Techno pastoral: Regenerative strategies of landscape urbanism in Italian Appennini "marginal" areas

Tecno pastoral: Estrategias regeneradoras del urbanismo paisajista en las áreas "marginales" de los Apeninos (Italia)

Antonia M. A. CHIESA ♠

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Introduction

The ongoing research, initiated in 2012 by the Misura&Scala Lab, Politecnico of Milan, investigates the undisclosed landscape of the Aemilian Apennine, along the valley engraved by the river Enza, within and around the municipalities of Palanzano and Monchio delle Corti. This paper proceeds from the theoretical framing and strategic design development of the research; it also represents the opportunity to reflect on the role of landscape in the contemporary debate on urban ideologies.

The allure of marginal lands

Diffusely considered as a background landscape as seen both from the flat land and from the sea, the Apennine represent a geographical backbone of the Peninsula, and an obstacle to a pervasive urban diffusion. Its flaky instable topography persistently changing since glacial orogeny, its high rainfall rate[1]

1 More than 1600 mm/year according to Emilia Romagna regional database

♠ Antonia M. A. Chiesa - DAStU, Politecnico di Milano
Via Bonardi, 3, 20133, Milano Italy. 0039223995527, antonia.chiesa@polimi.it

and inclination to fog formation picture a gloomy atmosphere further aggravated by unpleasant popular memories of brigandage, cruel intestine fights, poverty handed down in the last two centuries (De Marchi, 1980).

Figure 1: *Lorenzo Fratus (2013), territorial map based on castles' visual fields*

Yet ages ago, when here knights were trained to be sent as tribute the Pope, salt was carried across the mountains from the Tyrrhenian Sea to the cities in the flat land, sight-seeing towers and castles interpolated crossing routes, these lands knew a florid prosperity. A partly-domesticated nature, called saltus (Sereni, 1961), was both a threat and a resource; later on technological advancements increasingly transformed wilderness in a more controlled environment: first as hunting reservoirs, then, as agricultural domains. Highly manipulated, terraced, layered, fairly extensively planted, such semi-natural ecosystems developed throughout centuries as background for a sophisticated, place-based environmental knowledge fighting against flaking clay soil, constant erosion by water, harsh climate (De Marchi, *op. cit.*). Even chestnuts, firs and beeches, whose foliage chromatic tone varies with altitude, are the product of an extensive, selective forestry operation promoted in 20th century to contrast land erosion and provide population with comestible products. Through a series of semi-stable states the nature-culture ecological relation was severely compromised since the 80's by massive migrations towards the attractive cities in the flat land (De Marchi, *op. cit.*), which, as Parma, Reggio Emilia and Modena, were developing as huge urban systems with plenty of services and facilities. Since then the Aemilian Apennine suffered from marginalization, due to intrinsic inhospitable morphology, lack of transportation system and consequent increasing isolation (Sebastiani, 2009). Such condition of persistent abandonment is causing disrepair of built heritage, infrastructural decay, neglect of productive landscape, reduction in biodiversity and increase in the risk and scale of natural hazards as land sliding and flooding. The cultural and ecological value of such compromised territory needs to be reframed, reactivated and re-launched as irreplaceable resource to sustain urban resilience and feed a high-quality lifestyle.

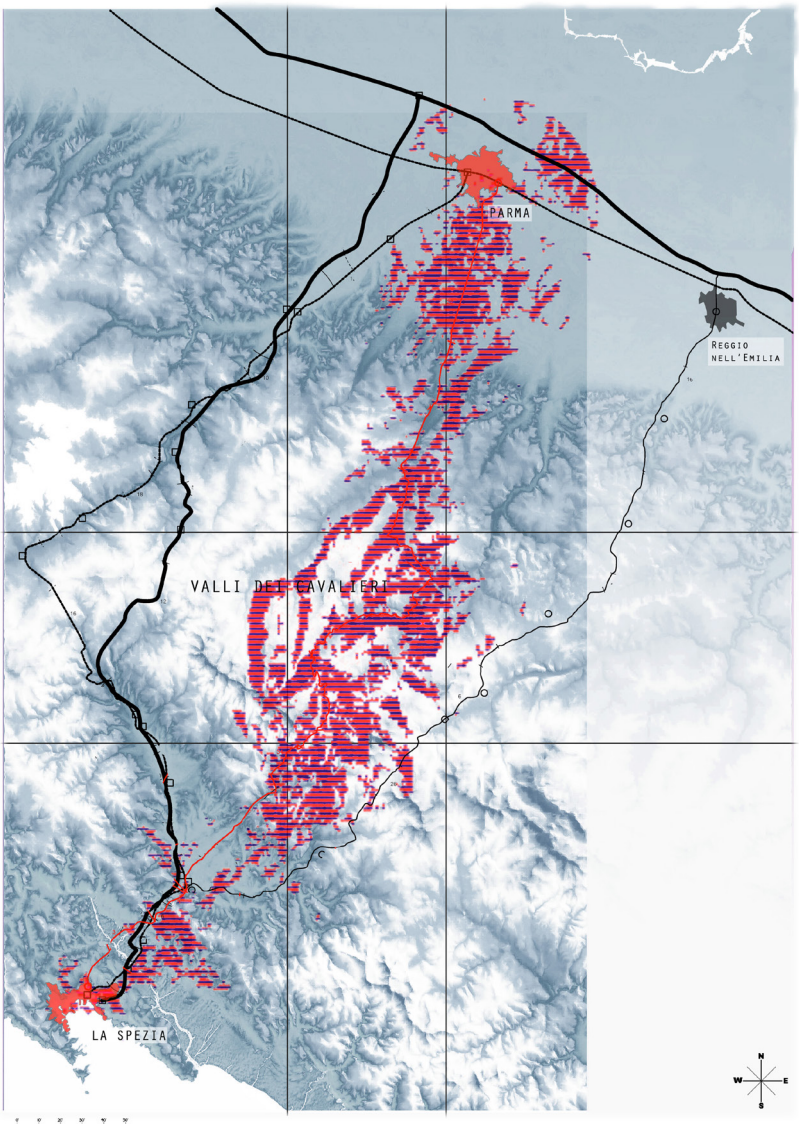

Figure 2: *Lorenzo Fratus (2013), territorial map based on visual permeability*

Insurgent critical ecologies

A pervasive green ideology, consecrated as the new religion, seems to reclaim our connection with a supposed primordial nature turning woods and forests, once set for scary tales, into friendly and romantic (Ausubel, 1996). Even discussions of urbanism are permeated by a resurgence of ecological ideas and ecological thinking (Reed; Lister, 2014). Reflecting on the origin of such greening trend and unpacking its complexity, Gandy (1992) highlights the moment when scientific researches widely demonstrated the negative impact on human health of air pollution and of the post-war agricultural contaminations of ecosystem food chains. Immediately ideological thorny issues were raised, as for the 'limits to growth' thesis presented by Club of Rome (1972) facing the incompatibility of urban and economical growth with earth's carrying capacity. Accused of swinging toward an anti-capitalist ideology, such position was partly overtaken by late 80s discussion focusing on the potential reduction of energetic exploitation due to fast technological progress (Ausubel, 1996), since the frontiers of sustainability are constantly shifting (Redclift, 1997: 203). A more flexible idea of sustainable development overtook that of growth, overcoming the idea of finite resources as geo-politically addressed. A long-lasting anti-urban conception despised cities' alienation to nature as opposed to rural superiority and dispraised industrial societies and the use of hard-technology as opposed to rural low-technology ones. Public debate further enriched in complexity by the advent of green consumerism in the 90s: merging low and high tech it represented an eco-alternative, and moved toward a diversification of positional, market-niche products. With reference to the post-fordist flexible accumulation of the economies of scope (Cooke, 1988), mass consumption shifts to individualized consumption, serving an elite segment of people who consciously prefer environmentally friendly products even if more expensive. An adaptable, sophisticated emancipatory version of environmentalism turns into a less emphatic yet enchanted, return to nature (Braun; Castree, 1998). Generated by a sense of alienation from the urban landscape and spurring a compensatory interest in local traditions, it uses technological progress against environmental degradation; the idea of the 'production of nature' originates a "saving nature" environmentalism, later called new pastoralism (Braun; Castree, *op.cit.*), replace the concept of "earth mother" with a more entrepreneurial approach to nature. Sympathizing with smart solutions and digital connectivity, it juxtaposes the technical and the pastoral in seek for an effective mode of environmental re-

generation (Hirsch, 2013.). Hints of such renovated relation to nature emerge indeed today as return to sustainable agriculture: experimental productive ventures increasingly populate Alps and Apennine where new mountaineers migrate (Dematteis, 2011) and contribute to the regeneration of local territory.

Environment-driven economies

Naturally prone to agricultural biodiversity and to small-size cultures, techno pastoral strategies in mountain marginal areas face though significant economic challenges (Sebastiani, op. cit.; Lister, 2007); the conservation and promotion of diversity is extremely costly, due to intrinsic limited incompatibility of a corrugated topography with economies of scale, climatic stability and infrastructural accessibility. Accommodating an increase in the number of cultivated species, matching wood, pasture and fruit tree areas, and manipulating sloping terrain severely limit revenues. Moreover, European interest on agricultural strategies (PAC) is only partially considering mountain economies and barely investing resources on human capital in these lands (Lister, *op. cit*.).

However a synergic approach has been recently promoted as a possible way out, by promoting a multifunctional territorial economy, which enlarges the concept of agriculture into food ecologies. Replacing food at its place, it promotes territorial specificity within a multiplicity of diverse economic opportunities working in a synergic way: supporting the battle against placeless food implies a discovering experience of the place of its production to improve the awareness of its sowing and growing, from seed to harvest, up to time and place, seasons and soils (Lister, 2007). In the Val di Vara valley, in a much similar climatic and biological ecosystem within the Apennine, a project called Castagricoltura (Sebastiani, op. cit.) successfully matched agricultural economies of locally produced chestnut flour with tourism ecologies of the Cinque Terre area on the Tirrenian Sea. Promoting and monitoring the semi-rural production, researchers of Pisa university creatively encouraged landscape-driven economies re-interpreting territorial relations.

Magnaghi (2011) indeed underlines the relation between bioregion's self-sustainability and place consciousness: evoking the emergence of new environmental-based identities, he indicates place consciousness as starting point of territorial regeneration.

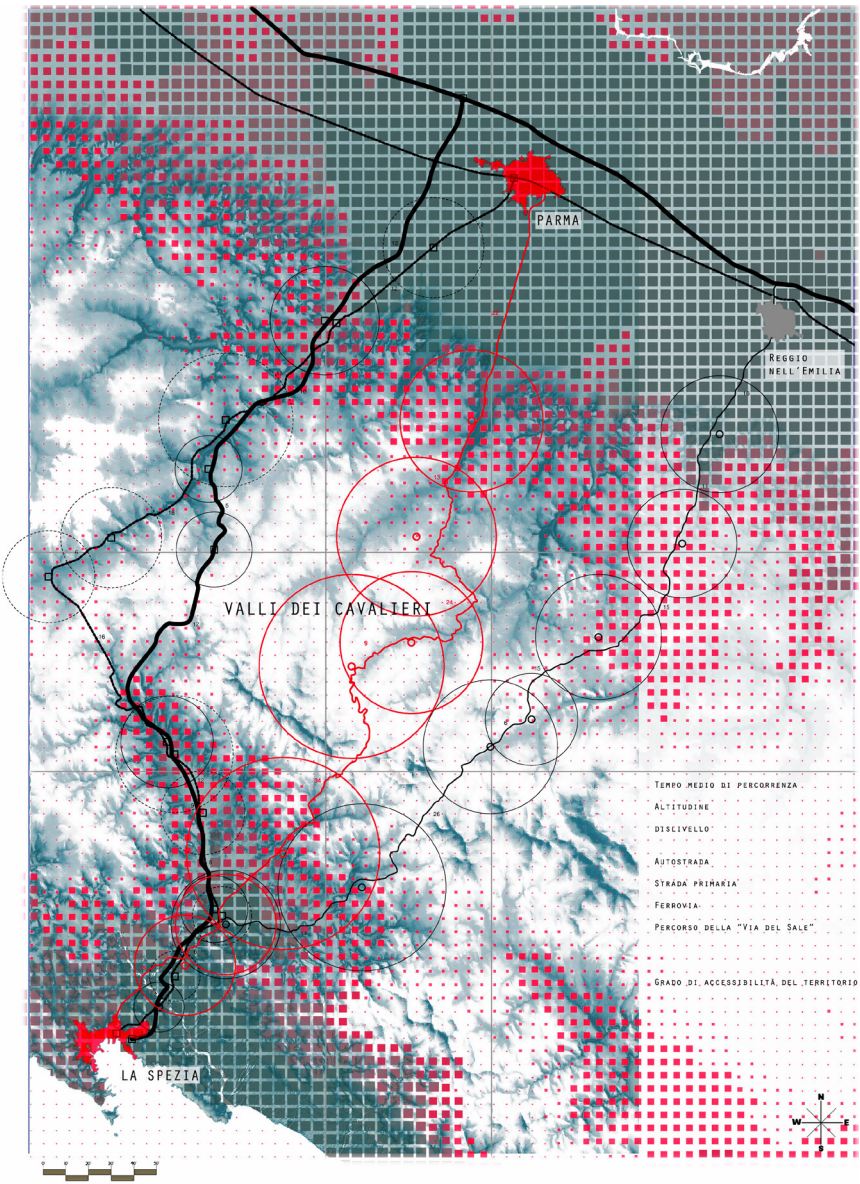

Figure 3: *Lorenzo Fratus (2013), territorial map based on infrastructural connectivity*

The awareness of how places, in their environmental, energetic, urban and rural specificity, are essential for the biological and social reproduction of each community is paramount for a reinterpretation of local ecological know-hows. Small-sized productive realities should also intend bioregions as political and economic systemic nets to be organized and fed. The awareness for the potential value of a territorial patrimony, both cultural and natural, is therefore the base for long-perspective economic strategies.

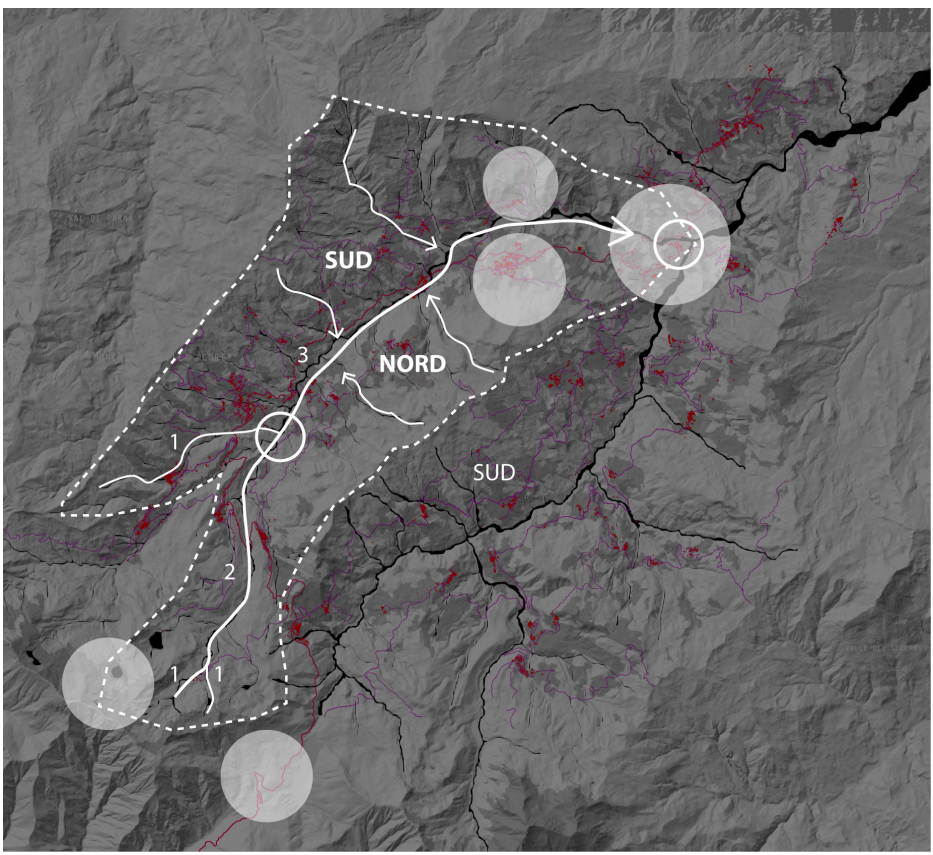

Figure 4: *Antonia Chiesa (2013), schematic outline of region's watershed*

As for the present case study, scattered disposition of active farms, animal husbandry and dairy and ham manufacturing facilities still claims for a common vision of regeneration. Yet excellent quality of pasture, grass, water and air guarantee superior phytochemical composition of locally produced Parmesan cheese. Together with chestnuts, mushrooms and ham such combination of food ecologies sufficiently triggers an adequate territorial specificity, which, according to a synergic approach, may be connected with the re-evaluation of the built cultural heritage. The reactivation of abandoned buildings throughout the valley, such as castles, monasteries, sight-seeing towers, dairies, ham factories, and entire ancient deserted settlements move toward reveal landscape most attractive narratives. In a way, it re-interprets traditional nature-culture relation of mountain eco-systems, where architecture adaptation to the site, by shape and location, is typically the most appropriate (Gaiani, 1995). Military architecture as well as manufacturing activities is located in the most desirable corners of the valley, taking advantage of extended view, warm wind currents, stable soil, and efficient drainage conditions. Such potential matches the request for a sustainable form of dispersed eco-tourism, resulting in an interpolation and net of hinge points. Moreover, the proximity of institutional Regional Parks multiplies opportunities of seasonal explorations of glacial lakes, mountain high-picks and semi-natural habitats. After a confrontation with political entities, social actors and local expertise, the research hypothesized local isolation -rather then a disadvantage- as a choice and a chance to provide an opportunity for a slow-time experience within a renovated relation to nature as an essential part of urban life.

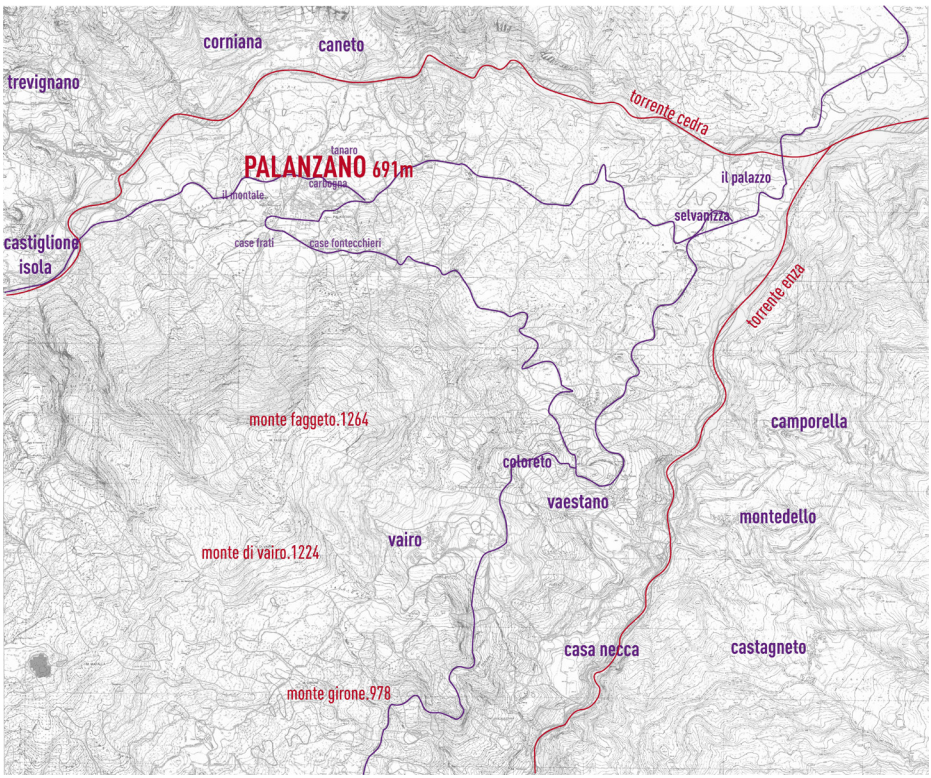

Figure 5: *Antonia Chiesa (2012), framing local emergencies*

Which landscape?

Therefore, from a terminological point of view, what we consider as nature swings from the concept of landscape to that of environment (Berleant, 2012). Still fascinated by visual speculations on sceneries of bucolic allure, contemporary pastoralism is more and more affected by less charming visions of disrepair, decay and even natural violence. The term environment embodies therefore a more comprehensive and shareable vision of any specific combination of natural elements encouraging or preventing specific biological events, whose fluctuating trend maybe somehow measured (Clement, 2013). The continuous transformations of such transient, vibrant set originates from the intensive interactions among species and ecosystems, whose effects may be only

partly foreseen and controlled (Chiesa, 2013). The environment is therefore the technical context for techno-pastoral strategies to be developed, yet landscape is the image speculation of the site they take place on. As Corner (1999) states, without image landscape is resulting in an unmediated environment. Working on strategies for the promotion of a distinct territory, the research investigates ways to produce powerful images of it as indispensable part in the communication of the idea of a land. As large parks, mountain territories remain fundamental to cities not only for their infrastructural and ecological functions, but also because they are distinct, memorable places where local identity is absorbed and produced in a social and cultural irreproducible way. They capture our imagination by visually powerful, unforgettable images, yet open to contingency and change (Berrizbeitia, 2007). A collective recognition of land as landscape proceed as exposure to prior images, and the ability to intentionally construct landscape works on the eidetic declinations of mental conception which may be equally visual, but also acoustic, tactile, cognitive, intuitive (Corner, *op. cit.*): therefore the image speculation is intended to include the transient status of environment.

In the Salento project by Paola Viganò (2001) the whole region is intended as an extended park, from requalification of coastal areas to productive landscapes. Imaginative speculation proceeds from the specificity of agriculture and water flow systems; capillarity, permeability, percolation are delineated as specific features of a land where natural and cultural elements coexist since ancient times. A powerful visions of interconnectivity, based on spatial disposition of natural elements, speculates for example on the allure of extended olive tree cultivations intertwined with small-scale soft infrastructures connecting a weak urban layout. Even suggested economic strategies are shaped on territorial dispersion: agro-touristic development is articulated according to a fine grain in order to reveal and support values and remediate vulnerabilities of a place that mass tourism would ruin.

It is therefore worth underline that a purely visual and present-time approach to the natural scene has been permeated since the 20th century by considerations on process, time and adaptation (Berrizbeitia, *op. cit.*). Already belonging to the aesthetic of landscape painting[2] (Viganò, *op. cit.*), the idea of transformation became in the last decades, mostly due to emerge of ecology

2 With reference, among others, to watercolours by John James Audubon (1785 – 1851)

as a discipline, an active part of landscape design strategies. Being the process a primary time condition of ecological production, it indeed influences the dynamics of landscape in terms on variability in color, texture, spatiality and scents unfolding through the seasons and through the long-term changes in growth and decay. A focus on the programmatic and the social aspects of open sites was later incorporated cultural practice into the concept of contemporary public landscape, which increasingly provided space for the construction of social experience.

Therefore a process-based approach, permeating contemporary landscape design, works towards the facilitation of connectivity, ecological functions, program, and the perception of phenomena rather than aiming to the production of a final form. That means an enlargement in scale time of the analysis of the site in order to understand how landscape came to the present status; topography, vegetation and drainage are investigated in their historical modification and artificial manipulation, whose legible traces are a matter of inspiration and guidance for the development of an adaptive design. As for time, inert visual scenes turned therefore into a historically contingent process always in a state of formation (Berrizbeitia, *op. cit.*).

Figure 6: *Filippo Oppimitti (2013), View on the route to Lago Verde and Ballano, with forest of chestnuts, firs and beeches, pasture during fall on a foggy rainy day*

As for scale, largeness implies, when referred to landscape, the presence of conflicting habitats, the layering multiple forms of organization on the site, the distribution on the surface of often contradictory programs with inclusion of transport infrastructure and circulation patterns. Since there is no "correct" state for any ecosystem, adaptive design works in a long-term perspective on the whole system enhancing opportunities for logics and cohesion at a large scale. It focuses on local ecologies in order to accommodate ecosystem's changes, trigger recover from disturbances, make them function in a state of health by inclusion economic health and cultural vitality. In the Fresh Kills Park proposal by James Corner Field Operation (2001), design sequences are envisioned according to phases of adaptation to the site steps in revenue-generating actions, increasing complexity of programs.

As for time, considerations on the multiple histories of a site call for a multiple-level reading of landscape, which may be considered as literature. Like myths and laws, landscape narratives, based on stories of survival, identity, power, success, and failure organize reality, justify actions, instruct, persuade and even compel people to perform in certain ways (Whiston, 1998). All of these dialogues arrange themselves in spatial conditions, by gradient of closed, semi-open and open landscape types, from dense forests to agricultural clearings to villages. Moreover, they are unified by the long and continuous gesture of circulation, by the water cycle of a river that runs through the valley, and by the landforms that maintain a lower and higher continuity. Landscape may be considered therefore as a living medium whose materiality spreads from liquid to solid and dense, from flat to inclined and rounded. Under such condition the park becomes a space whose structural image has to be designed, a common ground to host multiple identities, from the industrial sublime to the bucolic pastoral and recreational activities, managed and maintained by a multiplicity of owners, tenants, and agencies (Berrizbeitia, 2007).

A geographical approach

The common vision on which the research strives is primarily geographic. With reference to Geddes' Valley Section (1909), the relation between mountain territories and the cities in the flat land seem to be at stake both pragmatically and theoretically. The ecological, energetic and economic implications of productive areas on urban development in the long perspective

are evident.

From a theoretical point of view, an increasing hybridization of urban landscape and the development of technological network within mountain areas imply a more comprehensive consideration of urbanism. Adopting and locally translating Waldheim's reflections on landscape urbanism and agrarian urbanism, the research focuses on landscape as the medium for the production of contemporary urbanism. Concentrating on the organization of human activities in the natural landscape, landscape urbanism works on the continuity of landscape, overcoming any distinction between the city and the countryside and revealing the emergence of the ground over the figure: cities and infrastructures are just as "ecological" as forests and rivers (Waldheim, 2006). English landscape architecture's legacy, together with McHarg (1969) and Foreman (1986) experiences, inform such geographical approach, which re-evaluates the broader scale as dimensionally appropriate for the description of the dispersed territory, yet focuses on ecological adaptive design as enhancing ecosystem interactivity. Space is intended on a temporary basis, shaped by fluxes of water, waste, food, transport, and energy: trajectories of humans and goods, flexibly moving on the field of action (Corner, *op. cit.*), define a performative urbanism (Shane, 2006). Often intended as infrastructure, in a new fluid interpretation of the territory, landscape is shaped by processes of accumulation and superimposition consistently informing the formation of new spatial morphologies (Belanger, 2013). But first and last, landscape urbanism moves toward a speculative thickening of the world of imagination, as an interpretative approach to a rich, hybrid, self-transforming whole.

City and landscape, sharing issues of sustainability at a broader scale, should be ideally considered as part of the same entity: the acknowledgement of reciprocal territorial benefits may contribute to the whole regeneration of the area. In particular, the remedial role of landscape needs to be re-evaluated as permanently feeding urban resilience; belonging to the European Ecological Net, the whole Apennine area is protected by activities of preservation and conservation of biological, cultural and landscape diversity (VVAA., 2003), yet the value of landscape as patrimony and economic potential is still underestimated.

Figure 7: *Filippo Oppimitti (2013), view of Palanzano from opposite mountainside*

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