



Figure 1. Yves LYON - Jérôme LAMARD, Le Triangle Vert, Essai de planification de France, 2009.

CFC–MULTISCALAR CHALLENGES : LAND-LINKS: MULTI-CITIES, AGRO LANDSCAPES, HYPER-FOODS, INNO-FIELDS. 5 FACTORS FOR A BALANCED GEO-URBANITY

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The new contemporary multi-city, the fractal, irregular and networked poly-polis (Gausa 2018), needs the landscape, as a eco-systemic and proactive infrastructure, conceived not only as a network of 'green open spaces'. The in-between transversal landscape of the new city needs agriculture to ensure its positive and relational conservation. Agriculture, especially if developed in low or medium intensity contexts, requires programmatic innovative mixture and diversity—associated with its uses and crops, but also with an agro-tourism based on zero kilometre hospitality, gastronomy, energy production, digital manufacturing, technical research—to ensure its own resilient livelihood capacity. Creative Food Cycles (CFC) covers all these scales and levels of action—with a socio-cultural activism approach—promoting a strategic and innovative integration, from the territorial and urban perspective to the creative-social dimension and to the scale of product design. The food factor, from a mere productive indicator, becomes an agent inducing new sustainable and innovative processes.

geo-urbanity / multi-Cities / landscape links / new agriculture / innovation / proactive sustainability

LAND-LINKS:

FRACTAL MULTI-CITY, MESHED TERRITORIES, AND OPERATIONAL LANDSCAPES

The last decades experimented the emergence of a double territorial equation. On the one hand, the increasing anthropisation and the competitive positioning of cities in a global economic framework, associated with the growing increase in mobility and internationalisation of the housing market (Muñoz 2008). On the other hand, the appearance of a new cultural and environmental sensitivity, responding to the need of reflecting on the current urban reformulation processes, fostered by 'significant', innovative and qualitative interventions in open space design, more interconnected on a social scale, and more democratic in their accessibilities and uses.

The definition of possible *Multinter* strategies—*multi-levelled* and *inter-networked*—applied to *multi-urban* or *inter-territorial* scales (Gausa 2009) to tackle the great challenges that arose in the global scenario, obliges to contemplate cross-cutting topics associated with the so-called 're'-factors (re-naturalisation, re-environmentalisation, re-cycle, re-structuring, re-activation and re-information) which today tend to mark the new urban-territorial agendas in the beginning of this century (Ricci 2012, Carta et al. 2017, Schröder et al. 2018). The debate on urban and territorial challenges, in other terms, appeals today to a new mutable evolution of the system theory approach. The *systematiCity* embodies relational (transversal), intelligent (holistic), and imaginative (creative) needs to be implemented into a new conceptual logic, more strategic and informational; a logic where the ancient 'urban-swing' or 'urban-needlework' would not be only based on the continuity of the building plot(s) but on the capacity of new integrating and interweaving network models (Gausa et al. 2003). These models are associated with the active importance—programmatically intense in the exchanges—of natural and semi-natural (agro-productive) landscapes capable of promoting different territorial land-uses, ecosystem services and interlaced development patterns of large meta-politan areas (Asher 1995) through urban reinforcements and interurban conjugations. This type of new multi-urban governance (Puig Ventosa 2011, Gausa 2011) obviously requires a qualitative (re)definition of its main territorial assets and policies towards the reuse and recycling of urban pre-existences by implementing strategies of spatial, programmatic, and social diversity. It requires a more effective relationship with the landscape: an in-between condition, giving new values and meanings to the natural-artificial dimensions.

We have used, in several occasions, the terms *Land-Links*, *Land-Grids*, or *ReCity-ing* (Gausa 2014) associated with these new dynamics. Terms that are predisposed

to defining possible strategies—integrated and interdependent, compared to local and global development trends, And able to create a dialogue among different scales of interventions. Developments, in which the new *multi-city* (Gausa 2019) would no longer interpret specific interventions on ‘building extension’ linked to a single mono-central, mono-referential, or pseudo-radial expansion programme, but as a possible multi-central (or polycentric) structure (Nel.lo 2011); strategically adjusted, properly recycled, sensibly reoriented, and intelligently re-informed. Three main strategic research lines in an agri-urban development debate can be identified as:

- Connecting the landscape(s) and consolidating the city(ies).
- Articulating and coordinating the different infrastructural (and programming) links.
- Meshing the various knitting and knotting ‘patch-matrices’ of our existing territories in new planning models of integrated, multi-dense kaleidoscopic mosaics (Llop 2008).

Today, the question of interpreting landscapes as infrastructures—or even infrastructures as landscapes—becomes crucial according to the level of the ecological performances produced in the territory: *eco-structures* of which we have to explore the infra-, intra-, info-, and trans-scalar operability. The territorial city can therefore be proposed as a ‘non-linear’ structure of places and in-between-spaces; a complex set of conditions, situations, solicitations, and information combined in *agenced* (*agencés*) spaces (Deleuze-Guattari 1980) related to effective inter- and eco-qualities.

We are talking about a combinatorial system built on territorial evidences, conflicts, risks, stresses, and threats, that is nevertheless capable of promoting new series of development scenarios and offering also possible multi-leveled strategic projects based on potentials, capacities, latencies, and operative strategies. It is no longer a matter of compact models, neither of ‘poly-diffuse’ models, but of possible ‘interlace’ systems, focused and articulated; intensive and extensive; capable of combining, within new territorial networks, density structures (urban centres, nodal fabrics), interweaving structures (connective links), and relationship structures (active landscapes) able to establish new urban-geographies or geo-urbanities (Gausa et al. 2003, Gausa 2009). They are discontinuous multi-networked structures, aimed at spatial, functional, and social mixtures (local and global), associated with a differential ways of organisation.

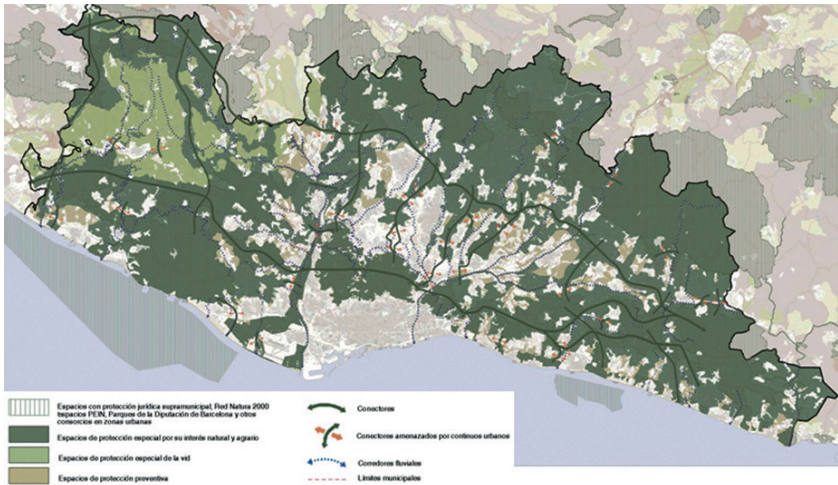


Figure 2. Barcelona, Strategic Director Plan, 2011. Green agro-corridors. Ajuntament de Barcelona (Barcelona City Council)

AC+. AGRO-CULTURES, AGRI-CITIES THE POTENTIAL FOR A NEW RURBAN PROACTIVE DEVELOPMENT

The evolution of the urban-territorial city together with the mutation of our natural environments due to climate change has produced, in Europe—and, in particular, in the Mediterranean areas—a complex set of questions and research interests going beyond the traditional relationships City/Landscape, Landscape/Nature and Nature/City. To the growth of the informal and informational city corresponded, paradoxically, the diffusion of urban sprawl, more or less tending towards a dense and intense but discontinuous fractal geometry.

Therefore, the necessary articulation, planning and design of resilient landscapes become crucial in the articulation of coastal areas, where agricultural and woodlands can be interpreted as a fundamental (and possibly founding) element of a new sustainable form of dis-dense (discontinuously dense) multi-city model (Gausa et al. 2003, Gausa 2009). Consistent parts of the reflection of urban disciplines and territorial sciences have been dedicated in these years to the reinterpretation of the role of open spaces (free spaces, semi-natural spaces, in-between spaces), closely related to agricultural production (active and/or in decline), and how they can become (re)generative elements for defining new paradigms in the construc-



Figure 3. Agricola Sud Milano, 47.000 ha, 61 comune, 2005.

tion of the new urban forms and formulations (Ricci 2012, Carta et al. 2017). Going beyond the traditional dichotomy of city and countryside towards an integrated and intertwined reading of peri- and para-urban territories it means to assume a wider interpretative logic of the n-productive functions associated to creative of complex added-values.

It is a new holistic approach to land-use governance in a geo-urban condition (Gausa et al. 2003, Gausa 2009); questions that arose together with new ways of planning and that recommend policies for inter-urban or rurban (Guallart 2014) realities; challenges that require the definition of new land-spaces necessarily designed to combine primary and tertiary activities; agricultural production and technological production; environmental sensitivity and tourist attraction; private spaces and public functions. The role of agriculture, in this interpretative framework, is hence fundamental, being one of the most decisive and transcendent uses of the soil—linked to the concept of 'landscape' transforming conservation and efficiency—in a multi-meshed integrated systematicity (Gausa et al. 2017). In most of the productive areas of the Mediterranean Latin Arch, agriculture generally represents an average of 35% to 65% of the available fertile lands, occupying only 1% to 5% of the working active population (Ministerio de Agricultura, Pesca y

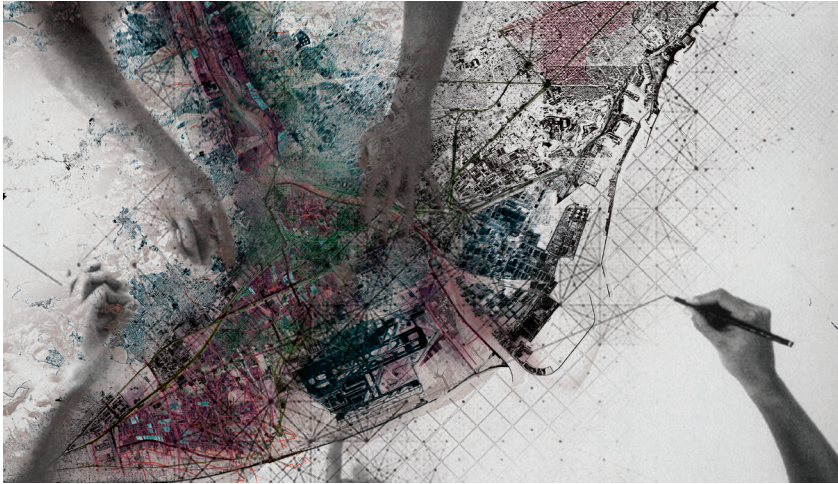


Figure 4. PABLL-BCN+, Agricultural Park of the Baix Llobregat, Barcelona: a park of park (Actar Arquitectura-Gic-Lab, 2014). Smart Agro-Parc. Network Activations and App Cycles.

Alimentación 2006).

The importance of understanding agricultural spaces as operational landscapes, not only as productive landscapes but as multi-productive landscapes, supposes a new urban-rural vision of the contemporary city-mosaic. The multifunctional and multi-programmatic condition of these agricultural spaces implies to no longer conceive them as 'primary' spaces but as 'complex spaces' (green infrastructures, ecological corridors, natural patterns, wellness environments, innovative productive programmes, agro-touristic attractors, etc.); spaces that are able to understand the landscape as a "system of eco-systems, in plural interaction" (Buonanno 2012). A condition linked to its basic agricultural-food component (Sommariva, 2015) but also connected to the social well-being, to the economic development, to the environmental and resilient urban quality, and to a (new) technological and operational dimension: the *smart-landscapes* (Carrabba et al, 2013) or *advanced landscapes paradigm* (Gausa 2012). The conveyance of the 'smart planning' concept alludes to a set of integrated systems and subsystems (safety, resilience, water, health, infrastructure, economy, environment, food, etc.) called to guide the sustainable growth of these new *multi-* and *inter-urban* scenarios (Ratti 2016).

In this 'smart' framework, urban and interurban agriculture can contribute to en-



Figure 5. Any figure of Albenga or MedNet Coast AgroCities with all Med cities

asuring not only healthier and more efficient nutrition processes—related with algorithmic data-optimization of environmental and economic parameters—but also linked and shared dynamics associated to the energy and waste cycles, water and material consumption, as well as with a better management of environmental resilience factors. In parallel, new playful-social interactions promote the consolidation of local identities, by integrating cross-cutting topics such as food safety, food security, and food creativity. These aspects are linked to the implementation of diversified and plural strategies, oriented towards the creation not only of productive spaces, but also of recreational, restorative, and agro-touristic developments based on pre-existing environmental and socio-cultural values (Gausa et al. 2016, Tucci 2016).

In this sense, several research questions can be formulated around this new perspective of smart agri-landscapes and their ability to adapt to the current transformation trends according to a glocal and rurban development model.

1. Which can be the roles (and new identities) of the large agricultural landscapes (and land-spaces) according to their different definitions, characteristics, and structures in these new meta-metropolitan contexts? How could they be better linked with the territorial natural assets and how could they be

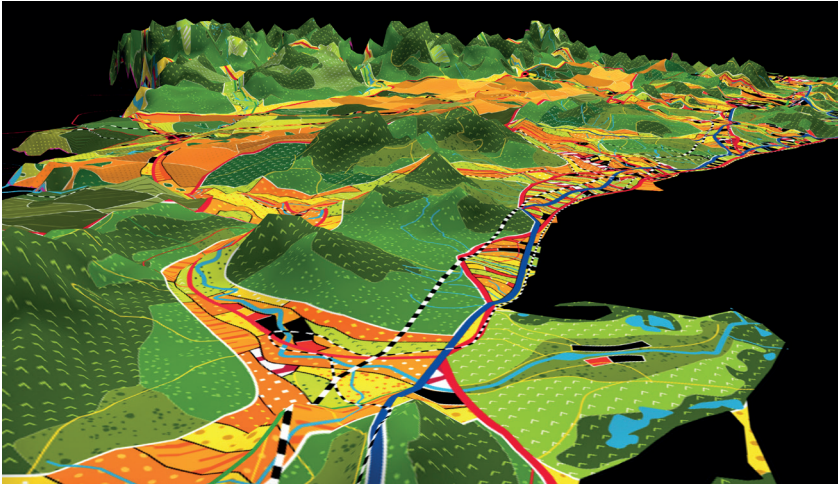


Figure 6. BCN.CAT, Catalunya Land Grid. Barcelona / Catalonia, an integrated model of urban and territorial development (Hicat-Actar Arquitectura, 2003). General view and detail of the big agricultural central plane.

designed according to their definition as key elements of intra-, eco-, info-, and trans-territorial articulations?

2. In which way can mono-functional specialised areas (logistic-industrial, residential, commercial, eco-recreational, and touristic) be rethought to encourage new positive interactions with productive landscapes, social recreation, leisure, and innovative mixed operations and users?

3. How can the different volumes of flows related to the large and middle-scale infrastructures—which delimit, cross, or surround these spaces—be exploited, by channelling and configuring slow mobility lines able to configure new strategic eco-circuits and qualitative interventions?

4. How can these areas, together with their heritage and values, be declined in the diverse equations among *interactive* scenarios (environmental, social, and cultural), *active* scenarios (economical, material, and industrial) and *attractive* scenarios (touristic, recreational, experiential)?

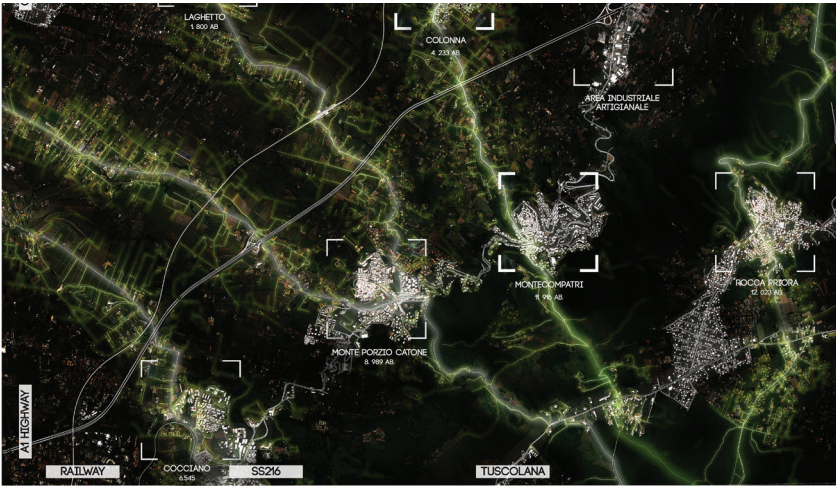


Figure 7. AGR0MA - ROMA 2025 (IAAC, 2016). Prospective diagrams of structuring sharing network strategies.

5. How can these territories maintain their agricultural vocation and, at the same time, reinforce their functionality toward a new, innovative, and operational condition: eco-industrial, eco-touristic and eco-resilient?

6. How can the old notion of 'food' be reformulated as a primary product, combining it with other secondary and even tertiary levels of definition, and how can it be related to the recycling of waste and discarded products? How can we reorient the research in pharmaceutical applications, cosmetics, chemistry, new bio-materials, to design new objects and materials with wasted food? How can we implement three-dimensional manufacturing and new technologies according to the eco-design paradigm for the food industry, able to implement new bio-temporary facilities?

7. What can be, in conclusion, the evolutionary horizon of these different in and in-between agri-cultural and agro-territorial (semi-natural and semi-artificial, fragmented or extensive, highly productive or socially oriented) dynamic fields? How can these practices be implemented in their different socio-cultural mixed contexts, by evaluating potentialities, capacities, and identities in the framework of the new *multi-city* and *geo-urban* dimension?



Figure 8. PABLL-BCN+, Agricultural Park of the Baix Llobregat, Barcelona: a park of parks (Actar Arquitectura-Gic-Lab, 2014). Territorial relations with the Big Natural Parks of the Pre-Coast.

**PERSPECTIVE AND INNOVATION:
CREATIVITY IN THE CENTRE OF (PRO)ACTIVE RESEARCH**

In the last years, many of these questions have guided research activities related to a strategic planning approach and social design laboratories at UNIGE-DAD, such as *AC +*, *Agri-culture*, *Agro-cities*, *BCN Llobregat multi- Agro Park*, *Albenga Glass City*, or *Med.Ned Agro.Coast.Cities* (Gausa et al. 2017; Canessa 2020; Tucci 2016; Tucci 2020), and recently the innovative actions linked to the *Creative Food Cycles* project (Creative Europe, 2018-20), framing a set of urban-to-product design educational activities based on the assumption of the relevance of food in the contemporary multi-city and its relationship to the new urban food equation. It is a search for factors which bring together cross-cutting topics such as food-art-design, but also food-landscapes-architecture and ecological resilience as framing condition of a new inter-city relationships.

It is the transition from a strictly taxonomic reading between city and countryside to a more integrated understanding of polycentric territorial development scenarios (multi-dense, or in-between fractal growth), questioning the traditional interpretation of 2D planning theory towards new participated 3D actions. These



Figure 9. Albacete, Spain. Patterns with agricultural

vibrancies are necessary to combine not only the socio-cultural background of the territory, but also the site-specific knowledge and maker communities, based on primary skills and activities. Agricultural production, eco-industrial production, and technological production still represent the crucial assets on which the quality of our living spaces and leisure interspaces can be formulated; dynamics of relationship and dynamics of growth: environmental sensitivities, and socio-cultural sensibilities, etc. A condition that is linked to the digital turn and the operational emerging ICT dimension able to reformulate traditional urban/agricultural spaces into new *Resili(g)ent-landscapes*, which are 'resilient' in their shapes and 'intelligent' in their performances (Gausa 2020) to face exponentially stressed land-use and increasing climatic threats.

The conveyance of the concepts 'Intelligent Cities', 'Resilient landscapes'm or 'Smart Contexts' is, hence, combined with the terms 'Trans-productive Lands' and/or 'Advanced Planning', alluding to the ability to make sets of integrated informational systems and subsystems interacting among them—in terms of security, safety, closed cycles of energy, water, material, waste management, health, infrastructures, economy, environment, food, etc.—called to guide the development and sustainable growth of these new multi- and inter-urban scenarios. The main

case studies presented in the *Creative Food Cycles* (CFC) project have shown new logics and interpretations for food topics, by exploring their inter-operability and the creative re-information of hyper-agricultural contexts as well as their spatial effects (urban, natural, cultural, economic, social) connected to our “living-working-resting...leisure and celebration” habitats.

These ‘in-between’ transversal landscapes need agriculture to ensure its positive and relational conservation. Agriculture requires programmatic diversity, associated with new uses, functions and programs, to ensure its own resilient livelihood capacity. This new intelligent resilience requires, above all, technological empowerment of social community to diversify production generated beyond pure food, ensuring a second or third level of definition, aiming at social inclusion. New socio-ecological systems need to be animated to implement holistic solutions to societal challenges that we are currently facing, putting food higher on urban, environmental, and public health agendas. In this regard, the transition towards a new democratic and circular economic model, empowered by new creative tools and research actions, represents the paradigm on which we re-imagine the future of our cities, from the design of our public spaces to the domestic spaces, for new needs and new opportunities.

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