DIVERSITY AS A UNIQUE CONSTELLATION OF SUPER-IMPOSING NETWORK LOGICS.

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Abstract

In the context of the European city, the regeneration of former industrial sites is a unique opportunity to actively steer urban development. These plots of land gain strategic importance in actively triggering development on the city scale. Ideally, these interventions radiate beyond the individual site and contribute to the strengthening of the location as a whole. International competition between locations is rising and prosperous development a precondition for wealth and wellbeing. This approach to the regeneration of inner city plots makes high demands on all those involved. Our framework suggests a stronger focus of the conceptualization and analysis of idiosyncratic resources, to enable innovative approaches in planning. On the one hand, we are discussing spatially restrained urban plots, which have the capacity and need to be reset. On the other hand, each plot is a knot in the web of relations on a multiplicity of scales. The material city is nested into a set of interrelated scale levels – the plot, the quarter, the city, the region, potentially even the polycentric megacity region. The immaterial relations however span a multicity of scale levels. The challenge is to combine these two perspectives for their mutual benefit. The underlying processes are constitutive to urban space diversity, as urban form shapes urban life and vice versa.

Keywords: *Urban development, relational planning, European city, resource-based development.*

INTRODUCTION

The urban space is the result of multiple processes of generation, formation, emergence, development and implementation – to different degrees conspicuous, conscious and specific, overlapping and sequential in time. It is the temporary product of a multitude of exchange relations – material and immaterial – giving a provisional ordering to urban life through their underlying network logic (Latour et al, 1998). The urban form as the material sediment and urban life as the immaterial field of activity are equally important components to urban space. Moreover, the underlying processes are constitutive to Urban Space Diversity, as urban form shapes urban life and vice versa. In an economic system, where knowledge is the key resource, space becomes the principal mode of social ordering and control (Harvey, 1989; Soja, 1989). Architectural and urban design research in this context focuses on the production of qualitatively different spatial conditions based on local interactions between relevant networks. The immanent field of relations between nodes of a network manifests difference and is constituted via other nodes of the network, delineating urban space. The resultant configurations are regarded as loosely bounded aggregates characterized by porosity and local interconnectivity conducive to human activity.

Urban development in this context becomes the art of mediating this interplay and providing the flexibility for adaptation in ever changing configurations (Eisinger, 2010). The urban space, rather than being an object in itself, is constituted by its relations between physical substance and non-physical flows as well as its position and meaning in the global network of interrelations (Lefebvre, 1991). Urban space, the product, created and constantly recreated by processes of production and consumption that imprint on the physical and non-physical environment of the city (Löw, 2001).

EUROPEAN URBAN DEVELOPMENT

In the last decade, we have seen numerous European cities trying to re-invent themselves as post-industrial hubs of the network society (Castells,

2000). Their rational is driven by the ongoing structural change in the economy, which leads to the relocation of material-intensive activities into other areas of the world and the rising demand of non-European markets, leading to a complex web of material and immaterial flows, coordinated by means of modern communication technology and based on knowledge as a key resource. The circumstances in which cities compete make it necessary to adapt the qualities of the urban accordingly and vice versa. The context of the European City, where space for development is scarce, poses particular challenges to the renewal and addition of 'urban space'. These cities are built with a history of development, which can hinder adaptation to changing demands locally and globally. The physical restraints of the existing and the non-physical conditions of control, influence and objective make interventions of larger scale increasingly complex endeavors from a public perspective. In parallel, to the overarching demands upon European cities in regard to the fulfilment of equal living conditions (German Basic Law GG Art. 72 Abs. 2. German Planning Law ROG § 1. ESDP 1999) and global competition (Sassen, 1991) there is an intrinsic logic (Berking et al, 2008) of the individual city. Based on its past trajectory, which is critical to the successful implementation of urban development strategies by means of built form. The broad similarities of emergent schemes, however, are missing local specificity in both directions of the argument.

The globalization of production and consumption has changed the field conditions for cities. Formerly, prosperous cities have declined and other places (mostly outside Europe) have gained strategic importance. The functional specialization of places became more pronounced. The global exchange of knowledge and goods has increased and made talent and capital sought after resources to secure prosperity. Cities have gained in importance as sophisticated market places for services and goods locally as well as globally. The traditional urban environment catalyzes knowledge transfer through density, richness and diversity. Knowledge with its various forms and focuses has become a more distinct feature of value creation. The supply of complementary and competing knowledge via firms and employees is a key factor for agglomeration effects to evolve. The risk of specialization and the division of labour is offset by a certain critical mass and a multitude of networking opportunities. In that sense, the urban reduces the transaction costs of knowledge at the benefit of the individual and the private firm (Thompson, 2007). On this background, many European cities have an opportunity to re-invent themselves as platforms in the globalized economy, based on a critical assessment of their knowledge base.

The regeneration of former industrial sites fallen into disuse within the existing core cities is a unique opportunity to actively steer urban development towards sustainable economic and ecological targets. These plots of land, a residue of the logic of the industrial city, gain strategic importance in triggering development on the city scale. Ideally, these interventions radiate beyond the individual site and contribute to the strengthening of the urban agglomeration as a whole. International competition between locations is rising and prosperous development a precondition for wealth and wellbeing. This approach to the regeneration of inner city plots however makes high demands on all those involved.

THE INDIVIDUAL CITY - A UNIQUE PLACE IN A RELATIONAL WORLD.

Wirth's definition of a city as "a relatively large, dense and permanent settlement of socially heterogeneous individuals," (Wirth, 1938) can only serve as minimal concept on the most general level. The qualities of the individual city need to be decoded from its co-existing and penetrating relational logics, which are exerting a strong impact on past, current and future development. Relational logics based on the physical flow of people and goods, as well as the non-physical flows of finance and control, resulting in fields of interaction. The spatial extent of these fields and its specific logic cannot be delineated a priori but has to be revealed empirically as part of the conception of the city (Boudon, 1999). Only thereafter it can be stated which forces are exerting an influence on the local and instruct the strategy of reset, including which actors are to be involved in such a project (Bourdieu et al, 1996; Berking et al, 2008). The interrelatedness of different field logics in the formation of the urban means

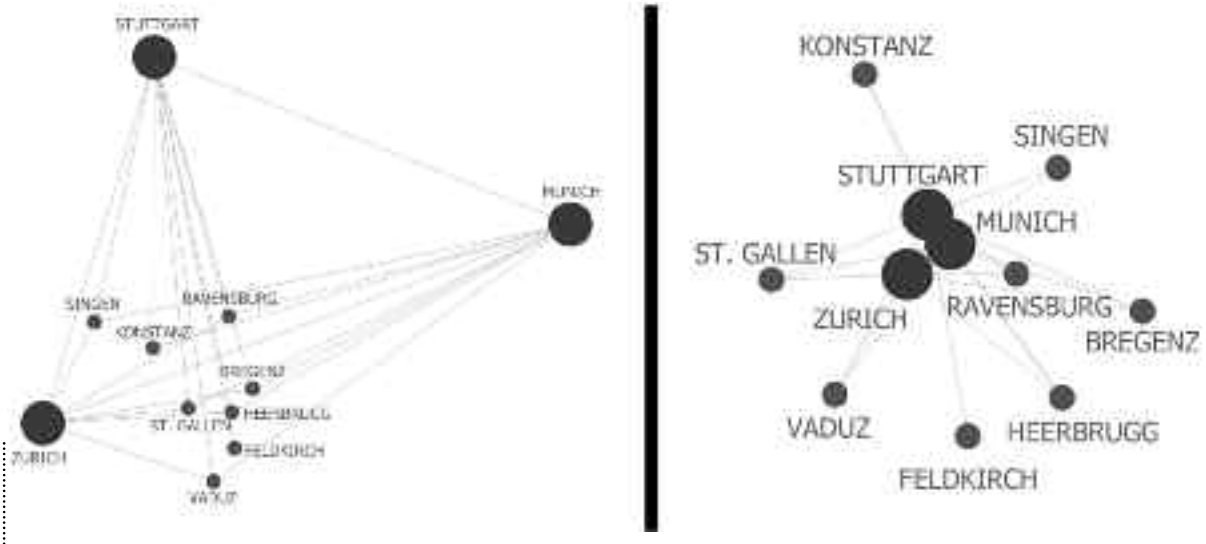

Figure 1. Geographical (left) versus Relational Proximity (right) of Advanced Producer Services Firms in the Lake Constance Region based on the intensity of network connectivity.

- to the local scale of intervention -, which it does not coincide with the network extent that imprints its logic locally. The flow of knowledge, goods and people is intrinsically linked to the historic, present and future form of the individual city (Graham et al, 2001). The question of scale becomes paramount.

The logic and scale of different networks penetrate the local situation. Not only the delineation of the task in question but also the possibility of one scale dominating the other or functioning as the principal or structuring scale rests upon the decoding (Boudon, 1992). Urban planning needs to grasp these 'multifocal, multi-perspective and hierarchical' qualities and acknowledge them as central to the concept of urban diversity. Although, at first sight the local is part of a set of nested scale levels, the more appropriate imagery is foam of co-isolated islands that are associated to other islands in a multiplicity of ways binding them momentarily or chronically to a multiplicity of larger structures (Sloterdijk, 2004).

BETWEEN SPACE OF FLOWS AND GENIUS LOCI

What are the implications of such a framework for urban design? Urban diversity should be explicitly set as the start and end-point of idiosyncratic development. It is however, neither a blueprint nor a panacea for the European cities, whose diverse existing urban landscapes are sediments of flows embracing different spatial scale levels delineated by qualities of exchange in combination with their specific site conditions. The relevant level for intervention is therefore not a pre-given but produced and changed by the place specific relational forces at work. An example of the divergence between spatial and relational configuration is revealed in an empirical study on the inter-linking firm networks of the Southwestern region of Germany. At first sight, the Lake Constance could be considered the linking element; however, the functional dependencies reveal an entirely different image.(Figure 1)

A city is a relational product that is at once a hub and a transformer - a space of flows - of streams of people, ideas, goods, and services. Accessibility is critical in the physical as well as the non-physical sense of it. "There exists no place that can be said to be delocalized, everything is sent from one place to some other place, not from one place to no place" (Latour, 2005). Hence, connectivity within a network that gives a city access to resources for future sustainable development. For Urban design to fulfil this task it needs to be rooted in the existing and pointed towards the future, it needs to respond to global challenges and draw on global resources as well local needs and conditions. The current paradigms for development should be reframed with the above in mind to operate them in the effort to re-development:

Creativity: the global trend of the knowledge economy propels the creation of a worldwide, increas-

ingly steeper hierarchy of cities; the capacity to innovate and create has become the competitive advantage of organizations competing for market leadership. Cities have been awarded a major role in this quest (Florida, 2002). Their diversity is seen to stimulate the exchange and diffusion of ideas. The unique combination of relational and spatial proximity stimulates the exchange of knowledge (Boschma, 2005). A quality urban environment can serve as a catalyst by providing spaces of encounter and amenities. In their attempts to improve the rank of their own city in this competition, politicians and administrators are easily lured into this catchy solution. After countless cluster projects and cluster strategies, the new, hopeful slogan is "Be creative!" In the competition for the most qualified and innovative labour force, the urban milieu is become the centre of interest (Florida, 2002).

Attractiveness: Cities worldwide are increasingly competing for companies, qualified workers, capital, and attention—that is to say, for mobile factors attractive to businesses that are therefore free to seek their anchoring points in a globalized world. Ranking lists show the most successful, most attractive, or most easily accessible locations (Frey, 2009). Through this competition, minimum requirements for a successful location are established. Waterfront developments are the most prominent example. In the attempt to compete with other locations for firms, talent and attention urban development programs on the waterfront are strikingly similar: a mix of private and corporate uses with offices and shops, water related recreational uses, touristic, cultural and gastronomic offerings and a certain amount of entertainment and event (Price Waterhouse Coopers, 2010). Although, raising the attractiveness of a destination, the effect is inter-changeability between local environments as capsules of a standardized life that can be plugged into an existing network of services and transportation (Cresswell, 2011).

Competitiveness: Knowledge-intense processes and services have become the central factor in competing for companies and economic regions. Urban and economic development therefore focuses its efforts on providing pre-conditions for firms to settle. Amenities and Talent are seen to attract capital, which in turn makes the urban environment prosper. Despite taking a relational perspective, this approach undervalues the *city* in its diversity of functions. *City* is a heterogeneous structure - an amalgam whose individual components are in demand as a "bundle" (Frey, 2009). Various economic branches and user groups are interwoven with one another through the supply and demand of functional and morphological qualities of space (Lüthi et al, 2009).

Despite limited financial means and opportunities, European cities formulate high expectations. Equal living conditions throughout Europe are still the dominating mantra. In the form of strategic urban development proposals, they attempt to integrate across disciplinary arenas and levels of scale. The difficulty in implementing such goals is bundling spatially limited measures in such a way that significant effects are achieved in the city.

On the one hand, we are discussing spatially restrained urban plots, which bear a capacity and need reset. Their existence is the physical result of a specific economic, social and structural trajectory in the past. On the other hand, each plot is a knot in the web of relations on a multicity of scales. The material city is nested in a set of interrelated scale levels – the plot, the quarter, the city, the region, potentially even the polycentric megacity region. The immaterial relations however span a multicity of scale levels. The challenge is to combine these two perspectives for their mutual benefit.

This understanding of space integrates the built environment intervention with the use value of the city. It conceptualizes the physical and non-physical components of the setting as resources for an active resetting of the urban code of places. The systemic view taken enables urban development to be based on the existing qualities, capabilities, instruments and facilities in order to respond to implicit and explicit challenges in product and process. This conceptual approach to redevelopment aims to avoid standardization and uniformity of locations and cities as a response to international competition and fosters a development strategy based on the idiosyncratic and relational capabilities of the place.

VISUALIZING INTERDEPENDENCIES

Architectural research has always sought to visualize the contemporary city as part of the process of reflection. The invisible forces and blurring boundaries, which are crucial to conceptualizing contemporary urban space, pose a particular challenge in this respect. However, within the architectural tradition the iterative conceptualization, visual representation and creation of models and images are an integral part of the problem solving process. Specifically the interlinking of Analysis, Visualization and Communication (Förster, forthcoming; Förster et al, 2009) is constructive to the evolution of a development process, based on the current European paradigm of inclusive, democratic and flexible planning (Healey, 2007). The integration of all actors involved, notably planners, investors and stakeholders, their motivation and means of delivery are equally important for the fulfilment of targets as the existing built structure.

The conceptual diagram (Figure 1) illustrates the different anticipated levels and fields of action, which span across functional logics stemming from an economic, transportation or social perspective based on a project for the City of Nurnberg. The fields of activity arise through a process of calibration between potentialities and resources by a trans-disciplinary contextual logic.

In the competition with other locations, the goal is to develop unique selling propositions based on local resources that are strategically valuable, singular, and difficult to substitute for or imitate. Under resources, we understand every kind of raw material that can open up potential within the context of urban development (Penrose, 1959). Resources represent the *internal factors* of the action model of urban areas that needs to be developed. The immanent potential of the local and specific can be developed only when supply and demand do in fact come together successfully in the city, in the location. For that to happen, *internal factors* have to work together with *external factors*. Figure 2 sketches the interplay of essential internal and external factors, which are explained below.

First, there are the spatial, physical features that cannot be transferred:

(1) the location of a city, whether relatively (in the heart of Europe) or absolutely (in the sunny south), can be a comparative advantage. Within the city, (2) the physical substance on various levels of scale - urban plan, neighbourhood, building - is the point of departure for future development possibilities. The provision of infrastructure, and especially (3)

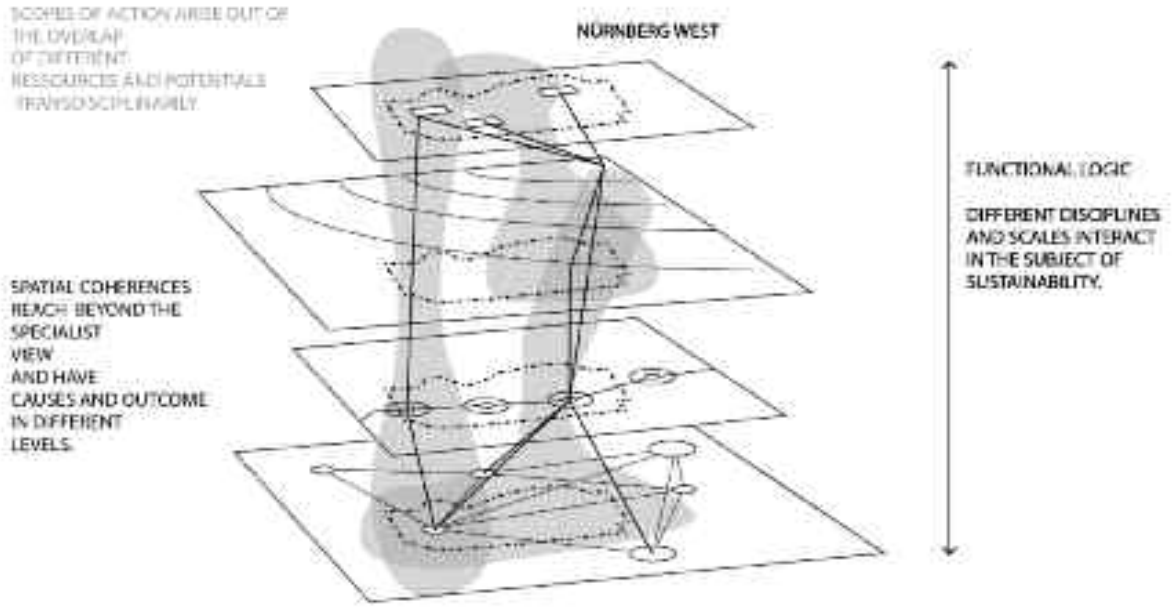

Figure 2. The integration of hardware, software and orgware to spheres of activity.

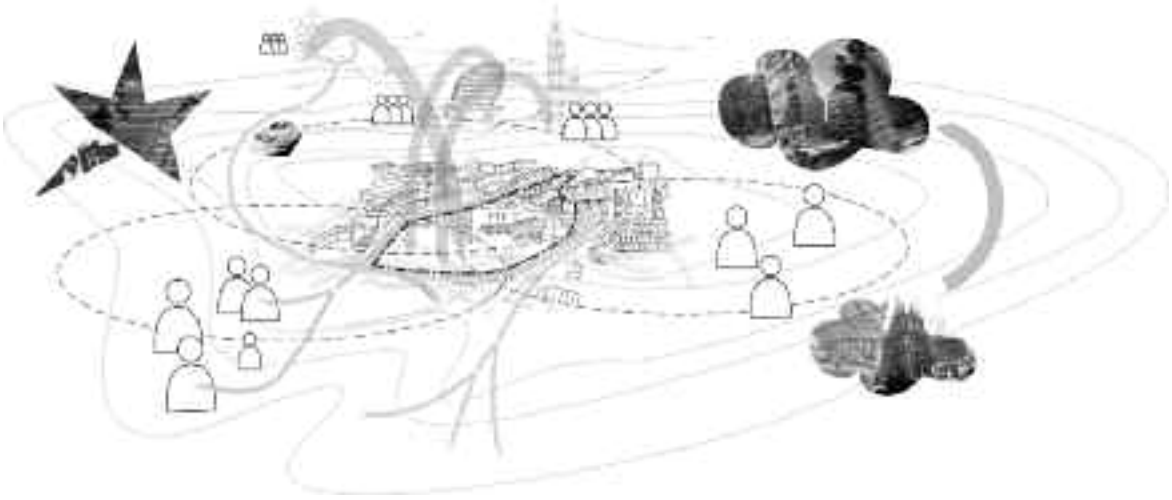

Figure 3. The local super-positioning of network logics

transportation infrastructure, is also highly important. That includes both accessibility within the city and within the region by means of a public transportation system and integration into the national and international networks of transportation. These features can be activated in the classic sense as catalysts for proposals to develop a location.

(4) The people living and working in a city are another central resource for urban development. The population's size, profile of abilities, and age distribution can lead to new potential because of the quantity and quality of demand. Moreover, the personnel makeup of (5) decision-making organizations plays an important role. These people in the city are, from the perspective of demand, a collective target audience of urban development and, from the perspective of supply, open up possibilities thanks to their uniqueness as a group.

(6) General financial conditions achieve the status of a resource in several respects: in the form of the budget of the city or state. In question, the form of the availability of outside capital and the conditions associated with that, and in the form of other possibilities of financing such as public-private partnerships and public funding programs (Hall et al, 2001). The opportunities when selecting financing for public and private projects are also determined by the organization of the state and the legal grounds. Decision-making processes are anchored in (7) a certain administrative structure with corresponding administrative actions; together with (8) structures for controlling the parties involved in the project, they can powerfully influence the result.

In Europe, the opportunities for architectural interventions in a city are crucially affected by (9) ownership structures. In Western countries, the legal security of property is firmly established in constitutional law and has considerable influence on what can be achieved in the public interest. Ownership structures determine both the distribution of power and the deployment of materials. Land and buildings that are the public property can be developed in ways that benefit the city in more direct and targeted ways than private property can, as the development of the later can only be controlled indirectly by means of laws and regulations. In combination with direct and indirect control mechanisms, (10) the state's latitude for action emerges, something we also understand as a nonphysical resource for urban development. Another factor is structures that influence the perception and interpretation of the physical and nonphysical resources described in the preceding sections. (11) Culture, tradition, experience, and reputation are thus potentially either catalysts for or obstacles to urban development.

This list of resources potentially relevant to development makes no claim to be complete. However, it does, show how urban development is conditioned by mutually linked factors on different levels of scale. The goal is to couple them and actualize their value for the specific task in a strategy for space.

RESILIENCE AND FLEXIBLE SELF-ORGANIZATION

The framework we have outlined here makes it clear that the immanent potential of urban areas extends far beyond its boundaries. These "dormant opportunities" represent an opportunity for the state to be proactive despite limited finances. On the basis of a strategy, different players - including private investors - can adopt active roles in the development process.

A systemic perspective permits urban development based on the supply of existing locally specific qualities, features, and instruments in order to find solutions to the tasks with which the city is confronted from inside and from outside. The proposal presented here for how to approach the restructuring of urban areas aims to counteract the standardization and uniformity of locations and cities within the international competition.

The framework makes it possible to initiate a process, which allows for flexibility and resilience, and thus considerably reducing the risk of failure. The complexity of urban development projects and especially the time spans associated with them demand a system that is in a position to react to changes in internal and external circumstances and to (re)organize itself. It is necessary to distinguish vigilantly between coincidences and patterns when new structures emerge so that the correctness of basic assumptions can be continually tested (Taylor, 2001). Because there are constant changes both inside and outside the system, it is particularly important to consider changing circumstances of supply and demand (Dangschat et al, 2008). Ultimately, people whose knowledge and competencies continually evolve influence structures and functions. By eliminating the separation between the controlling subject and the controlling object in planning practice, the constant integration of insights from planning authorities and those with interests in and affected by planning has become a best practice (Offe, 2003).

Existing imageries of urban space such as the 'archipelago city' and 'collage city' do not grasp this complexity, nor do they capture the highly idiosyncratic local conditions as a key resource. In that context, the metropolitan delta might be the more appropriate albeit still underdeveloped image. A landscape determined by flows, local sediments and interrelated spheres of influence and metabolism. Highly sensitive to changes of flow in the river, tides of the sea and climate, constantly in flux.

CONCLUSION

The urban space has changed into a complex field of interrelated activities through changed boundary conditions and additional factors of influence. Urban space diversity is the product of local and global factors, relational and positional qualities and material and immaterial components, which manifest themselves in a unique local configuration. For urban development, the local resources need to be matched with the demand of potentially conflicting interrelated scale levels. As a result, an increased amount of trans-disciplinary and anticipating work in research is needed, to reveal the underlying logics. In the light of scarce financial resources and existing urban systems in Europe the possibilities for a sustainable and future-proof redesign are limited. Urban space diversity is starting and end-point of our model of development. As vehicle of change, we suggest a spatial strategy iteratively linking conceptualization and projection, rooted in a critical assessment of resources.

The dealing with these limited opportunities requires an adaptation of current methods of planning, responding to the multi-layered challenges of a relational concept of place. The mutual understanding and inter-linking of the information flow between practice and theory as well as between the private and public side is necessary to mitigate conflict. The result thereof needs to be multidimensional discourse aiming at the optimization of the system as a whole, which spans disciplinary boundaries in order to identify key interfaces thematically. Our framework suggests a stronger focus on the conceptualization and analysis of idiosyncratic resources. The conception of the status-quo needs to precede the projection into a future trajectory. The aim is to strengthen the innovative capacity of the future project and promote the negotiation of unique solutions in this field of differing scale and activity levels adding to urban space diversity.

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