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The frieze for territorial futures: a sustainable prospective and participative design tool

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Abstract

City dwellers and public policies are today confronted with the global urbanization, the complexity of cities and the increased climate risks. Consequently, architects and urban planners constantly renew their practices and initiate collaborative approaches involving other stakeholders in the territory. They are invited to design new urban forms and urban production to best respond to these socio-urban issues and challenges. If the implementation of participatory approaches is emerging, prospective design and the participative design approach takes a strategic place. Above all, it is a question of thinking together about the scales of territorial change to respond at the social and urbanistic challenges of tomorrow, while taking into account the diversity of populations and cultures. From then on, critical and speculative design brings a unique reflective, innovative and experiential dimension to designing futures. Participative approach involves a dynamic of co-production between all the actors of the territory to create scenarios that stimulate the imagination and propose courses of action and engagement.

Based on a theoretical and operational analysis this contribution demonstrates how critical and speculative design takes part in a co-production process for territories and participates at the same times in the renewal methods of analysis and the production of the territory by architects and urban planners. Case studies using a methodological tool called 'frieze for territorial futures' illustrates this contribution.

How thinking futures for territory through a participative approach and speculative design ?

Social, urban and climatic challenges issues are now becoming a priority for cities. (risk management, considering the socio-environmental challenges). They mobilize synergy between municipalities, architects, urban planners, and city dwellers for use and design various participatory tools, or even to manipulate information for awareness-raising, prevention and anticipation purposes. Local actors mobilize the field of design, thus giving way to a co-production and prospective approach at the heart of urban public policies and actions.

The practice of prospective research and planning offers visions and frameworks to better define futures and projections. It can be a useful way to raise complex urban problems and systems (Amar, 2013).

The prospecting and projection of the territory, through design and its innovative tools, contribute to a productive perspective of urban planning and territorial studies, project and design, aimed at renewing the practices of urban planners and strengthening the role of design in a participatory involvement with all stakeholders in the territory. Having a vision with the knowledge of the actual, present and past conditions drives the making of prospective research in specific ways. Foresight alone it constitutes a singular project practice, aiming to

through co-design (co-design prospectif in french) argue for an articulation of three main and complementary elements to do so: design, participation and prospective (Abrassard, 2015). This given perspective of prospective research brings then both anticipatory methods and participatory actions to a desired co-production tool.
A last practical dimension lacking in this last proposal and adding productive and enriching perspectives to the given timeframe lie on the sustainable concepts and principles. Indeed, sustainability complements prospective research by engaging through its 'pillars' a constructive narrative and inquiry (balancing equitable, livable, liable) and by questioning the capacity of action for a better "habitability" of territories and the world.
Besides these three practical oriented dimensions our contribution seeks nevertheless a theoretical and post-modern approach to building futures by making reference to Critical and Speculative Design.

Theoretical framework of critical and speculative design

The perimeter of what is Critical and Speculative design (CSD) is large and integrating various types of practices of design (Mitrović, 2015). Ivica Mitrović places critical design between a Speculative Design approach and a traditional design scope. In this conceptual scheme the author proposes a synthesis of such practices by explaining a progressive move from Traditional to Speculative Design where Critical Design appears between a Discursive design and a Speculative one. It leads to less operational applications but more to a post-modern framework analysis for research and design in our proposal for co-designing futures.
Our interest in such theoretical framework from a Traditional to a CSD is illustrated and rely on Dunne & Raby's "cone of speculative design" (originally conceptualized by Stuart Candy) for an application to territorial contexts, urban or rural (Dunne, Raby, 2013, Candy, 2010). This conceptual diagram serves to classify the degrees of speculations, of feasibilities, and thus to think of the futures by establishing a more or less close distance with the reality of the society oscillating between times of alternative presents and speculative futures.
As analyzed and redrawn by Ivica Mitrović the time frames could be defined as follows. "Probable" is a traditional design space and constitutes what will happen. "Plausible" is an alternative future not far from today's conditions. "Possible" is a future includes possible scenarios based on scientific proof and knowledge (technical too). "Preferable" is speculative by essence and brings debates and discussion. And finally a "Wild card scenarios" provide "low-probability and high-impact-to think about and discuss a much wider set of possibilities".

Coproducing multiple social relations and participatory experiences

The integration of design practices such as urban design and social design into a perspective of prospective for territories and urban context implies obviously participatory dynamics. Nevertheless, this consideration of city dwellers within projects opens to an array of political actions, emotions and in a much larger spectrum of experiences.

The creation of a prospective tool seeks to create a public debate and discourse as a collective and social experience mobilizing actors of territory. The co-creation in small groups or in larger group conversations generate frictions and positions stimulate the searched participatory dimension. Either by engaging, provoking (Sanders, 2015) the co-production process creates various relations and behaviors between users. It can create frictions and productive disagreements among participants. The co-production tool is accompanied by a collaborative and playful experience while responding and providing relevant answers to socio-environmental issues in the area.
The frieze of future territories makes it possible to join all the actors of the territory around a common theme. From then on, it operates an inclusive and co-productive dimension with each participant, thus uniting everyone in the construction of their living space. The uniqueness of this co-design tool is based on the stimulation of a common imagination, which emerges from experience. The imagination feeds the creative processes, through images or intuitions that challenge us, seduce us and open us to the unknown.

Putting into action a critical tool for territorial prospective through co-production

The context of urban planning, urban design and urban studies is at the core of the creation of this critical tool for territorial prospective through

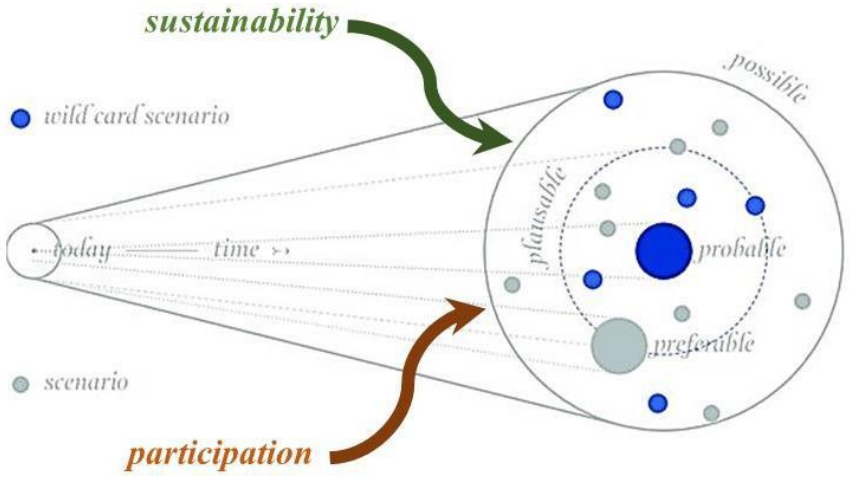


Figure 1. Diagram of the "cone of future speculatives" as proposed by Dunne and Raby, illustrated by Ivica Mitrovic and here modified by proposing two complementary dimensions: participation and sustainability.



Figure 2. POPSU Montpellier Métropole co-production workshop



Figure 3. Workshop for the Tulum master plan: organizing a frieze of futures.

co-design and taking into account sustainable principles. The interpretation and translation that we make of this model (the cone of speculation design) into a participative and prospective tool for urban planners, public policies and with the territory invites participants to co-decide together in order to constitute a triptych composed of three times with several specific thematic entries of the territorial context and read from left to right: 'probable feasible', 'plausible desirable' and 'speculative future' (Sanders, Jan Stappers, 2014, Manzini, 2015).

The participatory approach is based on the constitution of a heterogeneous group made up of local actors, experts and elected officials. A consultation is then initiated to build together the territory in its multiple temporalities and spaces. A socio-spatial narrative then engages in a collaborative and collegial dynamic. The territory becomes here a common narrative that all participants share in the room at the end of the session.

All in all, local actors are invited to think, say and see the city and territory of tomorrow. The construction of a new representativeness of the territory by the entry of the frieze of future metropolitan residents thus makes it possible to compare the points of view and singular views of each actor, operating a project oriented dimension of the territory. Similarly, it encourages the construction of a new lexical and imaginary field from which public actors can build to introduce a prospective dimension to the territory.

Prototyping a tool for action

Popsu research initiative: a starting point

Our first implementation and application of this tool for and with the territories was part of the metropolitan context of Montpellier (France). This "frieze of metropolitan futures" has benefited from a large-scale experimental framework within the Observation Platform for Urban Projects and Strategies POPSU Metropolitan collaborative research program. This research project aims to join metropolitan administration and researchers (architects, urban planners, sociologist…) to collaborate on urban studies in their respective cities. The national program of POPSU covers a total of fourteen metropolitan areas in France, like the one of Montpellier. In this context our role as researchers in design was to build progressively a design oriented approach to a more classical research and urban study. To do so, we designed for a workshop the frieze as a tool for collective communication between actors and visualizations and discursive futures of the metropolis. During the co-production workshop of the local platform POPSU Montpellier Métropole, the partners and actors of the program (researchers, elected representatives, citizens) were invited to think about the metropolis of tomorrow, through the use of this prospective tool. In this case, it was a question of stimulating a collaborative dynamic, but also of building together a common vision around the specific issues and themes of the Montpellier region while considering the plurality of futures and their meanings. The “frieze of the metropolitan futures” participates in the opening of debates and solicits the imagination of the local actors, making it possible to reinforce both the co-production approach and to stimulate new socio-urban issues with an aim of innovation. (Gagnon, Watkin, 2017, Scherer, 2015).

Tulum Master Planning (Mexico)

The second experimentation of designing prospective futures with the Frieze was realized in México on the seashore of Yucatan, in the city of Tulum. The touristic attraction of natural landscapes (beaches, cenotes and flora) made Tulum a busy place in less than three decades

without much planning and design orientations. Most of the hotels located by the shore are located along a unique road crossing a heavy jungle which lead to various problems and conflicts for tourists, local workers and common users. The co-design tool of the Frieze was implemented within a set of two workshops. The first one was realized in order to socialize a diversity of participants (public administration, hotels and few workers) on an ideation phase to rethink the street along the shore facing major conflicts of uses and environmental resources. The Frieze was presented for a second workshop by integrating other actors from the civil society. In it a two steps process was chosen by having a first moment for socialization and choices of materials for its composition and opening up during a second workshop the experience into a public debate and vote which enlarged the scope of the coproduction process (figure 4). The use of images and words by participants boosted discussions among them for their choice and provoked a common ground for questioning what could be Tulum and how to define its future. And fostered engagement by stimulating leadership. This activity and development of the



Figure 4. Workshop for the Tulum master plan: complete frieze with three futures.



Figure 5. the workshop for the Tulum master plan: vote and discussion

Frieze was realized as an empirical research in collaboration with a Mexican architectural and design firm based in Guadalajara..

Projecting OPDE (Clermont-Ferrand)

Our third and last experience of the Frieze is a contribution to local actors of the territory of Greater Clermont (Parc Naturel Régional Livradois-Forez) to propose a project oriented approach to a specific territorial administration and planning, a regional natural park. This experience (in October 2019) was presented at the scientific conference organized by a community interested and specialized in food, agricultural land management and planning (rural and urban areas). Thus, this context considers both natural and urban land, managerial aspects but also physical, socio-political and economical parameters and conditions. Here this scientific community seeks tools of territorial management through co-creation and co-design. We therefore found an opportunity to present our work in progress of the Frieze and apply it, as proposed by the organizers of the conference, to the territory of a regional natural park (Parc Naturel Régional Livradois-Forez). Here we wanted to widen the spectrum of possibilities in participative approaches and representation of Clermont's territory in a double helix innovation mode by confronting public agents with scientists.

Conclusion

Our contribution has tried to demonstrate how speculative and critical design can be fully integrated by local actors and public policies in the co-production dynamics of territories. In fact, the appropriation of multiple futures by public policies contributes, through the realization of the frieze, to the opening of debates that strengthen the co-production process and the emergence of new socio-urban issues. Via the co-production tool presented in our contribution, we were able to highlight that this frieze not only generate a productive confrontation of viewpoints from local actors, but it also helps to renew the initial definition of so-called Classic foresight (fig. 5). While prospective co-design is part of a collaborative and essentially operational dynamic, critical and speculative design incorporates an experiential dimension to foresight. This contribution aggregates this operational and planning view and objective of classical foresight by adding a more post-modern and discursive approach useful to make utopias and dystopias of futures of territories the common ground of debates based paradoxically based on a practical understanding and pragmatic comprehension of situations at multiple scale.

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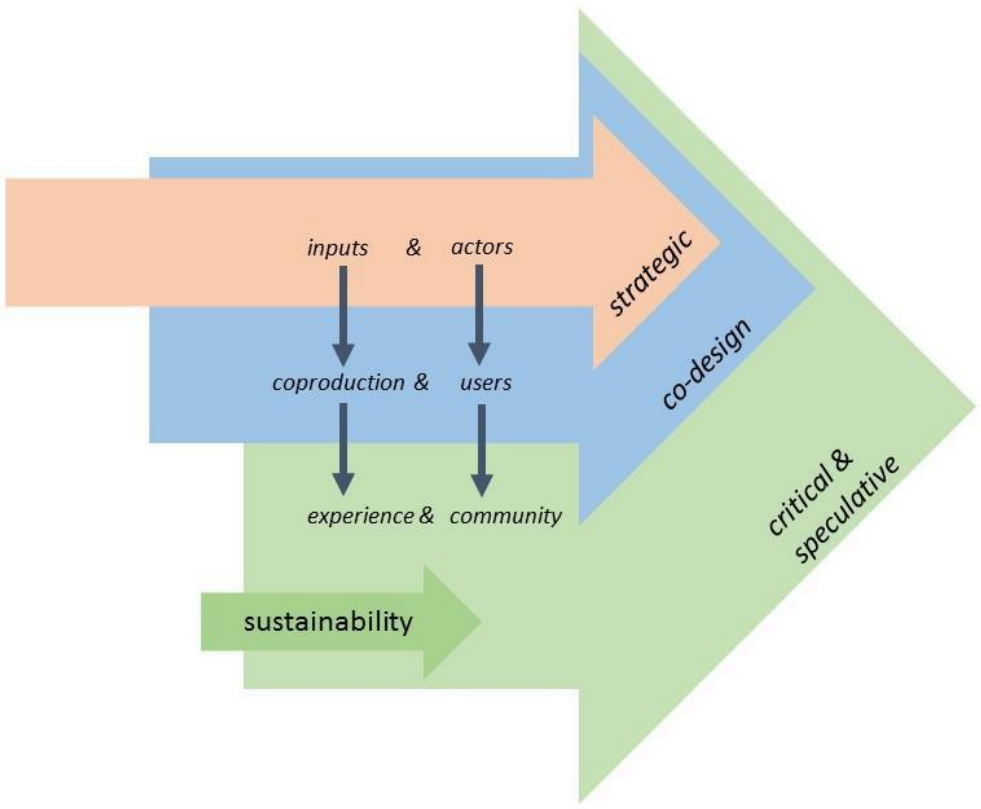


Figure 6 : Conceptual and schematic diagram of a prospective aggregative approach: of strategy, participation in speculation.