

Heterotopias of transition. Notes from a research program

Luigi Pellizzoni

Abstract

Ecological transition is generally seen to ask for profound changes. The city condenses many aspects of the issue, not least the variety of spatial and temporal scales involved. The article examines different declinations of the concept of change and the relationship between space and time that they entail. The issue is placing this relationship in the context of modern space-time topology. This has recently seen new anticipatory approaches come to the fore, that abandon the linearity of the relationship between present and future in favour of recursive structures centred on eschatological, catastrophic or regenerative visions. Such emerging topologies, which would seem to evoke the traditional concepts of utopia and dystopia, are examined in the light of the notion of heterotopia formulated by Foucault, with which they share much while contradicting its transgressive scope, its ability to open up at once to the elsewhere and the otherwise. The question is how to think transition in heterotopic terms. Some current experiences can be read as heterotopias, but we need to develop the ability to distinguish heterotopias from 'autotopias', which are designed to prevent any real change.

La transizione ecologica è in genere vista richiedere profondi cambiamenti. La città condensa in sé molti aspetti della problematica, non ultima la varietà di scale spaziali e temporali implicate. L'articolo esamina diverse declinazioni del concetto di cambiamento e il rapporto tra spazio e tempo che esse comportano. Si tratta di collocare tale rapporto nel contesto della moderna topologia spazio-temporale. Essa ha visto di recente salire alla ribalta nuovi approcci anticipatori che abbandonano la linearità del rapporto tra presente e futuro a favore di strutture ricorsive incentrate su visioni escatologiche, catastrofiche o rigenerative. Tali topologie emergenti, che sembrerebbero evocare i tradizionali concetti di utopia e distopia, sono esaminate alla luce della nozione di eterotopia formulato da Foucault, di cui condividono molto pur contraddicendone la portata trasgressiva, la capacità di aprire al tempo stesso all'altrove e all'altrimenti. Il quesito è come pensare la transizione in termini eterotopici. Alcune esperienze in atto sono leggibili quali eterotopie, ma occorre sviluppare la capacità di distinguere le eterotopie dalle 'autotopie', vocate a impedire ogni effettivo cambiamento.

Parole Chiave: transizione ecologica; eterotopie; *pre-emption* e *preparedness*.

Keywords: ecological transition; heterotopias; *pre-emption* and *preparedness*.

Introduction: cities and ecological transition

The ecological transition is generally defined as a process of change towards an economic and social model capable of using the planet's resources in a sustainable manner, thus quite different from the current one. This change has to reckon with the need to mitigate or adapt to phenomena such as climate turbulence and change and the loss of biodiversity or the depletion of water reserves, which bring into play very different time scales, from the very short to the very long term, both towards the past and towards the future: from the geological timescale of climate change to the exponential growth of emissions in recent decades, from the announced switch to electric mobility to the long-term confinement of radioactive waste and CO₂. No less varied are the spatial scales at which these phenomena manifest themselves and interventions are implemented.

The city seems in this context destined to play a role that is as important as it is contradictory. The condensation of spaces, artefacts, relationships, movements, activities, people, can play as much against as in favour of sustainability, in its various aspects: energy, waste, land consumption, even biodiversity as research on the 'new ecosystems' produced in highly urbanised contexts shows (Baker, 2019). This is confirmed by a recent report by the European Environment Agency (EEA, 2022), which notes that the city offers both opportunities and difficulties for the energy transition. One example is the density of housing, which makes it technically convenient but managerially challenging to deploy photovoltaics on apartment building roofs. Opportunities and problems of this kind are emphasised by increasing urbanisation, which is usually assumed to continue into the future.

The contradictions of the city with respect to ecological transition can be declined in many ways. One of these – deeply implicated, as mentioned, in the very idea of transition – is the relationship between space and time in today's society, of which the city is a synthesis and emblem. The city is first and foremost a place where space and time undergo significant disruptions. Where the rural landscape suggests an articulated but also regular distribution, in the city space thickens or dilates in the built fabric, from the skyscrapers of downtown to the sprawl of the suburbs.

Time, too, contracts into accelerations and expands into pauses and suspensions, contrasting with the cadenced rhythms of the countryside. Moreover, the city has historically been associated with an 'other' place, that of utopia. The example of Tommaso Campanella's *The City of the Sun* is one among many. The utopian city is separated from the present by an unspecified time, but in the utopian city time stops in an eternal present. Utopia presupposes an uchrony. It is necessary, however, to ask what is the precise relationship between this double otherness, spatial and temporal. Without forgetting that the city is also the theatre of choice for dystopias, and not just today. If books and cinema are full of dystopian narratives in which the urban nightmare is produced by the intensification, to the point of distortion or reversal, of the same hyper-technological traits underlying modern utopias, we should not forget ancient condemnations of the city as a place of disorder and corruption.

Two authors of great historical-philosophical acumen have proposed apparently contrasting readings of the way the relationship between space and time has evolved in the modern era. According to Reinhart Koselleck (2002), utopian thinking shifted from a spatial to a temporal imaginary from the late XVIII century onwards. Rather than imagining an elsewhere, one imagines an otherwise, assuming that tomorrow will be different from today and yesterday. For Michel Foucault, on the other hand, the present can be seen as the age of space, of the network of relations spanning time, to the extent that «certain ideological conflicts animating present-day polemics oppose the pious descendants of time and the determined inhabitants of space» (Foucault, 1986: 22). In effect, however, Koselleck and Foucault are looking at two different phenomena: the former at how the relationship with time has become increasingly important in modern culture and politics; the latter at how this relationship has taken shape in late modernity.

In this contribution, I would like to reflect on how the idea of ecological transition, of which the city condenses challenges and opportunities, is entangled in a space-time tangle that is difficult to decipher. To do so I will make four steps by considering: 1) the different declinations of the concept of change and the relationship between space and time they entail; 2) the peculiar relationship with time established in the course of modernity,

how this has been changing in the recent evolution of the politics of anticipations, and what kind of spatiality they imply; 3) Foucault's famous text on 'heterotopias', and what it tells us about the spatio-temporal configuration of recent anticipatory approaches; 4) how to think of transition in heterotopic terms, in contrast to the opposing dominant tendencies, which in the hypothesis I try to develop do not allow for any substantial change.

What follows is not a fully developed argument. Rather, they are notes from a research programme that I have been pursuing for some time, and which deals with issues on which I think appropriate a more intense debate than has so far been.

The space and time of change

Today, it seems to me, we have four main conceptions of social change: revolution, transformation, transition and exodus. Each of them establishes a particular relationship between space and time.

Revolution means a reversal of the order of things: from the bottom up and from the top down. It requires a certain time but not another place. This also applies to transformation, which means reorganisation of the elements of that order, reconfiguration of their relations according to a new order, with more or less happy outcomes (possible 'monstrous' outcomes, à la Mr. Hyde). The time of transformation is, however, generally imagined as longer than that of revolution, which in historical experience finds its key in dramatic and short-lived events.

Transition suggests a more subtle, fluid, molecular rather than molar, change, but precisely for this reason potentially more radical: a little at a time, one can transit into something completely different. Time dilates further, but the relationship with space is more ambiguous. The idea of transit is inherently spatial, but in the notion of transition such movement can only be internal: not (also) from one place to another but (only) from one state to another.

Exodus, finally, means realising elsewhere what is not allowed here, expressing what is prevented here. Change in this case requires a generally not short time precisely because it is linked to a shift in space, although it is not only that. The change of place inevitably affects the identity of those who move: one cannot be

exactly the same elsewhere. The exodus to the promised land is a biblical theme that has been linked to that of revolution, in the sense that the subversion of order is sometimes only possible elsewhere (Walzer, 1985). In recent times, especially exponents of Autonomist thought have spoken of exodus (Virno, 1996), referring, however, to an exodus in the same place, a calling out of the capitalist order within its own meshes, considered so pervasive as not to allow for a geographical elsewhere. Put differently, the image of spatial movement intrinsic to the idea of exodus has been attenuated in favour of internal change.

Today, the very idea of exodus is less and less thematised by critical discourse, which is curious if one thinks of the growing waves of migration, but a further symptom of the erosion of the imaginary of elsewhere as a complement and support for the otherwise. Complicating matters is the appropriation of the figure of the exodus by capitalist elites, emblematised by figures like Elon Musk, who – largely responsible for the growing ecological unsustainability both directly, through their lifestyles (Oxfam, 2020), and indirectly, through the industrial model they stubbornly preside over and defend – fantasise about colonising other planets where they can reproduce the same social order from whose disaster they (alone) intend to escape. Never as much as now, in short, have the figures of change and the spatio-temporal relations involved been charged with ambivalences that invite careful scrutiny.

Time and late modernity

The expression ‘politics of time’ refers to the way in which past, present and future are related as crucial to the social order (Kaiser, 2015), Niklas Luhmann (1976) provided a particularly effective account of why and how such politics has become particularly relevant in modern societies. Modernity’s orientation to the ‘new’, that is, to a future conceived as open rather than as a repetition of the past, an accidental deviation from established patterns or the end of time, creates the condition for greater complexity in the relationship with time. If the future is a horizon of possibilities, the connection between ‘present futures’ (i.e. present visions of potential futures) and ‘future presents’ (i.e. states of affairs that actually come into being) becomes problematic. The emergence of probabilistic

and actuarial sciences in the late XVIIIth century provided a fundamental response, centred on the notion of risk (Hacking, 1990). Probability «defuturizes the future without identifying it with only one chain of events» (Luhmann, 1976: 141). In this regard, Foucault (2007) speaks of the advent of a 'securitarian' type of political rationality, where the determinism of sovereign and disciplinary power is replaced by the governance of the tendencies found in social and biophysical processes, in the population and the territory on which it resides.

The limits of probabilistic prediction began to be addressed in the 1920s, but it was not until the 1960s and 1970s, with the advent of disequilibrium and complexity theories and the gathering of evidence about the systemic nature of failures in predicting the social and ecological impacts of technologies, that 'incalculable risks' (an effective and therefore widely used oxymoron) began to be considered the norm rather than the exception. It may seem paradoxical that this is happening in the face of ever-increasing computing power and ever-expanding capacities for technological intervention in the world. However, it is easily explained. The more the capacities (and claims) to control the world increase, the more the sphere of what is beyond control (open chains, complex phenomena, true 'nescience', i.e. ignorance first of all of the extension and characteristics of what is ignored) becomes salient, a hidden but crucial part of decisions and their effects (Pellizzoni, 2023). Put differently, 'future presents' are less and less accessible through 'presents futures', i.e. forecasting and planning. Hence the success of the precautionary principle: acting against threats known enough to imagine the implications of their actualisation but not enough to calculate their probability. The trajectory of precaution, at the level of academia, public opinion and policy, rose rapidly in the 1980s and 1990s to its peak in the early 2000s and then declined just as quickly (Pellizzoni, 2009). This is certainly not due to a revival of probability, but rather to a sharpening of systemic uncertainty, a perceived widening of the hiatus between present futures and future presents produced by growing social and ecological turbulence, from which arose the need for new defuturisation technologies.

One of these is 'pre-emption'. A term often considered synonymous with prevention but which has little to do with the

latter in the traditional sense of predictability (Anderson, 2010; Kaiser, 2015). The idea, which has become the pivot of American security strategy after 9/11 with the 'war on terror' and the invasion of Iraq, is in fact to anticipate threats that have not yet manifested themselves, and thus are properly indeterminate. In what way? Through an 'incitatory' action: «Since the threat is proliferative in any case, your best option is to help make it proliferate more – that is, hopefully, more on your own terms» (Massumi, 2007: § 16), seizing the opportunities thus created. What is particularly relevant here is the temporal structure of this anticipatory approach. Whereas probabilistic prediction and precaution aim to alter the course of events from now (future presents depend, to a more or less precise extent, on present futures), pre-emption starts from the imagined – catastrophic – future and backtracks to the present time in order to realise a manageable version of it (present futures depend on future presents).

Apart from the deresponsibilization that this entails (an action in response to hypothetical threats cannot properly be judged wrong), the remarkable fact is that the action thus conceived generates the reality that proves its own validity. Emblematic in this regard is the statement by G.W. Bush: «Some may agree with my decision to remove Saddam Hussein from power, but all of us can agree that the world's terrorists have now made Iraq a central front in the war on terror» (cited in Massumi, 2007: § 17). That is to say: removing Saddam Hussein was the right thing to do because Iraq has become what justified such action. We are faced with a departure from the linear structure of time that characterised modernity, in favour of a recursive structure. The realisation of the catastrophe, taken for certain, becomes reference for the action aimed at postponing it. The effects of the latter redefine the present (and even the past, if we look closely: Iraq, says Bush, had to be a suitable place to become a terror centre if it has in fact become one; indeed, we can assume that it already was, even if we did not know it when we acted and only wanted to make it appear so). This redefinition in turn justifies further interventions that will generate new states of reality, on the basis of which we will proceed further. As one can see, pre-emption opens up an operational space whose objective is no longer the elimination of the threat but its modulation and, with

it, also – and perhaps above all – that of the threatened reality, as we have seen from everything that followed the invasion of Iraq.

It may be useful to note that the same mechanism is at work, in an inverted way, in the structure of technological hype (Pellizzoni, 2020). The future realisation here is not catastrophic but regenerative: food, health and long life for all, cheap and pollution-free energy, and so on. This imaginary of ‘disruptive’ innovation, whose irruption is continually evoked but never realised even though it is always on the verge of being so, retrocedes to the present to allow denouncing the forces that would hinder its realisation (conspirationists, radical ecologists, anti-scientists, fearful investors...). Once again, a space opens up for increasingly adventurous actions (and financial speculation), more and more profitable for the few and less and less democratically debated. The contrast between supporters and (real or presumed) opponents of innovation is apparently that between technological utopia and dystopia, but the latter envisages a linear structure of time, where future presents depend on present futures, whereas here the opposite is the case. Note that the past undergoes also in this case ontological perturbations: just think of how the nature of the human mind is continually redefined – each time what it ‘really’ is! – depending on the technologies that come to preside over the scientific and cultural imaginary (Israel, 2004), or how genetics has subjected the identity of organisms to a process of dematerialisation and consequent transferability from one medium to another (seed, test tube, computer...) (Thacker, 2007).

Pre-emption in the military and technological field is not the only anticipatory logic of this kind currently present. Another noteworthy and largely overlapping one is ‘preparedness’ (see Fig. 1). Of military origin too, focused first on nuclear attacks and then on bioterrorism, it has been expanding since the 2000s, as witnessed by its adoption by the World Health Organisation (WHO, 2009), in the direction of biological threats: new or resurgent infectious diseases conspicuously linked to climate change and intensive land use (Wallace, 2016). More recently, the approach has been extended to food security problems arising from climatic and geopolitical factors (OECD, 2020). The idea of preparation that underlies it is peculiar. It is not a matter

of preparing a response to known and predictable events, but of being ready to react to the unknown and surprise, to unforeseen and unpredictable threats, perhaps already in place but hidden. Rather than eliciting its manifestation, however, here it is a matter of catching its early signs. To this end, a crucial role is played by vigilance performed by 'sentinels', biological or otherwise, sensitive enough to pick up on danger signals but not too specific, calibrated to known threats (Lakoff, 2017; Keck, 2020). The goal is therefore not, nor can it be, to prevent the actualisation of the threat but, through early detection, to manage its expression. The re-establishment of 'normalcy' (elimination of the threat) officially remains the ultimate goal, but this goal is by definition unattainable: since new eruptions of the threat or new threats of comparable type are always to be expected, it is necessary to remain on guard at all times. What is done, therefore, is to retrograde from the announced future normality to the present in order to modulate responses and counter-responses between threat and defence, adapting society to a condition of permanent war.

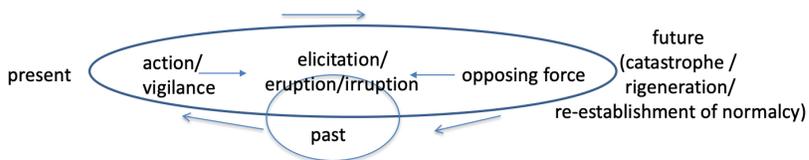


Figure 1. Logic of pre-emption and preparedness

Once again, it is the future presents that depend on the present futures rather than the other way around. That a space for action is opened up here that would otherwise be unthinkable is demonstrated by the handling of the Covid-19 emergency, the questionability of which is becoming increasingly apparent (Mucchielli, 2020; Shir-Raz *et al.*, 2022). Not only have serious distortions to the rule of law been justified, tolerated and even advocated (restrictions on movement, potentially indefinite renewal of the state of emergency), but strategies designed to 'chase' the virus, adapting to it, rather than preventing it, such as the Italian zoning system, have been implemented (Pellizzoni and Sena, 2022). The now endemic presence of Sars-Cov-2 and

the announcement of future pandemics further strengthen the dispositive. The end of the state of exception becomes an unattainable vanishing point.

If Luhmann (1976) spoke of a 'future that cannot begin' because one acts on the present to change it, now this missed or perpetually postponed beginning takes on, as we can see, a properly eschatological structure. Of eschatology, pre-emption and preparedness have both the apocalyptic tone of 'end of time' - be it marked by disaster, regeneration or the restoration of 'normalcy' after a profound disruption - and the opening up of an operational space constituted by the 'time of the end': the time between now and the end of time (Agamben, 2005). *Kronos*, the flowing time, is replaced by *kairos*, the time of opportunity, or rather of 'incalculable risk' taking. This time of indefinite duration is traversed by waves and counter-waves of threats/promises and responses/resistances in a sort of secularised and aporetic manifestation of the *Katechon*, the 'restraining force' of which St Paul spoke, without ever reaching an outcome in the sense of a new social order (Pellizzoni, 2020). Put another way, the anticipatory logic emerging in recent years is resolutely conservative or reactionary: the announced catastrophe, regeneration or rediscovered peace cannot and must never be realised for making the present increasingly manipulable, in order to eternalise it. Today's *Katechon* resembles Tomasi di Lampedusa's *Leopard*.

Heterotopias

The framework outlined raises the question of whether the ecological transition is destined to turn in on itself, all the more so since the apocalyptic space-time topology underlying the anticipatory logics that are making their way into disparate spheres (military, biomedical, agri-food, etc.) is also spreading into the imagination of social movements (Cassegard and Thörn, 2018). To try to respond, one opportunity seems to be offered by the notion of 'heterotopia'. This is one of the most famous of those coined by Michel Foucault, although its elaboration remains confined to a short essay dating from 1967: *Des espaces autres* (Foucault, 1986)¹.

¹ Originally prepared for a lecture, the text was first published in *Architecture, Mouvement, Continuité*, October 1984.

Foucault begins by emphasising «the fatal intersection of time with space» (p. 22). Each historical epoch has its own particular vision of space, and this vision also implies a given relationship with temporality. The Middle Ages conceived of space in a hierarchical manner (sacred/profane, closed/open, urban/rural, terrestrial/heavenly). This space of localisation is contrasted with the infinitely open space inaugurated by Galileo. While the former, we might add, implies a static, or rather circular, temporality (the movement of comings and goings between the salient poles), the latter implies the openness of time of which Luhmann speaks. In turn, Foucault continues, the space of extension has now been replaced by the space of emplacement², defined by the «relations of proximity between points or elements» (p. 23). This is «the epoch of «juxtaposition, the epoch of the near and far, of the side by side, of the dispersed» (p. 22), to the point that time appears as «one of the various distributive operations [*jeux de distribution*] that are possible for the elements that are spread out in space» (p. 23). Trains and places of passage such as roads and cafes perfectly express the idea of dislocation, as «something through which one goes, [...] something by means of which one can go from one point to another and then it is also something that goes by» (p. 24). We live within a set of relations that define emplacements that are «irreducible to one another and absolutely non superimposable» (p. 23). Of these emplacements the most interesting for Foucault are those

«that have the curious property of being in relation with all the other sites, but in such a way as to suspect, neutralize, or invert the set of relations that they happen to designate, mirror, or reflect. These spaces, as it were, which are linked with all the others, which however contradict all the other sites, are of two main types. First there are the utopias. Utopias are sites with no real place. They are sites that have a general relation

² The English translation renders the French 'emplacement' used by Foucault with 'site' and his 'localisation' with 'emplacement'. In Italian translations 'emplacement' is translated with 'dislocazione' (which rather corresponds to 'displacement' in English and 'dislocation' in French) and sometimes with 'luoghi' ('sites', 'locations' in English; 'lieux', 'places' in French). The resulting confusion does not help understand the meaning Foucault aimed to convey, which in my view is the following: in the Middle Ages the notion of space was relationally and temporally fixed; from Galileo it becomes dynamic and open-ended; now it displays, within a same place or location, both vicinity and distance, presence and absence, connection and disconnection, continuity and ephemerality.

of direct or inverted analogy with the real space of Society. They present society itself in a perfected form, or else society turned upside down, but in any case these utopias are fundamentally unreal spaces. There are also, probably in every culture, in every civilization, real places – places that do exist and that are formed in the very founding of society – which are something like counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted. [...] Because these places are absolutely different from all the sites that they reflect and speak about, I shall call them, by way of contrast to utopias, heterotopias» (p. 24).

Precisely because they are real, heterotopias allow for a description, a topology. First, says Foucault, we distinguish two categories. The first is that of the 'crisis' heterotopias, typical of past societies and consisting of privileged or sacred or forbidden places reserved for individuals placed in a state of crisis with respect to society, for example in connection with rites of passage such as childbirth or the transition to adulthood, but also conditions such as old age. Then there are the 'deviant' heterotopias, typical of modern society, where individuals with deviant behaviour are placed, such as psychiatric clinics, prisons and old people's homes (also to be considered crisis heterotopias for the aforementioned reason), or even brothels.

Secondly, a same heterotopia can perform different functions depending on the culture in which it operates. The example Foucault gives is the cemetery and the transformations it has undergone in its location, from the heart of the community (inside or next to the church) to its isolated positioning on the edge of the city. The third aspect is that «the heterotopia is capable of juxtaposing in a single real place several spaces, several sites that are in themselves incompatible» (p. 25). This is the case of the cinema screen or the theatre stage, but above all of the garden, at once particle and representation of the totality of the world.

The fourth aspect is the connection between 'other spaces' and time, heterotopias and heterochronies. «The heterotopia begins to function at full capacity when men [*sic*] arrive at a sort of absolute break with their traditional time» (p. 26). Once again, the cemetery is an emblematic case: heterotopia in which the heterochrony of the end of time, its continuation and its dissolution, is realised. But there are also libraries and museums, heterotopias whose

heterochrony consists in an accumulation and gathering of time in itself. And there are festivals, fairs, and holiday villages, heterotopias whose heterochrony is that of the ephemeral, of the abolition and rediscovery of time in a suspended present. Furthermore, «heterotopias always presuppose a system of opening and closing that both isolates them and makes them penetrable» (p. 26). Heterotopias are exclusive and inclusive on the basis of rituals or rules, as is the case with prisons and sacred places, but also with motel rooms with separate entrances from others. Finally, heterotopias create

«a space of illusion that exposes every real space, all the sites inside of which human life is partitioned, as still more illusory », or vice versa «create a space that is other, another real space, as perfect, as meticulous, as well arranged as ours is messy, ill constructed, and jumbled» (p. 27). Closed houses, colonies and ships are the examples Foucault gives. The essay actually ends with the claim that «the ship is the heterotopia *par excellence*. In civilisations without boats, dreams dry up, espionage takes the place of adventure and the police the place of pirates» (p. 27).

Heterotopias and autotopias

If we compare what Foucault says about heterotopias with the discussion about the recent politics of anticipation, we find various assonances and a resounding dissonance. Let us begin with the latter. As Foucault describes them, heterotopias are endowed with a powerful transgressive force. In one way or another, they challenge the social order. Exactly what emerging anticipatory logics programmatically hamper. And yet the assonances between heterotopias, with their heterochronies, and pre-emption or preparedness are undoubted: the substitution of pre-modern circular time and modern linear time with a time in which past, present and future fold onto each other; the replacement of *kronos* with *kairos*; the co-presence of proximity and distance, visibility and evocation, reality and unreality; the possibility of moving back and forth in the space-time topology. Have we therefore entered the era of heterotopias, which from exception become rule? And was Foucault wrong about their transgressive nature? Or has this nature changed into its opposite? Let us try to get our bearings by resorting to the 'semiotic square' of the linguist Algirdas Julien Greimas (1984), according to which

the relations between concepts are of three types: contrariety (opposition), complementarity (implication) and contradiction. Let us see what happens if we apply the square to our case (Fig. 2).

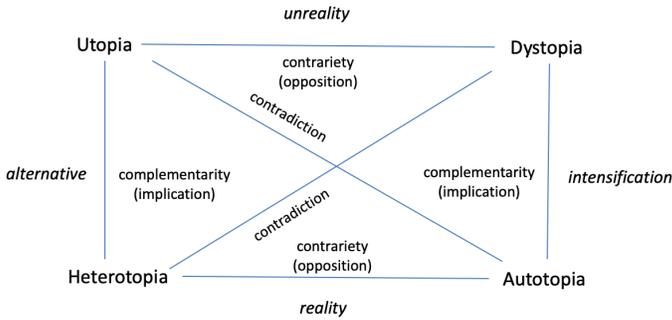


Figure 2. Spatio-temporal topologies of anticipation

Foucault contrasts utopia and heterotopia on the basis of the unreality of the former and the reality of the latter, or rather its ability to relate real and unreal, presence and absence, distance and proximity, similarity and difference. Both, however, as Foucault defines them, have a transgressive, alternative relationship to the present order. The difference is that heterotopia shows here and now, at least to some extent, what utopia postpones to the future. The relationship between utopia and heterotopia, then, is not one of contrariety but complementarity. The opposite of utopia is dystopia: a future that realizes or fully follows up on one or more of the potential or actual aspects of the present that utopia would like to prevent or dismiss. In this sense, dystopia stands in contradictory relation to heterotopia. But what is the latter opposed to and with what does dystopia stand in relation of implication? It is, evidently, the spatio-temporal topology that characterizes pre-emption and preparedness and which we can now call 'autotopia,' since it is a reiterative mechanism, not linear therefore but neither circular but spiral rather, since it proceeds by projecting onto itself, intensifying aspects present in reality, which it leverages to counter what it opposes and to promote what it appreciates by acting homeopathically (more terror to defeat terror, more emergency measures to overcome emergency, more technology to solve the problems technology creates), and thus realizing in part what the dystopia relegates to

the imaginary. How to grasp this topology more accurately? Foucault considers the mirror a middle ground between utopia and heterotopia, between unreality and reality. The mirror allows me to see myself there where I am not, but nevertheless «it exerts a sort of counteraction [*effet en retour* = feedback] on the position that I occupy», in the sense that it makes it «at the moment when I look at myself in the glass, at once absolutely real, connected with all the space that surrounds it, and absolutely unreal since in order to be perceived it has to pass through this virtual point which is over there» (p. 24). But of mirror effects there is more than one. The one described by Foucault we might call the 'objectifying' effect, in the sense that by mirroring myself I constitute myself as the object of my gaze. There is also a 'subjectifying' effect. Painting offers various examples of this. One of the most famous is Jan van Eyck's *Arnolfini Portrait*, where on the back wall of the scene stands a convex mirror in which two figures of onlookers can be distinguished. The mirror, in other words, testifies to the presence of those who are watching the same scene that we see in observing the painting (Fig. 3).



Figure 3. Jan van Eyck, *Arnolfini Portrait* (1434). London, National Gallery

There are even more complex mirror effects. One example comes from another famous painting, *Las Meninas* by Diego Velasquez, in which the painter portrays himself while painting a picture of which only the back can be seen but whose subject are the two characters reflected in the mirror that stands behind the painter's shoulders and whose position is basically that of the person who is looking at the picture (Fig. 4). Here the mirror performs both an objectifying and subjectifying function.



Figure 4. Diego Velasquez, *Las meninas* (1656). Madrid, Prado Museum

Then there is the figure of the *mise en abyme*, found in a variety of artistic expressions, from painting to literature to film, in which something is reproduced (potentially endlessly) within itself: story within story, image within image, film within film. When it is exactly the same thing - the same story, the same image - a peculiar mirror effect takes place, where the image

refers to nothing but itself. One of the best-known examples is the cover of Pink Floyd's *Ummagumma* album, created by Studio Hypgnosis, where the members of the group are portrayed in scenes that in turn include a similar portrait, at interchanged positions (Fig. 5).

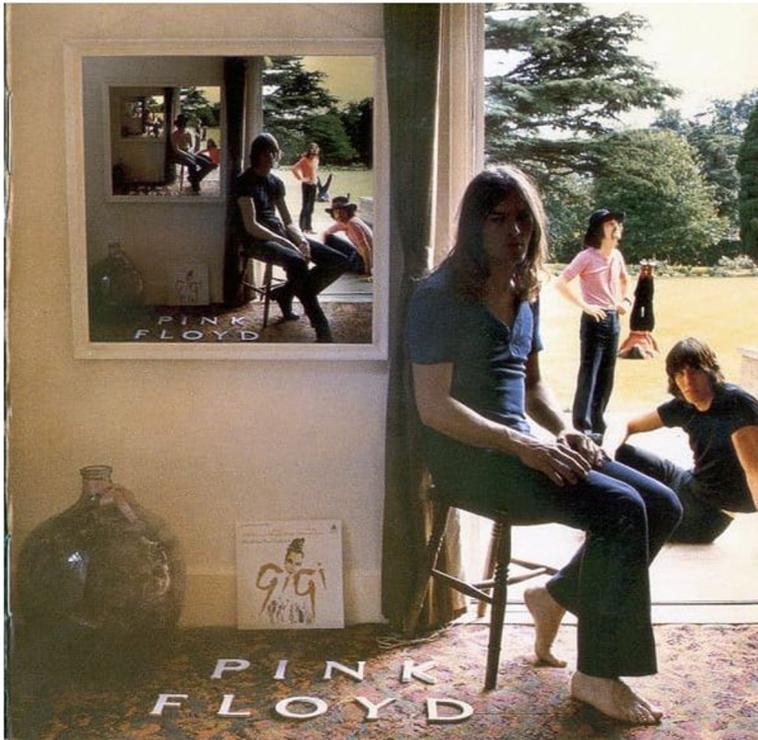


Figure 5. Pink Floyd (Studio Hipgnosis), *Ummagumma*. Album cover

In the *mise en abyme*, as in the case of the portraits of van Eyck and Velazquez, movement is not absent, but is purely internal; even time flows within itself, in a kind of kairolological instant. A further variant of the mirror effect, where movement is more apparent in the double sense of the word (explicitly portrayed but for that same reason quite obviously screwed in on itself), is that of Maurits Escher's impossible perspectives, such as *Ascending and Descending* (Fig. 6) where one is constantly moving without ever going anywhere.

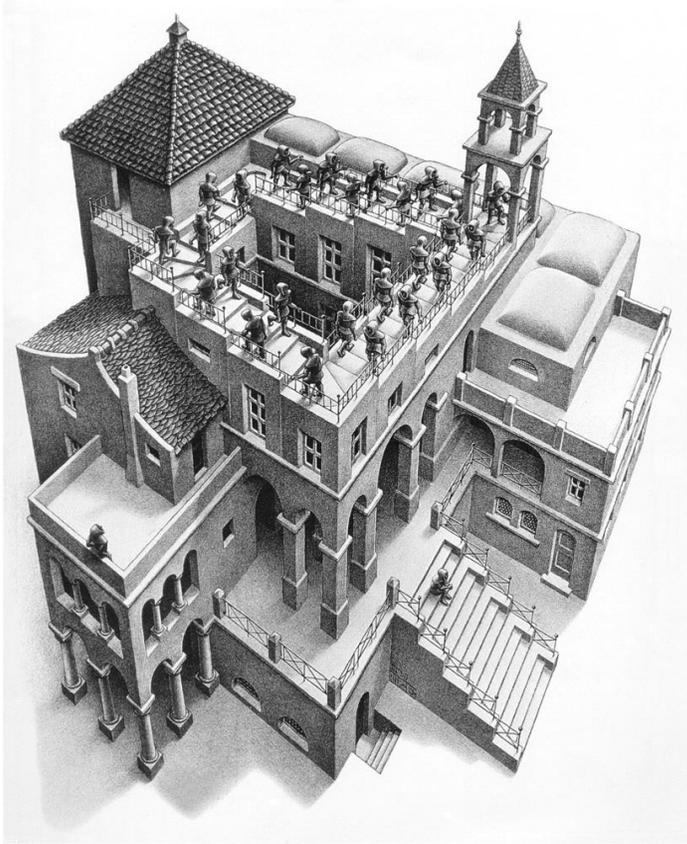


Figure 6. Maurits Escher, *Ascending and descending* (1960). Lithograph

Heterotopias of Transition

Las Meninas, *Ummagumma* and *Ascending and Descending* express quite effectively, it seems to me, the spatiotemporal topology of emerging anticipations. The current historical phase thus seems to be marked by autotopias rather than heterotopias, which are opposed to the former while sharing their absolutely real character (war on terror and management of Covid-19 docent), as contrasted with the unreal character of utopias and dystopias.

In this context, the idea of transition fades into an ever-postponed and ultimately unthinkable – before unrealizable – appointment. On the side of production relations, the capitalist model, in its more or less oligarchic and statist variants,

dominates even where it is still theoretically opposed. Neither governments nor ruling elites dream of questioning it, instead presenting it as the means through which sustainability can be achieved. On the side of production means, the heralded revolutions capable of making planetary ecological budgets take a quantum leap toward sustainability are not only not being realized but are contradicted by data indicating a declining marginal return on the energy, financial and organizational investment required to advance existing technologies, including those produced by the latest technological revolution, the bio-informatics revolution, still often referred to as decisive (Bonaiuti, 2019). The return of nuclear power to the scene is in this sense primarily a symptom of despair. But it is the productivist imaginary underlying the technological one – well-being or even human fulfilment is achieved only in and through production, the relentless transformation of the world – that hampers the exploration of real alternatives.

Yet something is moving. Degrowth and sufficiency theorizing are flourishing, as are ‘prefigurative’ movements, so defined insofar as they focus on the realization of the desired future in the here and now, obviously within the limits of available opportunities and perspectives, yet under the assumption that the end does not justify the means but rather the means embody the ends that are proposed to be realized (Monticelli, 2022). Prefigurative action – bread pacts, farmers’ markets, time banks, urban gardens, transition towns, participatory plant breeding, frugal innovation, *zones à défendre*, and more – seems to somehow transpose to the plane of praxis the idea of heterotopia and heterochrony, of places and times in which the elements of the social order are as much (inevitably) present as they are contradicted.

The city is once again a privileged theatre of processes to be studied also and primarily to learn to distinguish autotopias and heterotopias, which is less easy than one might assume. Take for example ‘controlled environment agriculture’ (CEA) i.e., cultivation under conditions isolated from the external environment. It offers numerous advantages in terms of ecological transition (Engler and Krarti, 2021): greater shelter from climatic turbulence; protection from pests and competitive species, thus less or no need for pesticides; higher

yields per square meter of area, with excellent adaptability to the limited and industrialized spaces of the urban environment (use of warehouses or disused mining structures; 'vertical farms', i.e., stacked fields; 'plantscrapers' i.e. skyscraper cultivations, indoors or on the roof) and thus possibilities for the development of zero-kilometre agriculture, with abatement of transport emissions and increasing food self-sufficiency of the city; low consumption of land, water and fertilizers thanks to hydroponic and aeroponic techniques, i.e., use of water or aerosols with nutrients. 'Precision fermentation' then aims to create 'cell factories' suitable for, among other things, producing genetically modified microorganisms that are in turn useful for the formation of proteins on which to base the production of 'cultured meat' (with the energy savings and ethical aspects of reducing traditional livestock farming). All this requires increasingly precise techniques, favoured by digitization, and the genetic design of organisms to be interfaced with the established environmental conditions and goals.

With more or less gritted teeth, it is admitted that all this involves high energy costs (Engler and Krarti, 2021; Vatistas *et al.*, 2022). Their reduction can be pursued in various ways, yet the ecological impact of CEA ultimately depends on the availability of renewable sources (none of which, moreover, are zero-impact). Thus, also in perspective the overall ecological balance of CEA is quite speculative: for now but probably forever or at least for a long time, since it is one of those cases – such as the cost of a nuclear KW or whether it is more or less ecologically impactful to use the same car for many years or to switch after a few to the latest available generation – where the outcome depends on which aspects are considered pertinent or unrelated to the account. Most importantly: neither the production model, centred on intensification of yields, nor the food model, aimed at maintaining current styles, nor the ownership model, based on technological capitalization that, as it intensifies more and more, favours corporate concentrations, is questioned. In front of these autotopic processes stand many of the prefigurative experiences mentioned above and a variety of agroecological approaches, whose heterotopic character is expressed by the deconstruction of each of these models: social-ecological

balance instead of yield intensification; different approach to the use of space and the goals of technical development; changing lifestyles, production relations, and the relationships between production and consumption.

Conclusion

It may be objected that the proposed exemplification is quite, too, schematic. Right. However, the foregoing, or similar reasoning, does not pretend to close the discourse: on the contrary, it intends to open it up, showing how it is necessary to equip oneself with analytical tools appropriate to the complexity and ambivalence of the processes underway. The distinction between autotopia and heterotopia aims precisely at this goal. It itself needs further elaboration. For example, Foucault's assertion about the heterotopic character 'par excellence' of the ship questions the relationship between change and movement. Contingent or constitutive? And, in the second case, how to imagine it today? How to combine ongoing migration with the idea that with respect to capitalism there is no outside but an internal one? Many prefigurative activities, particularly urban, offer insights in this regard: they create and move in 'spaces apart' as a necessary element of, rather than background or complement to, new relations between humans, non-humans and things.

In short, the question is how to think heterotopias of transition. In this regard, it is perhaps Escher who provides an effective suggestion, just as his perspectives that twist on themselves well illustrate how autotopias work. This is *Three Worlds*, a lithograph print depicting an autumnal scene: the surface of a pond or stream on which a bed of leaves rests, bare tree trunks are seen reflected, and a fish, whose silhouette is caught in transparency, appears (Fig. 7). Each of these worlds refers back to the other by merging reality and appearance, surface and depth, air and water, organic and inorganic, active life and dormant or past life; each presupposes the other and none is sufficient unto itself. It is not futile to think that a lake or river dried up by drought would not allow any of these forms of life – real and apparent, concrete and ephemeral – to subsist and meet, except in being swept away into a single, tragic fate.



Figure 7. Maurits Escher, *Three worlds* (1955). Lithograph

References

Agamben G. (2005). *The time that remains: a commentary on the Letter to the Romans*. Stanford, CA: Stanford University Press.

Anderson B. (2010). «Preemption, precaution, preparedness: anticipatory action and future geographies». *Progress in Human Geography*, 34(6): 777-798.

Baker S. (2019). «Novel ecosystems and the return of nature in the Anthropocene». In: Arias-Maldonado, M., Trachtenberg, Z., eds., *Rethinking the environment for the Anthropocene*. London: Routledge, pp. 51-64.

- Bonaiuti M. (2018). «Are we entering the age of involuntary degrowth? Promethean technologies and declining returns of innovation». *Journal of Cleaner Production*, 197(2): 1800-1809.
- Cassegard C., Thörn H. (2018). «Toward a postapocalyptic environmentalism? Responses to loss and visions of the future in climate activism». *Environment and Planning E*, 1(4): 561-578.
- Engler N., Krarti M. (2021). «Review of energy efficiency in controlled environment agriculture». *Renewable and Sustainable Energy Reviews*, 141(110786) [online]. doi:10.1016/j.rser.2021.110786.
- EEA (2022). *Energy prosumers and cities*. EEA Briefing no. 19/2022. Copenhagen: European Environment Agency.
- Foucault M. (1986). «Of other spaces». *Diacritics*, 16(1): 22-27.
- Foucault M. (2007). *Security, territory, population. Lectures at the Collège de France, 1977-1978*. New York: Palgrave MacMillan.
- Greimas A. (1984). *Structural semantics*. Lincoln, NE: University of Nebraska Press.
- Hacking I. (1990). *The taming of chance*. Cambridge: Cambridge University Press.
- Israel G. (2004). *La macchina vivente. Contro le visioni meccanicistiche dell'uomo*. Torino: Bollati Boringhieri.
- Kaiser M. (2015). «Reactions to the future: the chronopolitics of prevention and preemption». *Nanoethics*, 9: 165-177.
- Keck F. (2020). *Asian reservoirs*. Durham, NC: Duke University Press.
- Koselleck R. (2002). «The temporalization of utopia». In: Id., *The practice of conceptual history: timing history, spacing concepts*. Stanford, CA: Stanford University Press, pp. 84-99.
- Lakoff A. (2017). *Unprepared. Global health in a time of emergency*. Oakland, CA: University of California Press.
- Luhmann N. (1976). «The future cannot begin: temporal structures in modern society». *Social Research*, 43(1): 130-152.
- Massumi B. (2007). «Potential politics and the primacy of pre-emption». *Theory & Event*, 10(2). [online]. doi: 10.1353/tae.2007.0066.

- Monticelli L., ed. (2022). *The future is now. An introduction to prefigurative politics*. Bristol: Bristol University Press.
- Mucchielli L. (2020). «Behind the French controversy over the medical treatment of Covid-19: the role of the drug industry». *Journal of Sociology*, 56(4): 736-744.
- OECD (2020). *Strengthening agricultural resilience in the face of multiple risks*. Paris: OECD.
- Oxfam (2020). *Confronting carbon inequality*. Nairobi: Oxfam International.
- Pellizzoni L. (2009). «Revolution or passing fashion? Reassessing the precautionary principle». *International Journal of Risk Assessment and Management*, 12(1): 14-34.
- Pellizzoni L. (2020). «The environmental state between pre-emption and inoperosity». *Environmental Politics*, 29(1): 76-95.
- Pellizzoni L. (2023). *Calvalcare l'ingovernabile. Natura, neoliberalismo e nuovi materialismi*. Napoli-Salerno: Orthotes.
- Pellizzoni L., Sena B. (2022). «Preparedness as governmentality. Probing the Italian management of the Covid-19 emergency». *Sociologica*, 15(3): 61-83.
- Shir-Raz Y., Elisha E., Martin B., Ronel N., Guetzkow J. (2022). «Censorship and suppression of Covid-19 heterodoxy: tactics and counter-tactics». *Minerva* [online]. doi: 10.1007/s11024-022-09479-4.
- Thacker E. (2007). *The global genome*. Cambridge, MA: MIT Press.
- Vatistas C., Avgoustaki D.D., Bartzanas T. (2022). «A systematic literature review on controlled-environment agriculture: how vertical farms and greenhouses can influence the sustainability and footprint of urban microclimate with local food production». *Atmosphere*, 13(1258) [online]. doi: 10.3390/atmos13081258.
- Virno P. (1996). «Virtuosity and revolution: the political theory of exodus». In: Virno, P., Hardt, M., eds., *Radical thought in Italy: a potential politics*. Minneapolis: Minnesota University Press, pp. 189-212.
- Wallace R. (2016). *Big farms make big flu: dispatches on*

influenza, agribusiness, and the nature of science. New York: Monthly Review.

Walzer M. (1985). *Exodus and revolution*. New York: Basic Books.

WHO (2009). *Pandemic influenza preparedness and response: a WHO guidance document*, Geneva, World Health Organization.

Luigi Pellizzoni insegna Sociologia dell'ambiente e del territorio presso la Scuola Normale Superiore e coordina il gruppo POE-Politica Ontologie Ecologie (www.poeweb.eu).

Si occupa di questioni ecologiche, tecnoscienza, conflitti e partecipazione. Tra le pubblicazioni recenti: *Ontological Politics in a Disposable World. The New Mastery of Nature* (Routledge, 2016, 2019); *Cavalcare l'ingovernabile. Natura, neoliberalismo e nuovi materialismi* (Orthotes, 2023); *Handbook of Critical Environmental Politics* (co-curatela, Edward Elgar, 2022); *Introduzione all'ecologia politica* (curatela, Il Mulino, 2023).

luigi.pellizzoni@sns.it