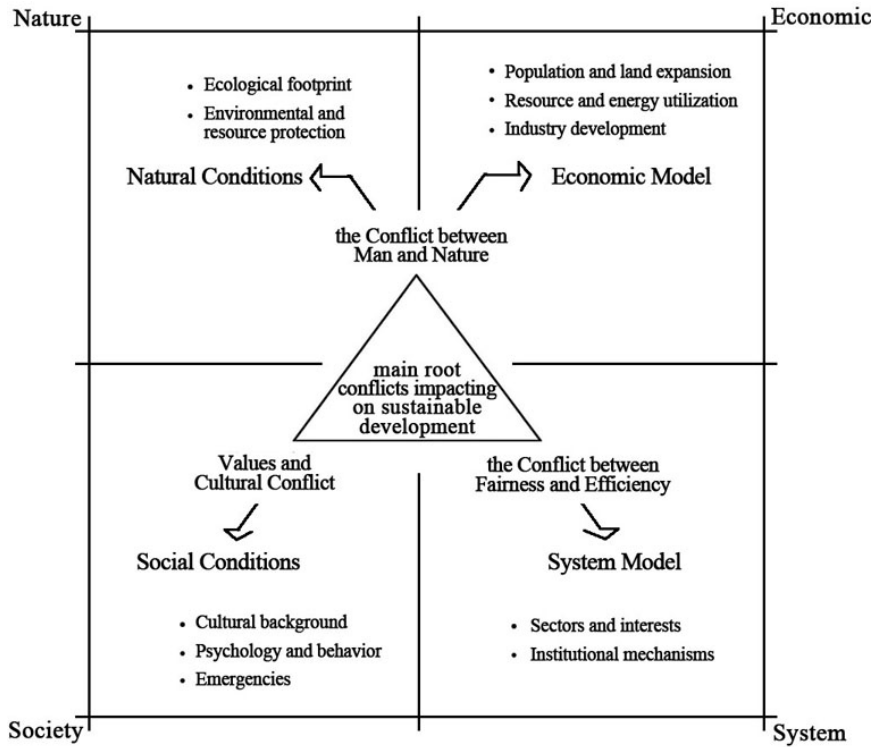

Figure 1. Analysis dimensions of the local urban development situation in the context of globalization
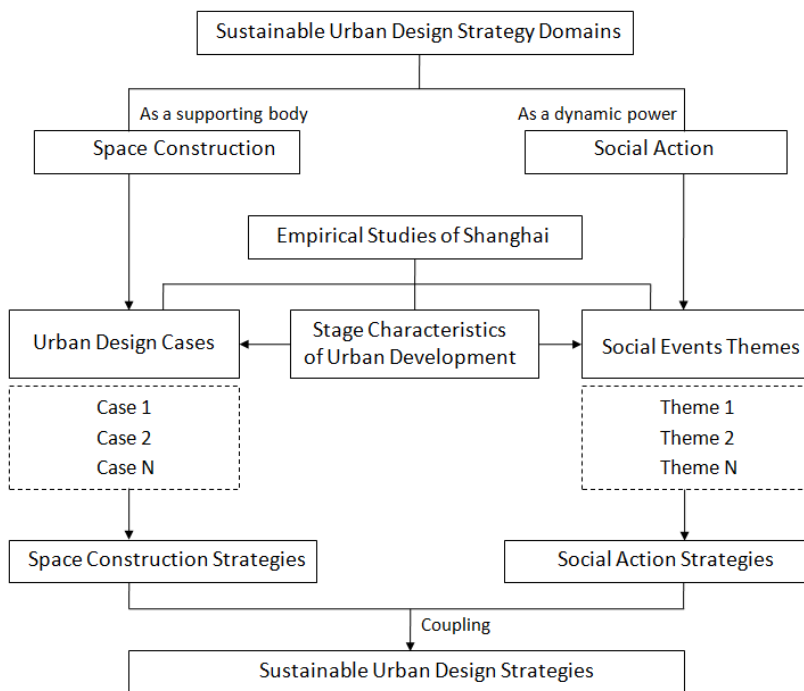

Figure 2. Research route for sustainable urban design strategy domains

On the one hand, the development and evolution of urban space itself is embodied as a kind of social development process with transforming and restructuring. Judging from the surface features, the city is reflected in the performance of its two-dimensional and three-dimensional space, such as its form, style and layout of material elements, while from the content essence, it is a kind of comprehensive reflection of the interaction of history, culture, politics, technology, and a variety of human activities and natural factors. Moreover, with increased connectivity and mobility of modern cities as well as people, concepts, information, urban scale, and technology in constant change, the connotation of urban space is becoming more abundant and frequently changeable, and its social characteristics have become stronger and increasingly reflect the characteristics of dynamic development and diverse perception. As a result, combined with this process and its result, to analyse the styles and forms of space and the evolution pattern of urban development, will be a kind of attempt at exploring patterns and applications combined with the considerations for social factors, which will help to inspire and refine the ideal model of urban development, and expand the deep-seated social construction fields of urban space.

On the other hand, in fact, the evolution process of real time social forces and physical forces, intertwined in an interactional or emergent way, will inevitably be affected and repeatedly adjusted by the actions of people, including the actor, the acted upon, the conditions and means, the normative orientation and others (Parsons, 2003). They will also act on the reality of the sustainable development of a region, accompanied by the specific practice situations limited or initiated by conflicts. To be sure, social action itself is a closely relevant problem to the actual social transformation, and the exploration for its final "meaningful effect" (Yang, 2005) is reflected as a common effect of practice. It is not only inseparable from the considerations of interconnectedness and the public consistency of social actor bodies, and the ones of the socio-economic environmental factors in the selection and use of policy instruments (Zhao, 2011), but is also inseparable from the integration and reconstruction of social cooperation and social order in the reproduction process of practical action (Yang, 2005).

Overall, the "space construction" strategy emphasizes the construction of social space itself in this paper, and is the bearing of sustainable urban design for social elements; while a "social action" strategy is the action response of a construction mode in the perspective of transformation, and additionally plays a supporting role for social elements. As the methods and processes of solving problems in the perspective of conflict, they together reflect two aspects of one body of sustainable urban design, and complement each other while having different breakthrough points and analysis focuses.

2.   "CONFLICT" INVESTIGATION FOR SHANGHAI URBAN SPACE: THE SITUATION AND THE RESPONSE

"Conflict" is a kind of phenomenon and feature of social facts (Durkheim, 1995). Moderate conflict is often very constructive, and can be transformed into a positive force for change (Dahrendorf, 1958; 1959), promote social stability (Simmel, 1908), excite the formation of dominant values (Chen, 2005), be conducive to re-structuring of the social order

(Yang, 2005), and be beneficial to the coordination and integration of practical activities (Collins, 1981; Knight, 2009). Associated with sustainable urban design orientation, this paper attributes the main root conflicts impacting on sustainable development to three main aspects of the conflict between man and nature, values and cultural conflict, and the conflict between fairness and efficiency (*Figure 1*).

More specifically, this paper analyzes the conflict issue from the following two cognitive dimensions: (1) the situation of conflict, which is always a kind of presence status in a certain period of time. In fact, whether it is from the perspective of power interests, resources, other interactions, or a unique perspective to investigate the status of conflict, we can always attribute it to a kind of situation of conflict embodied or rendered in the development process of a city or society. The values, actions and systems can be produced in the interaction of the various forces in a situation of conflict; and (2) the response of conflict, whereby once the conflict presents itself, the parties in it all try to take effective measures to influence the development of the conflict, to make its results more conducive to their own interests, which reflects the specific measures regarding the response of conflict.

As for the situation of conflict in Shanghai, embracing diverse stakeholders of government, business interest groups, the public and so on, is not influenced by the rooted conflicts acting on its sustainability, but is exposed to the overarching conflict situations of sustainable development and construction of cities. The development of urban space can be divided into three phases according to its economic and social development and spatial evolution since 1990（*Table 1，Figure 3*).
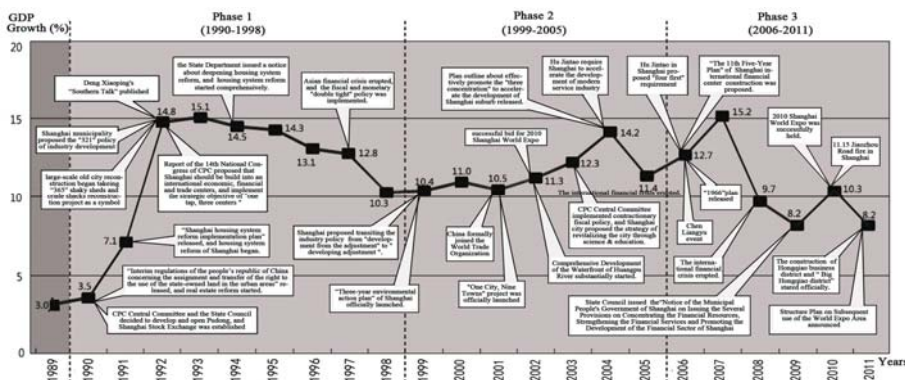

Figure 3. Three Phases of Socio-Economic Development and Spatial Evolution of Shanghai (1990-2011)

Table 1. Division of analysis aspects contributing to stages of Shanghai urban space development

Development Fields	Main analysis factors
Economic development	- Cyclical features of economic growth
	- General characteristics of industrial structure
	- Industrial power
	- Demand power
Social Development	- Social development stage characteristics
	- Social development motivation
Urban construction and spatial development	- Evolution characteristics
	- City construction situation

During this period, on the one hand, the outward expansion of built-up areas and suburbanization was evident (*Figure 4*), and with the penetration

of ecologically sustainable concepts, the new urban development of Shanghai city is increasingly combined closely with construction for sustainability and shapes the city's future ideal life. On the other hand, diverse and complex restructuring is going on in the interior space of this city, which is intensively reflected in the construction, protection and development of the central city, the Huangpu River and other core areas. In this process, the points are often inseparable from the ecological, cultural, and public interest considerations, and the phase of "old city reconstruction" is being progressively broken through and the threshold of "new city transformation" is surpassed. Through this study, the paper proposes that the sustainable development and construction of urban space in Shanghai since 1990 has faced five major fields of conflict (*Figure* 5), which are the conflict between the city and rural areas, the new and the old, the public and the private, the global and the local, and the crisis of environment and resource, which were induced and resulted in the three root conflicts closely related to its sustainable development, and the 20 major conflict aspects among them are shown in *Figure 5*.
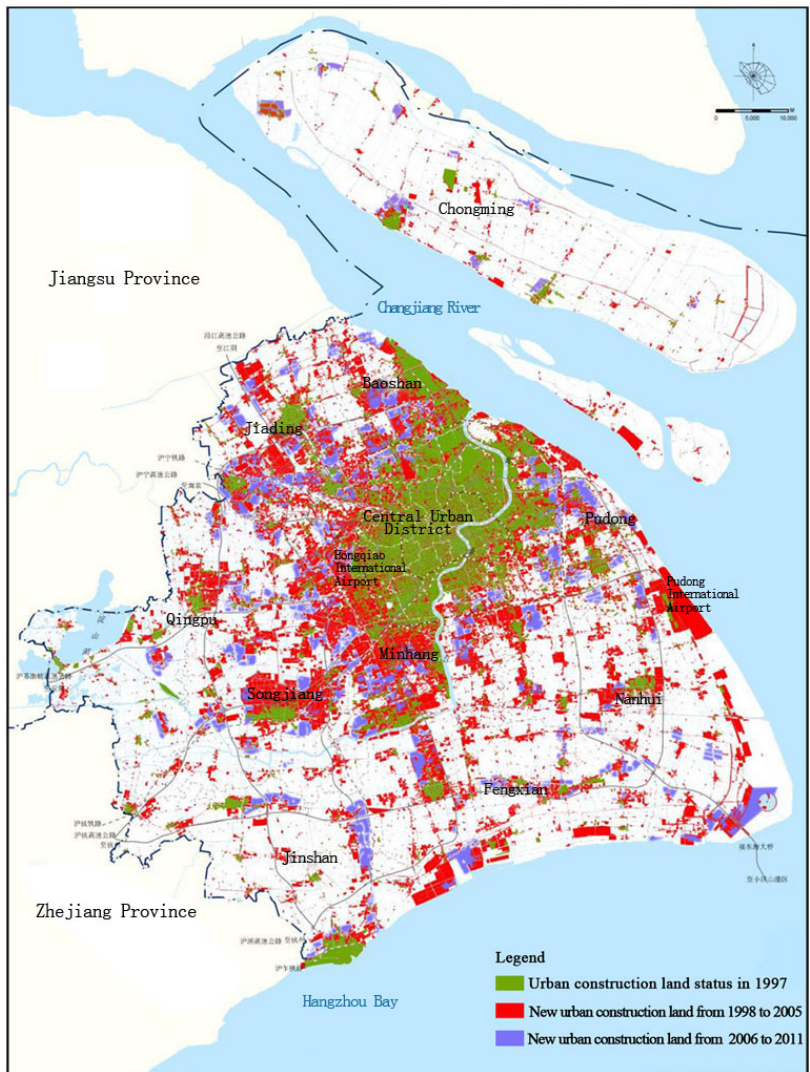

Figure 4.　Dynamic change of urban construction land in Shanghai (1997, 2006, 2011)
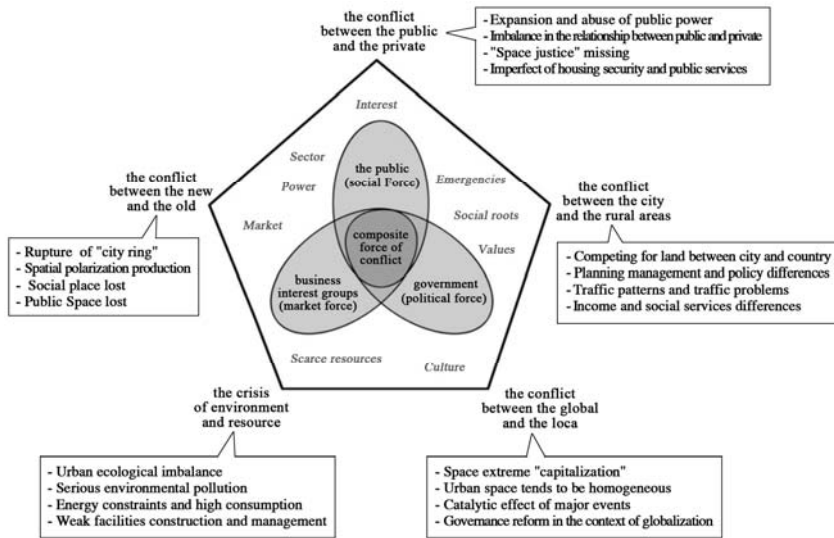
Figure 5. Conflict fields and performances related to the development of urban space in Shanghai

Then, as for the response to conflict, empirical studies have been developed and combined closely with the stage characteristics of urban development in Shanghai, drawing support from the associative analysis of the "technical route" and "action route". Among them, "technical route" embodies the studies about the space construction in seven local urban design cases, which are "Lujiazui CBD, Shanghai Xintiandi, Duolun Community, Comprehensive Development of the Waterfront of Huangpu River, Dongtan Eco-City, Hongqiao Business District, Expo 2010 and 'After Expo'", and the "action route" is implemented through the research of four themes drawing from the conflict development processes of local social events, including "new area development in the rapid urbanization process, the transformation of the old city areas and the cultural renaissance, the liveable environment and ecological construction, and the local governance promoting social harmony" (*Figure 6*). Also, these cases selected regarding the different strategy domains are inherently associated with the above five fields of conflict (*Figure 7*).
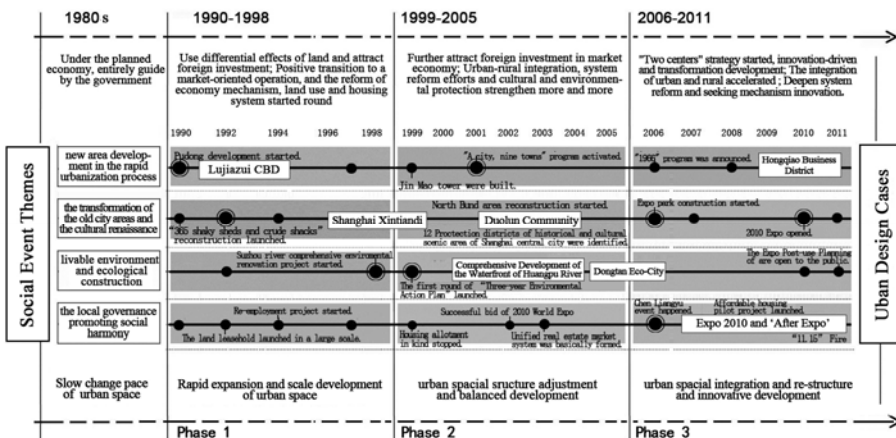

Figure 6. Conflict analysis frame work of focus issues and corresponding approaches in the empirical studies
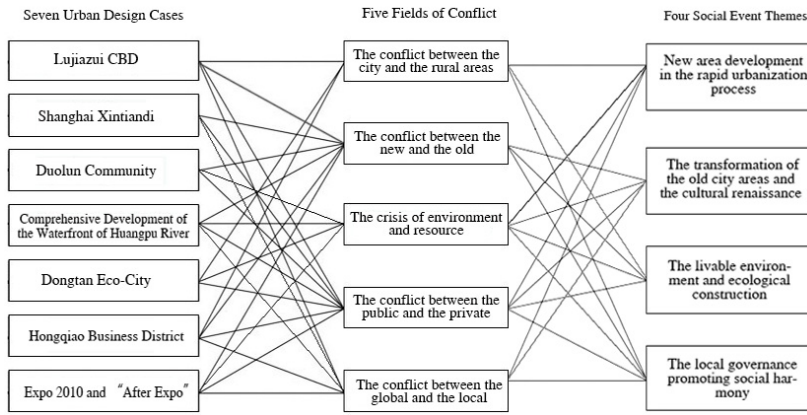
Figure 7. Main conflict-orientations of the cases selected

More specifically, the paper tries to take the elements of conflict analysis, including time point, participants, selection, means and so on, more systematically into the specific research and analysis of these cases（*Figure 8*）. Furthermore, combining the above overall investigation about conflict situations, and especially based on the problem framework of 20 major conflict aspects among the five major conflict fields, this paper takes the core points and corresponding policies reflected in the case studies into integrated considerations, to extract beneficial approaches and summarize the main orientations. Which approaches offer favourable initiatives and which ones are inadequate are analysed, and the latter's changes in turn could generate useful strategies, which could be taken as the foundation of discussing strategies toward integration and balance, as well as the exploration for the useful mechanisms of promoting design organization and practice. Finally, through the strategy of coupling space construction and social action, the main contents of the sustainable urban design strategies are generated and developed.
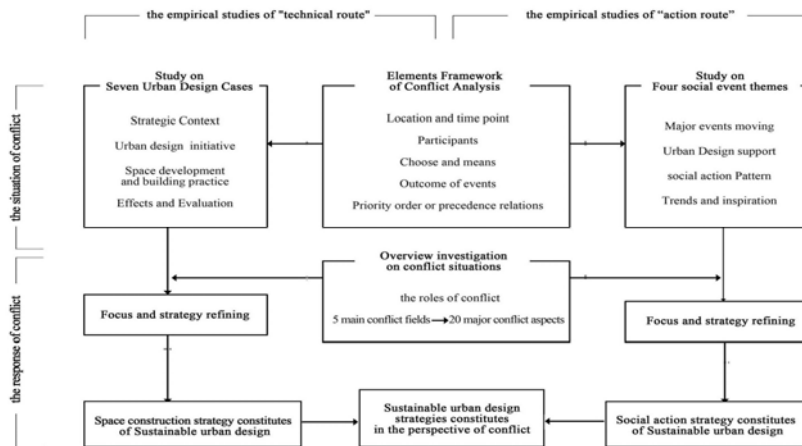

Figure 8. Analysis framework of "technical route"-"action route" coupling

3.   CONTENT FRAMEWORK OF SUSTAINABLE URBAN DESIGN STRATEGIES

From the entirety of the research, the following characteristics of conflict can be summed up in the urban development of China, which is increasingly widespread and diverse, increasing in scale, more intense, more pluralistic in

conflict, and occurring due to a growing complexity of reasons. As for the specific strategy for dealing with conflict, generated from the above two routes studied, the strategy sets are formed including 27 beneficial measures and 24 negative aspects. This paper further proposes the countermeasures and recommendations of implementation from two aspects (*Figure 9*). On the one hand, five overall orientations are summed up by the appropriation of technology, public priority, health and safety, policy decisions and co-ordination, and methods of innovation. On the other hand, the linked countermeasure system of "four-in-one", a local strategy of sustainable urban design, is composed of the four aspects of design principles, procedure structure, policies and regulations, and action mechanisms (*Figure 10*).
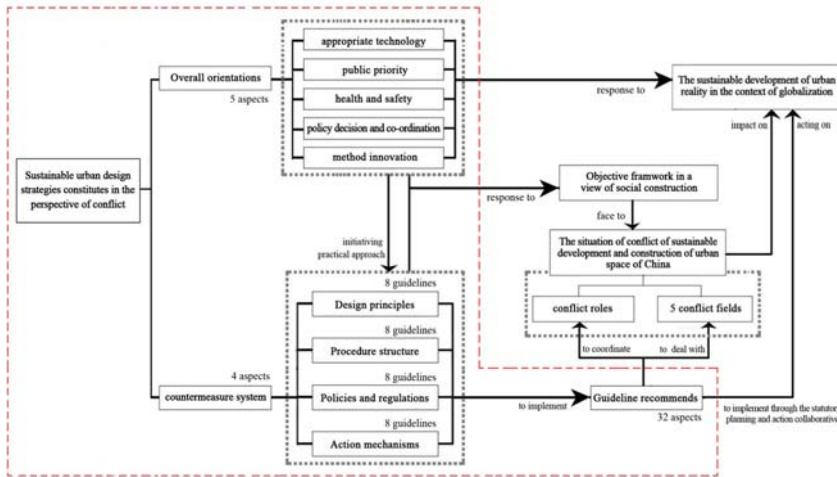

Figure 9. Framework of sustainable urban design strategies responding to local urban development
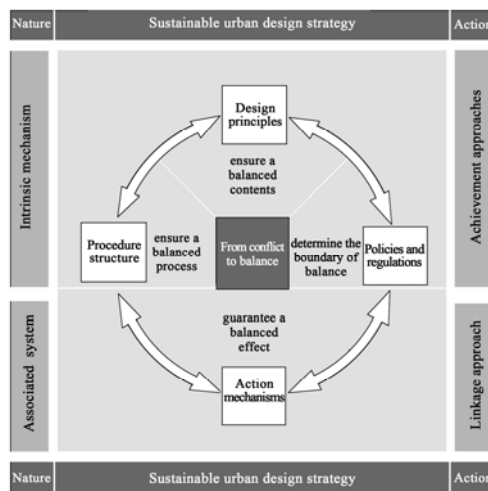
Figure 10. "Four-in-one" countermeasure system of the sustainable urban design strategy

Within the linkage countermeasure system, the first three constitute a kind of intrinsic mechanism and are the achievement approaches of strategies, as driving factors of the objective, process and decision, respectively. The last one is a connecting, driving factor objective that embodies a kind of associative and derivative system, which is the linkage approach. We can see that it is in the interactive practice of them that the sustainable development and construction of urban space are able to be promoted and implemented. Based on this "four-in-one" system, the paper

further proposes 32 guidelines for an implementation-oriented sustainable urban design strategy for Shanghai based on the above four aspects. There is an itemized explanation and refinement of them, and a pre-set evaluation about the effect of the application of the guidelines for the above five fields of conflict (*Table 2*). However, with respect to the length of this paper and the point of discussion, the detailed analyses demonstrating the effect of the countermeasures for each case, which were the foundation for Table 2, will not be shown in this article.

Table 2. Pre-evaluation of conflict resolution for the implementation of sustainable urban design guidelines in Shanghai

Countermeasures	Guidelines	Response to the five conflict fields				
		1	2	3	4	5
Design principles	- Compact and intensive	√	√	√	√	-
	- Function mixed	√	√	√	√	√
	- Traffic harmony	√	√	√	√	√
	- Public and open space	√	√	√	√	√
	-Characteristics construction	-	√	√	√	√
	- Renewal focusing on the protection	-	√	√	√	√
	- Social justice	√	√	√	√	√
	- Social inclusion	√	√	√	√	√
Procedure structure	- Top-level design	√	√	√	√	√
	- Public participation	√	√	√	√	√
	- Monitoring and feedback mechanism	√	√	√	√	√
	- Adjustment mechanism	√	√	-	√	√
	- Determine transitional zone - Technology Innovation	√	√	√	√	√
	- Specialized bodies of coordination and management	√	√	√	√	√
	- Open and diversified operation system	√	√	√	√	√
Policies and regulations	- Intensity standards of resource utilization	√	√	√	√	√
	- Ensure of public space resources	√	√	√	√	-
	- Limit of the negative impact of the new buildings	√	√	√	√	√
	- Open of the city	√	√	√	√	√
	- Risk management	√	√	√	√	√
	- Affordable housing	√	√	-	√	√
	- The continuation of the local landscape and lifestyle	-	√	-	√	√
	- Floating population living guarantee	√	√	√	√	√
Action mechanisms	- Three synergistic force	√	√	√	√	√
	- Multi-governance	√	√	-	√	√
	- Concept guiding	√	√	√	√	√
	- Technology links	√	√	√	√	√
	- The degree of integration and homogeneity	√	√	√	√	√
	- Institutional penetration	√	√	√	√	√
	- The cohesion of time and sequence	√	√	√	√	-
	- The role of urban designers	√	√	√	√	√

4.   CONCLUSION

It was the conflict problems during the development and construction of urban space that prompted the original pattern of China to be an extensive, fragmented, and individual combative style, needing urgently to be replaced by a kind of pattern which is affordable and associated with local factors, concerning the social situations and the "here and now" problems. Taking this as a fundamental point, the paper focuses the strategy study on two complementary aspects of space construction and social action, and tries to present a method of conflict analysis involving the two aspects of the situation and the response of conflict, mainly based on the investigation of the five conflict fields and their 20 major conflict problems. Through them, the conflict types and characteristics can be summed up, and the strategy orientations and countermeasures of sustainable urban design are proposed briefly in this paper to be of some useful reference.

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