

Mapping sustainability transitions in contemporary culture

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Abstract

This paper draws from research conducted at an ongoing project, 'SPLACH – Spatial Planning for Change', which aims to inform a sustainability transition of the Lisbon Metropolitan Area urban planning, towards an improved food system, responding to contemporary cultural concerns.

But where does contemporary culture really stand with respect to sustainability? Among many contenders for supplanting postmodernism, we would emphasize hypermodernism, digimodernism, metamodernism and transmodernism, since in many respects, these paradigmatic views are engaged with a sustainability transition.

Here, we assess how history, technology and visual culture are valued in contemporaneity. This is done by intersecting our readings of cultural paradigms with key ideas about sustainability, drawn from the SPLACH literature review. Moreover, we highlight opportunities for urban design to accommodate a change towards sustainable urban environments.

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1. Introduction

Between the early 1970s and the late 1990s, postmodernism was the dominant cultural paradigm. The critique of modernism and modernity itself presented by authors associated with or close to postmodernism, range from Foucault's propositions on regulation and surveillance (Foucault, 1966, 1975) and Derrida's deconstruction (Derrida, 1967) to Fukuyama's theory of the End of History (Fukuyama, 1992). Postmodernism emerged in architecture (Lipovetsky, 2004), with the writings and designs of Robert Venturi and Denise Scott-Brown, in emblematic books such as 'Complexity and Contradiction in Architecture' (Venturi, 1966) and 'Learning from Las Vegas' (Venturi et al, 1972).

Despite its influence in late capitalist culture (Jameson, 1991), postmodernism has been slowly withering in the past decade (Falck, 1989; Paglia, 1992; Wallace, 1992; Hutcheon, 2002; Kirby, 2006; Rudrum and Stavris, 2015). The new cultural scene is generating a variety of propositions, which is symptomatic of its complexity (Rudrum and Stavris, 2015). Descriptions and synthesis of the current cultural moment contribute to enlighten the values of this time in Western history, but also, we suggest, to ascertain indicators to evaluate society's sustainability. These propositions date back to the 2000s, the beginning of the new millennium, a time of market deregulation, national economic inequalities, systematic democratic failures, radically new communication technologies, major crisis and shifts in the world economy and growing awareness of human pressures on nature (Lipovetsky, 2004; Kirby, 2009; Vermeulen and Van Den Akker, 2010; Tibbs, 2011).

In the twilight of postmodernism, 'The Charter of New Urbanism' presented an urban diagnosis marked by pressing urban issues, including

'the placelessness of modern suburbs, the decline of central cities, the growing separation in communities by race and income, the challenges of raising children in an economy that requires two incomes for every family, and the environmental damage brought on by development that requires us to depend on the automobile for all daily activities' (Poticha, 1999, 1).

New Urbanism emerged as a sign of hope for spatial planning (Talen, 2005), given its emphasis on sustainability, following the official UN charter (UN, 1987). However, in architecture, the Pritzker Prize was awarded to Renzo Piano in 1998, Norman Foster in 1999, Rem Koolhaas in 2000 and Herzog and de Meuron in 2001, rewarding big-budget designs, postmodern or close to postmodern, detached from a sense of social role in architecture advocated by New Urbanism and other references.

The Charter of New Urbanism runs parallel to other theories for the sustainable city, including the Compact City proposed by Richard Rogers. Design solutions differed from those promoted by New Urbanism, testifying here a proficuous and creative moment for both urbanism and sustainability. Nevertheless the goals guiding architecture and urbanism were opposite.

Postmodernism may have created barriers for sustainability, given its underlying concept of nature emphasizing how scientific knowledge construes – rather than researches – nature, and shapes it according to power structures (Foucault, 1966; Derrida, 1967). Despite its theoretical interest, this conception remains self-defeating for sustainable transitions, leaving much room for anti-scientism. Donald Trump's 2012 tweet claiming 'global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive' is very postmodern, suggesting that sustainability

science is producing the concept of global warming to advance an ideological agenda. Meanwhile, political decisions in some countries which were strategic for sustainability milestones are also diverging from sustainability guidelines, as witnessed by abandonment of the Paris and Kyoto Protocols.

But are new paradigms showing a different approach to sustainability?

Here, we confront cultural paradigms with key theoretical basis of the ongoing project SPLACH – Spatial Planning for Change. SPLACH seeks to inform a sustainability transition of Lisbon Metropolitan Area urban planning, considering the importance of spatial policies and the food system. We assess contemporary cultural dynamics and identify how they influence perceptions and goals favorable to a sustainable transition of cities and their territories.

To this end, we propose the following methodology: first, we present a concise literature review from the SPLACH project, from which we identified indicators for sustainability, to guide the overview of current cultural paradigms. Secondly, we analyse four paradigms through indicators of sustainability. Third, we present three case-studies that display cultural concepts discussed in the previous section. Finally, we provide a discussion and concluding remarks.

2. Literature review

Although the request for a sustainable transition of a metropolitan area has taken the SPLACH project to review the roots of modern urban planning, most of the review focused on studies from the past 20 years, when the sustainability agenda promoted by the Brundtland Report (UN, 1987) gained relevance. Many works are

calling for culture to be accounted for. This paper aims to contribute to such account, highlighting studies we find central for a sustainable transition of urban design, spatial planning and the food system.

Steel (2008) analyses how aesthetical attitudes towards nature were determined by cultural conceptions over human transformation of landscape (agriculture) and food-provision, discussing how such conceptions shaped and organized premodern and even modern cities and suggesting novel relations between aesthetics, land-use and urban design. Gandy (2005, 2011, 2014) has also studied specific relations between aesthetic and cultural sensibilities and infrastructure, exposing how those are inherently linked with relations between individuals, their bodies and nature, including cleanliness, hygiene, health and morality. Marshall (2016) has called for urban design to be acknowledged as art, and established a comprehensive review of aesthetic philosophy applied to urban form. Marat-Mendes et al (2015) developed visual characterizations of infrastructure and land-use in early 20th century Lisbon region, disclosing its ability to inform a metabolic historical perspective of the territory.

Less concerned for aesthetics, the socio-ecological approach to urban metabolism as proposed by the Vienna School implies a historiography of socio-metabolic profiles and regimes (Fischer-Kowalski, 1998; Fischer-Kowalski and Hütter, 1999), focusing on material and energy flows exchanged between the environment and societies.

A different approach is taken by Geels (2002) who, using a Multi-Level Perspective (MLP) on systems innovation, distinguishes three (ideal type) levels composing a system. The first, 'niches' include minor and fringe interests, where radical innovation begins; 'regimes' on the upper level, include the 'rule set or grammar' of the dominant

institutions and artifacts; and finally 'landscape' testifies the external structure or context for the lower levels. According to Geels (2002), socio-technical regimes evolve overtime by absorbing innovations from niches, and these slowly alter the landscape. The MLP emphasizes the important and widening contribution of radical ideas towards change that impacts sustainability.

Viljoen et al (2015) have taken grassroots practices of urban agriculture and guerrilla gardening increasingly relevant in Global North cities, and reimagined the city as a 'continuous productive urban landscape'. Agriculture is redefined as a new urban ideal, ultimately disrupting the urban-rural schism which dominated the (cultural and physical) landscape of the 20th century (Kropotkin, 1898; Howard, 1902; Weaver, 1983). Indeed, previously overlooked authors and territory conceptions are being rediscovered for their important ideas in achieving sustainable cities (Wheeler, 2002; Welter, 2002; Batty and Marshall, 2009; Marat-Mendes and Oliveira, 2013; Banai, 2013; Fischer-Kowalski and Weisz, 2016).

From many research areas, including architecture, urban morphology, industrial ecology and planning, studies on the sustainability of cities are effectively exploring the first official definition provided by the Brundtland Report (UN, 1987), which clearly states that sustainability is a social as well as an environmental problem, which should not be forgotten.

In this literature, we gathered three indicators for sustainability we believe account for a cultural shift away from postmodernism. First, is the problem of history and time, since not only sustainability implies conceptualizing links between past, present and future for societies and the planet (Fischer-Kowalski and Weisz, 2016; Gandy, 2018), but recent studies of environmental history (Niza et al, 2015; Marat-Mendes et al, 2015; Krausmann et al, 2016; Winiwarter et al, 2016) have shown

how transformation of nature in the past may influence the future. Technology and the production system are also fundamental for assessing sustainability, since it goes to the heart of how we transform and explore nature (Meadows et al, 2004; Fischer-Kowalski, 1998; Fischer-Kowalski and Hütter, 1999; Gandy, 2014; Faraut, 2017; Sagan, 2019). Finally, visual culture and aesthetics are an increasingly important for the renovation of urban morphology and design and their relation to the environment (Gandy, 2011; Marat-Mendes et al, 2015; Marshall, 2016).

Much about sustainability depends on rigorous scientific inquiry – but is nonetheless encapsulated in cultural patterns. As such, sustainability concerns can be found outside scholarly circles and extend to art and aesthetics, generalist literature and public initiatives.

The August 2017 issue of magazine ‘Marie Claire’ focused on sustainability, acknowledging it as a dimension that must be incorporated into the fashion industry. In cinema, the last decade has seen a reemergence of science-fiction, with films like ‘Another Earth’ (2011), ‘Interstellar’ (2014), ‘Annihilation’ (2018), but also such documentaries as ‘También la lluvia’ (2010) and ‘Demain (2015)’ in which themes of natural resource depletion and disaster directly resonate warnings of sustainability science.

The role of food in contemporary life and cities is very notorious and gaining tremendous interest, from highly popular cooking contests like ‘Chopped’ and ‘Masterchef’, to entire TV networks like ‘Food Network’ and countless YouTube channels dedicated to the same theme, from recipe repositories like ‘Tasty’ to food tourism channels. The film ‘Upstream color’ (2013) by Shane Carruth draws a wild-love story from a brilliantly intricate scheme to which the nearly-complete food system is instrumental. The book and film series about psychiatrist/ cannibal

Hannibal Lecter was revamped in 2013-2015 in a NBC series which displays detailed (and highly meaningful) accounts of food-preparation. Julia Ducournau's film 'Raw' (2016) focuses on the radically shifting eating habits of a vegetarian girl turned cannibal. 'Butcher's Block' (2017), the third season of Sci-Fy horror series 'Channel Zero' also centred on the story of an once-prosperous meat factory which covered-up for a cannibal family.

Relations between societies and nature, and the specific social role that food plays in them have are widely studied in social and natural sciences (for instance, Darwin, 1871; Frazer, 1910 and 1911; Lévi-Strauss, 1962 and 1964; Douglas, 1966; Odum, 1975; Alier, 1977; Fischer-Kowalski, 1998; Fischer-Kowalski and Hütter, 1999; Descola, 2001) not to mention Turnbull's (1972) powerful ethnography with the Iks of North Uganda, a people devastated by hunger. Hunger has great symbolic charge in the most recent novels by Portuguese writers Lídia Jorge (2018) and Hélia Correia (2018), both of which project a future marked by depletion and deprivation, again resonating with sustainability science. Recent information discussed in the press (Público, March 10th) accounts that 35% of the Portuguese population is deprived of foodstaples such as meat or fish for financial reasons. Yet, dietary changes have an important impact in urban socio-metabolism, since the environmental footprint of industrial livestock and food regimes themselves are a pressing cultural and environmental problem.

In this paper, we submit that a transition to sustainability is (also) a matter of culture, and that without a public culture of sustainable behaviour, this transition will be much slower and less effective. As such, we seek to read how recent cultural theorists have been sensible to the problems of environmental risk and sustainability. We furthermore seek to highlight, among four specific

cultural paradigms, what aspects can be either instrumental or detrimental to a sustainable change. Particularly, when applied to urban design and planning.

3. Contemporary cultural paradigms

In this section, we analyse four proposed cultural paradigms, ranging from 2004 to 2011. Our review does not pertain to be exhaustive, but rather to identify indicators for sustainability. These are aspects we believe can be useful to conceptualize sustainable development, including urban design that is self-conscious and honestly engaged with its own time.

3.1. Hypermodernism – the cult of excess

Hypermodernism is a term coined by Gilles Lipovetsky in 2004 to characterize a cultural shift towards endemic and excessive consumerism. Hypermodernism is a modernity at the n th power, less of a new cultural era than the continuation and further development of modernity, now structured around the market, technocratic efficiency and individualism (Lipovetsky, 2004). It is essentially a consummate modernity, of everything hyper, a culture of excess and of 'here and now', impacting basic human needs such as food, procreation, death, the body, communications and urban agglomerations (Lipovetsky, 2004).

Aligned with the 20th century, hypermodernism has a tireless enthusiasm with change and novelty while also being deprived of any confidence in the future or in any grand historical vision (Lipovetsky, 2004). However, central beliefs in democracy, human rights and the market are reemerging as stable basic political principles, although without credible opposing models (Lipovetsky, 2004).

With regards to aesthetics, Lipovetsky (2004) identifies a mass-aestheticization of pleasure, sense and 'the moment', which amounts to a sensual counteract to the abstract mindset demanded by the efficiency of hypermodernism.

This ambiguity – that the conquest of efficiency is countered by the ideal of earthly happiness derived from pleasure – extends to sustainability. While public awareness of environmental risk increased, it is undermined by the 'here and now' mindset of hypermodernism. So, while public protest against unsustainable industrial practices rises, public action does not, and the rules of the market take the lead (Lipovetsky, 2004).

Hypermodernism is certainly an enlightening tool to analyse contemporary trends in urbanization. First, by exploring the spatial expansion of capitalism to the entire world, hypermodernism clearly sees society responding not only to a postmodernist mind-set where traditional grand narratives collapse, but primarily to the increased liberty obtained by international markets. Many recurrent outcomes of the neoliberalization of metropolitan areas could be explained by the dynamics described by Lipovetsky to understand the current culture. Such is the case of the increased role tourism and heritage in recent urban development: Lipovetsky's (2004) claims for the 'revisionary memory', 'remobilization of traditional beliefs' and 'hybridization of past and modernity' speak directly to the hypermodern vision of history. These also resonate with discourses around the value of heritage in preserving local identity, often associated with the management of the city's market value (Scoffham, 1994; Hodkinson, 2013; Mayer, 2013).

3.2. Digimodernism – freedom and futility

Digimodernism or ‘digital modernity’ is the second term proposed by American philosopher Alan Kirby (2009) to define culture after postmodernism, ‘a new form of textuality, characterized by onwardness, haphazardness, evanescence and anonymous, social and multiple authorship’ (2009, 1) emerging in the mid-late-1990s and spawned from digital technology, including commercial films, reality TV, videogames and internet platforms.

Digimodernism is characterized by a loss of authorship in the traditional sense. However, when the reader, the ‘textual consumer’ (Kirby, 2009) starts to literally create text where none existed, the result is not free-for-all information and liberty, as envisioned by postmodernism, but a lot of free-for-all infantilism and futility (Kirby, 2009). Successful highly digital political campaigns for Donald Trump in the US, Brexit on the UK and Jair Bolsonaro in Brazil hardly disprove Kirby’s point.

The relation of digimodernist texts with chronology is defined by Kirby (2009, 64 and 65) as antisequential and ultraconsecutive. If sequentiality is a progression in which a new term spawns from its predecessor, and consecutiveness is a relation in which terms are contiguous in space or time to each other, the particular features of digimodernism become evident, namely its preference for the latter (Kirby, 2009).

Kirby (2009) states that digimodernism is not primarily a visual – but rather textual – culture: although text becomes highly manual (through the use of fingers in digital technologies), it is aimed at digitization *per se*. In general, digimodernist aesthetics are characterized by references from children literature, ‘the apparent real’, earnestness and endlessness (Kirby, 2009). In his somewhat pessimistic tone, Kirby identifies the aesthetics of videogames and CGI

(Computer Generated Images) as the main sources for digimodernist aesthetics.

Regarding sustainability, Kirby (2009) points out problems associated with consumerism. Although his portrait is as hyper as Lipovetsky's, his response is considerably more radical. Seeing consumerism as a force absorbing social idealism and remaking it in its own image (Kirby, 2009, 240), he extends this problem into the destruction of the planet. Thus, environmental risk will not be solved by smart consumerism, but by consuming less.

3.3. Metamodernism – hopes and fears

While in scholarly debates the concept of metamodernism is associated with an essay by Vermeulen and Van Den Akker (2010), the term has a wider reach, to which artists like Luke Turner (2011) have also contributed.

Metamodernism is the terrain of ambiguity or, to use the term of Vermeulen and Van Den Akker (2010), of oscillation 'between a modern enthusiasm and a postmodern irony, between hope and melancholy, between naïveté and knowingness, empathy and apathy, unity and plurality, totality and fragmentation, purity and ambiguity'. Turner (2011) further sees oscillation as 'the natural state of the world'.

According to Vermeulen and Van Den Akker (2017), metamodernism must not be understood as a paradigm, but rather as what Raymond Williams called a 'structure of feeling': an element of culture that circumscribes it without being ascribable to any individual component but rather to a particular experience of time and space.

Van Den Akker (2017, 22) emphasizes the emergence of a US-dominated truly globalized world and corresponding spatial

exhaustion of capitalist expansion, together with ‘the completed incorporation of culture by commodity logic’ as the two key mutations of the capitalist system and of Western culture that defined postmodernism. The 2000s would afterwards bring about metamodernism, whose ‘present opens onto – in an attempt to bring within its fold – past possibilities and possible futures (defined as being *with* or *among* residual and emergent structures of feeling)’ (Van Den Akker, 2017, 22).

Sustainability is claimed by Vermeulen and Van Den Akker (2010) as one of the conditions which contributed to the emergence of metamodernism: ‘the need for a decentralized production of alternative energy; a solution to the waste of time, space, and energy caused by (sub)urban sprawls; and a sustainable urban future have demanded a transformation of our material landscape’. More recently (Vermeulen and Van Den Akker, 2017, 14) the wide acceptance of the Anthropocene notion is added as an expression of ‘humankind’s becoming conscious of its destructive behaviour’.

This extends into aesthetics, as metamodernism is inherently neoromantic, in art’s renewed interest in ‘the unsuccessful negotiation between culture and nature’ (Vermeulen and Van Den Akker, 2010, 7), adding to the shift to ‘greenprints’ in urban planning.

3.4. Trasmodernism – pastures greener

The synthesis advanced by Tibbs (2011) on sustainability is extremely relevant to understand the implications of sustainability in culture – as industrial growth is approaching systemic limits and eminent collapse, sustainability is seen as a call for transforming society towards sustained development. These problems have been noted since the ‘Limits to Growth’ study (Meadows et al, 1972, 2004), but significant technological and behavioural changes are more recent

(Tibbs, 2011). It is the outcome of such changes that Tibbs sees as a future transmodernity, the present being rather the dawn of such transmodernity (Tibbs, 2011, 27).

Technology plays a fundamental role in transmodernity: green-technology counters conventional industrial growth which due to its scale within the biosphere translates into accelerating resource consumption, ecological pitfalls and pollution. Among Tibbs' (2011, 15) suggestions are closed-loop manufacture systems, recycling, ambient energy systems, regenerative agriculture, ecosystem preservation, minimal-impact infrastructure and elimination of emissions, waste, dissipative substances unfit for biological systems.

While expansion was a major program of modernity, industrial globalisation is its threshold. Thus, 'modernity is reaching limits because of its own success' (Tibbs, 2011, 17). Initially, modernity went from poverty to economic security, but this produced another change from security to significance. It is the growth of post-materialist values that creates social conditions for conscious voluntary change towards a sustainable socio-technical system (Tibbs, 2011).

This proposition of transmodernism is informed by statistical studies on cultural values and by Fritjof Capra's theory of value change, but the dynamics described by Tibbs could also be enlightened by Geels' (2002) use of the MLP: the 'niche' level in the MLP accounts for radical ideas, resonating with the notion of 'cultural creatives' which Tibbs draws from Paul Ray. It is the growth of radical or creative ideas that eventually changes central aspects of culture – or the 'regime' level. Thus, Tibbs' proposition of transmodernity would perhaps be the effective change of the 'landscape' level into a sustainable socio-technical system.

The connection between Cultural Creatives and actual creativity is unfortunately unexplored by Tibbs, since his analysis

mostly relies on statistics and systems theory. As such, aesthetics is not accounted in his account of transmodernity. Nevertheless, he concludes that a general consciousness of the impact of social activities in ecosystems invites for consideration of the aesthetic and artistic expression of new attitudes towards nature, a suggestion which may be responded by some examples of metamodernist aesthetics (Vermeulen and Van Den Akker, 2010).

4. Case-studies

In this section, we analyse three case-studies related to urban design and architecture, seeking to understand if some of the concepts identified in the contemporary cultural paradigms section may be spatialized. The case-studies are related to issues of the food system, as we argued as it is central for sustainability transitions (Steel, 2008).

4.1. 'Modern Masterpieces Revisited' by Luís Santiago Baptista



Fig. 4 - Luis Santiago Baptista - Modern Masterpieces Revisited #5 (2016)

In the exhibition 'Modern Masterpieces Revisited', architect Luís Santiago Baptista (2016) presents a series of photomontages and short texts that transform and reenvision modern buildings from Adolf Loos' 1910 Steiner House to Aldo Rossi's 1980 Teatro del Mondo. One of the photomontages (Figure 1) shows Le Corbusier's Ville Savoye (1928-1931). The original white façade is now covered with red industrial metal, the exterior, a former green-field has now a farm with agricultural plots and a tractor (Baptista, 2016, 45). The author argues that Le Corbusier produced, among other things, 'living machines' for the industrial bourgeoisie as a peripheral escape from city life, but this dream was 'only sporadically inhabited' (Baptista, 2016, 44).

Baptista's photomontage can be understood through Heiser's (2017) metamodern analysis of super-hybridity. Although Heiser focuses on promotional imagery for ISIS (Islamic State of Iraq and Syria), the term is broader and describes 'creating by way of existing sources [which is not] automatically merely unoriginal pastiche' (Heiser, 2017, 56). The simultaneity of clashing elements is what produces this sort of metamodern super-hybridity. Furthermore, the text interprets this suburban vision as of 'pleasant and pacified relation with domesticated nature' (Baptista, 2016, 44). Yet instead of the green lawn of typical photographs of the Ville Savoye, we see 'domesticated nature' through an agricultural field, an idea that can be seen as a neoromantic or even pastoral but that can also be associated with the increasing awareness of the unsustainability issues (Tibbs, 2011; Lo, 2016) and with a metamodern neoromanticism, as explored by Vermeulen and Van Den Akker (2010), as a negotiation between nature and culture, which architecture and urbanization always must confront.

Urban agriculture is gaining public attention for its impacts on the food system, metabolism, and social benefits (Cabannes and Raposo, 2013; Dias, 2018; Delgado, 2018; Marat-Mendes et al, 2018). Moreover, Guerilla Gardening is a growing grassroots strategy to appropriate vacant land (Lyons et al, 2015; Reynolds, 2016). In France, where the actual Ville Savoye is located, urban agriculture is a relevant phenomenon, and rural communities of France have been noted for their sustainable practices (Berger, 1979). Thus, when Baptista transforms a modern urban vision into a more ‘natural’ suburb, he is transporting it to an idealized past, and inevitably projecting it into an idealized (and more sustainable) future.

4.2. Vale de Chelas Horticultural Park



Fig. 5 - Chelas Valley Horticultural Park and ‘Five Fingers’ estate from the Lóios Neighbourhood.



Fig. 6 - Chelas Valley Horticultural Park seen from a deck of the 'Five Fingers' estate. In the background, the Flamenga Estate.

In 2010, the Lisbon Council opened the Chelas Valley Horticultural Park, predating the most recent Lisbon Masterplan (PDM – *Plano Director Municipal*). Recently, the neighbourhood had undergone refurbishings and demolitions, to tackle criminality and social exclusion.

Four years earlier, the Lisbon municipality had revived the 'Green Plan for Lisbon', prepared in the 1990s by landscape architect Gonçalo Ribeiro Telles, integrating it into the Municipal Masterplan (Morais, 2006). This process placed hope on a Masterplan that promoted sustainability, since the Green Plan envisioned an extensive, varied and productive ecological structure. However, in 2010, the *non-aedificandi* status the

'Green Plan' suggested for green-fields, including courtyards, was refused by the Council (Henriques and Sobral, 2010; PDML, 2012).

Currently the Horticultural Park is thriving, but occupies only a part of available land in the area. The same land was completely used for agriculture, before the construction of several high-rise buildings, from the 1960s to the 1990s. Collective blocks and streets-in-the-sky (Figs. 3 and 4) make many of Chelas' estates important examples of Portuguese architecture and planning opening to international debates (Borges, 2017; Borges and Marat-Mendes, 2019), but the agrarian past has not disappeared. As such, further urbanization may be at odds with the desires of the population.



Fig. 7 – Guerrilla Garden in the Chelas Valley. In the background, the Alfinetes Estate.

At the South of the horticultural park lies an extension of illegal gardens (Fig.4), among beaten earth tracks and semiderilict cottages. Unlike the orthogonal plots of the Horticultural Park, here plots are irregular, separated by frail clumsy reeds. This Guerrilla Garden

(Reynolds, 2016), most likely associated with food security rather than leisure or environmental concern, is built by anonymous people who nonetheless partake in the improvement of Lisbon's environment.

Urban agriculture as in the Chelas Valley – municipal and illegal – has great environmental impacts (Viljoen et al, 2015; Faraud, 2017) and a productive urban green structure is instrumental to downsize the impacts of current agrifood business-structure, essential for achieving transmodernism (Tibbs, 2015).



Fig. 8 – Urban agriculture in the central valley of Chelas – municipal Horticultural Park (light green) and Guerrilla Gardens (dark green)

But the contrast between the high-rise estates, conveying modernism, brutalism and postmodernism, and the persisting agrarian practices (Fig. 5) suggest interesting relations with metamodernism, not only because farms have an inevitably Romantic imprint in urban landscapes, but mostly because of the clash between the urbanization and the agriculture it could not erase is very suggestive way of creatively using the past to bring about a vision for the future (of the city).

Significantly, the proponents of metamodernism (Vermeulen and Van Den Akker, 2010, 11) claim that 'In architectural practices [...] an emergent metamodern style still needs to distinguish itself from the dominant postmodern discourse'. Widening architecture and urban design to (re)integrate nature would favor a metamodern negotiation would emphasize the relation of urban form with the physical territory and encourage new solutions to critically interpret preexisting ones (Borges and Marat-Mendes, 2019).

4.3. Two municipal markets in Lisbon

Municipal markets were strategic in the urban development history of Lisbon (PMM, 2016). In 2016, the Lisbon municipality prepared a 'Plan for Lisbon Municipal Markets' (PMM) (PMM, 2016) which envisioned a revamping of existing market buildings to revive the roles they once played in neighbourhood life and local commerce, but also to emphasize their qualities as public places, encouragers of sustainable commerce and tourism (PMM, 2016). The plan is already being implemented and many municipal markets have indeed undergone refurbishing processes. Two of these were refurbished and partially handed to private agentes before the PMM: the Campo de Ourique Market and the Ribeira Market.



Fig. 6- Eastern façade of the Campo de Ourique Market



Fig. 7- Southern entrance of the Campo de Ourique Market



Fig. 8 - Fish selling area of the Campo de Ourique Market



Fig. 9 - Fruit-vegetable selling area and food court

Campo de Ourique Market was opened in 1934. Designed by António Couto Martins, it had shops in its outer perimeter and an open central space for food-produce stands. A first refurbishing by Daniel Santa Rita, Alberto Oliveira and Rosário Verde happened in the 1980s. The Southern façade was redesigned to become the new main entrance, with tile cylinders and metal grids, bringing a postmodern touch to the Art Deco style of the original design (Fig.7).

The most recent refurbishing was concluded in 2013, before the PMM. Basic features were kept, outer façades maintain retail

stores. The inner area includes stands and a food court (Fig.9), with several restaurants sharing space with stands selling fruit and vegetables. Only the fish selling area is separated from the remainder, but there is a fluid conviviality (Parham, 2016) between commercial and consumption spaces.



Fig. 10 - Main façade of the Ribeira Market



Fig. 11 - Entrance of the Ribeira Market



Fig. 12 - Entrance hallway of the Ribeira Market



Fig. 13 - Western wing of the Ribeira Market

The Ribeira Market dates back to 1882 and was transformed in 1903 by João Piloto (Fig.10). Since then, the market is structured by an interior corridor separating two wings – one on the East and one on the West. In 2014, a refurbishing was conceded to ‘Time Out’ aiming to mix traditional activities of the municipal market with contemporary food commerce. However, the concession negotiated

with the municipality conveys more parallelism than mixture, as the two main wings have different functions –a food court on the West wing and a market on the East.

That both markets articulated public and private agents, shows that market interests have become indispensable for public intervention (Lipovetsky, 2004). Particularly in the Ribeira Market, located on the riverfront, activities seem directed at tourism, while in Campo de Ourique greater compromise was achieved between old and new functions.

Most of what is new in the markets is also temporary: metal structures, dismantable stands and grandstands, ad-signs and pannels both in cloth and digital. The buildings are protected by the Municipal Masterplan (PDM, 2012) and the PMM (2016), so radical interventions were unlikely. Architecture of the past is preserved in a rather theatrical way, while new elements are frail and removable. This echoes Kirby's (2009) critique of digimodern earnestness, in which a present phenomena is set in the past but establishes no dialogue with its mores.

Kirby's critique that CGI films, relying on visual effects, do not seek any 'critical engagement with the world' (2009, 182) could also explain what is particular to the entrance hallways of the Ribeira Market (Figs.12, 14 and 15). The digital pannels, shifting every few seconds, keep providing information on Lisbon's cultural agenda and events promoted by 'Time Out'. The world seems like an endless circuit of leisure activities and less attention is given to what happens in the Eastern wing. The importance of markets for other aspects of urban life – including food security – is absent from this endless succession of events, mostly catering to youths, tourists and the affluent middle-class.

The suggestion of endlessness is where hypermodernist and digimodernist concepts meet, in these two markets. Removable stands point out that renewed life may not last long. Indeed, much of the current success of these markets depends on the flux of tourists and visitors. But if this flux diminished, would they continue to thrive? This problem goes to the heart of the PMM (2016) and its goal of reviving the role of markets in neighbourhood life.



Figs. 14 and 15 - Digital pannels of the Ribeira Market entrance

Discussion

Analyzed paradigms include concepts and concerns which strongly favor a sustainability agenda. In general, the four paradigms could be grouped into two groups: hypermodernism and digimodernism are somewhat negative assessments of the contemporary age, while metamodernism and transmodernism are cautious but optimistic and hopeful.

Having this in mind, with respect to history and time, both Lipovetsky (2004) and Kirby (2009) emphasize presentism and haphazardness emerging from economic and technical conditions. An obstacle to implementing a sustainability agenda is that it necessarily

privileges our relation with the future. Yet how can the future ‘in deep time’ of bio-systems (Krausmann et al, 2016; Gandy, 2018) be widely understood by a society increasingly organized around individualized experience of time (Lipovetsky, 2004; Kirby, 2009).

This has further implications in Lipovetsky’s (2004) discussion on the withering of public power and growing deregulation of the market, which urban design illustrates well. Figueira (2016, 17) exposes how market liberalization and regulatory spatial planning pushed architects to focus only with what they could control – buildings. Nevertheless, urban interventions considering the future of buildings, as witnessed in the examples of two Lisbon municipal markets, are not priority, as most interventions focus on the needs and opportunities of the ‘here and now’. Meanwhile, spectacular design has been widely sought by the State, municipalities, the private sector and architects themselves even at a time when Kirby (2009) senses the death of the spectacle society.

Research at SPLACH (Marat-Mendes et al, 2018) confirmed that spatial planning in the Lisbon Metropolitan Area is dominated by land-use *management* policies. With the State downsizing its role in housing and public equipment, architecture becomes a commodity dominated by private-market investment and big-budget demand, overriding beliefs in any strong social role (Borges, 2017; Marat-Mendes and d’Almeida, 2018; Borges and Marat-Mendes, 2019).

Yet, the neoromantic approach to nature (Vermeulen and Van Den Akker, 2010), as well as the ‘plastic’ vision of the past (Toth, 2017) of metamodernism point towards more personal and affective notions of history and time. This reading is confirmed by Tibbs (2011) who associates ecological concerns with a shift from materialist to post-materialist values.

With visual culture, we find another overlap between hypermodernism and digimodernism, emphasizing evanescent and massified aesthetic sensibilities (Lipovetsky, 2004; Kirby, 2009). However, metamodernism arises from the arts as a reorganization of both modern and postmodern aesthetic sensibilities, towards the particular experience of the present, and finds much more complexity in contemporary art and aesthetics.

Vermeulen and Van Den Akker (2010) claim no metamodernist architectural style has emerged yet from the trends of the past decades. In Chelas, the Horticultural Park reframes the urban landscape, creating a productive void at the heart of a renewing neighbourhood trying to overcome problems of social exclusion. And Baptista's (2006) interpretation of the affluent suburb turns modernist machines into agrarian plots. The role of food production in landscapes and social activities (Steel, 2008) is meaningful here, because it constitutes a privileged way in which human beings are intrinsically entangled with nature. This entanglement, we suggest, will be central for defining a metamodernist architectural and urban style.

The theory of de-growth (Meadows et al, 2004), acknowledged by Tibbs (2011), may find strengthening in hypermodernism and digimodernism. The fast-flows of digital information that have been absorbed by nearly all levels of communication (Kirby, 2009) – from personal to institutional – are concomitant with hyperconsumerism (Lipovetsky, 2004). Only in 2018, the global e-retail sales volume was 2,8 trillion US dollars (Statista, 2019), and the capital weight of online commerce is expected to continue to grow.

Gandy's (2014) suggestion that infrastructure determines social and individual attitudes towards body and nature may well apply to the food system. Several infrastructures used in the various

phases of the food system – land in production, roads and railways in distribution, buildings and urban elements in commerce and consumption, and waste-management facilities in disposal – although most are not exclusive to it. This scheme of infrastructure-use for our current food system was shaped by the agrifood industry and results in specific attitudes towards the body and its relation to nature. This is an important theme within metamodernist and transmodernist concerns for nature-culture negotiation and post-materialist values.

New attitudes suggested by these paradigms are fundamental for reassessing the infrastructural support of food provision. Awareness of the environmental harms of meat consumption and industrial livestock, as well as concerns for animal welfare, co-exist with an anxiety over cannibalism in art. North-American writer and metamodernist precursor David Foster Wallace (2004) wrote an essay on the Maine Lobster Festival, including disturbingly detailed accounts of lobster preparation, questioning the ethical implications of our eating habits.

Setting aside discussions of food regimes, the ethical and moral problems associated with food habits is an important part of contemporary culture, and may be instrumental for transmodernism, call into question the haphazardness of digimodernism, oppose hypermodern market deregulation (Spaargaren et al, 2012) and hyperconsumerism, and favour of post-materialism, meaningful relations with nature and sustainability. Cultural values and attitudes are fundamental to bring about such change.

Conclusions

History is fundamental to conceptualize culture, as verified both in the selected paradigm proposals and the SPLACH literature review. Contemporary creative approaches to history widen the

horizon of possibilities. This applies to environmental history, which discloses socio-metabolic transitions throughout time, encompassing the food system in its several dimensions (social, spatial, environmental). Our overview concluded that conditions are favourable for sustainability, yet it should be understood as a broad concept encapsulating both natural and socio-cultural challenges.

With the globalization of capitalism, time and speed of events take precedence over space. This is visible in the lack of durable solutions for territorial transformation. Spatial plans are not meant to remain active for long periods and are influenced by legislative calendars. Moreover, it seems prioritary to keep urban land – especially vacant – available for the evershifting needs of the market, wich would be impossible under long-term strategic spatial planning. This overrides the tremendous importance of green spaces for urban structure and its historical transformation (Whitehand, 2019).

This ambiguity about contemporary space can only be understood by acknowledging the territory for its physical characteristics, but also the cultural meaning it conveys. Hypermodernism, digimodernism, metamodernism and transmodernism are four examples of contemporary cultural paradigms, whose descriptions of a particular experience of time and space allow urban design for creative possibilities on the territory.

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