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Tiziana Terranova

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Another Life

The Nature of Political Economy in Foucault's Genealogy of Biopolitics

Tiziana Terranova

Abstract

The article focuses on the relation established by Foucault in the two lecture courses *Security, Territory, Population* and *The Birth of Biopolitics* between life, nature and political economy. It explores the ways in which liberalism constructs a notion of economic nature as a phenomenon of circulation of aleatory series of events and poses the latter as an internal limit to sovereign power. It argues that the entwinement of vital and economic processes provides the means of internal redefinition of the *raison d'État* and uses such an explanation to understand the emergence of the network topos as a technology of regulation of the unstable co-causality of milieus of circulation. The article also follows Foucault's argument that the neoliberal market is significantly different from the liberal market inasmuch as, unlike the latter, it is not defined as an abstract logic of exchange among equals but as an ideal logic of competition between formal inequalities. Finally it asks whether new theories of social production and sympathetic cooperation, in the work of authors such as Yochai Benkler and Maurizio Lazzarato, can offer an alternative to the neoliberal logic of market-based competition as the basis for the production of new forms of life.

Keywords

biopolitics ■ cooperation ■ neoliberalism ■ political economy ■ social production ■ topology

So, since there has to be an imperative, I would like the one underpinning the theoretical analysis we are attempting to be quite simply a conditional imperative of the kind: if you want to struggle, here are some key points, here

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> are some lines of force, here are some constrictions and blockages. . . . Of course, it's up to me, and those working in the same direction, to know on what fields of real forces we need to get our bearings in order to make a tactically effective analysis. But this is, after all, the circle of struggle and truth, that is to say, precisely, of philosophical practice. (Foucault, 2007: 3)

THIS ARTICLE is concerned with the genealogical relation established in two recently published courses by Michel Foucault (*Security, Territory, Population: Lectures at the Collège de France, 1977–1978* and *The Birth of Biopolitics: Lectures at the Collège de France, 1978–1979*) between biopolitics, political economy, 'nature', 'life' and 'market' (Foucault, 2007, 2008). This connection is affirmed by Foucault through a reconstruction of the ways in which the political rationalities of liberalism and neoliberalism are essentially implicated in the redefinition and individuation of the vital, the natural and the physical. These terms are persistently used throughout the two courses especially there where Foucault explores the central role of political economy in providing the art of government with a new rationality and strategies of action. In this sense, these two courses see Foucault returning to some of the ground already covered in *The Order of Things* (2001), but from a different perspective. Whereas in the former the question of political economy was posed in terms of the rules defining the formation of concepts, in the two courses it is posed genealogically, that is in the light of the objectives and strategies within which political economy is inscribed and with reference to the modes of political actions that it suggests (Foucault, 2007). In particular, as stated in the opening lecture of *The Birth of Biopolitics*, Foucault's analysis is framed within the attempt to grasp:

> . . . the level of reflection in the practice of government and on the practice of government . . . that is the way in which this practice that consists in governing was conceptualized both within and outside government, and anyway as close as possible to governmental practice. (2008: 2)[1]

Foucault's analysis of the role played by political economy in redefining the art of government gives a new inflection to his famous notion of biopolitics, and thus powerfully resonates with the last two decades of arguments and controversies around the 'biology' of the free market, the 'real subsumption of life under capital', and 'bioeconomy and cognitive capitalism' (Fumagalli, 2007; Hardt and Negri, 2000; Kelly, 1995).[2] Foucault's lectures in particular make it possible to think about the process by which the economic-institutional reality of capitalism (as a series of variable historical singularities, rather than the linear expression of a single economic logic) has not simply subsumed life in its economic processes of production, but actually drawn on life as a means of redefining a whole new political rationality where economic and vital processes are from the beginning deeply intertwined. The article will thus ask what possibilities are opened by a reading of the *bios* of economic processes which sees it neither

simply as a matter of ideology nor exclusively in terms of a 'real subsumption of life under capital', but rather as part of a complex historical trajectory.

This article will thus re-assemble and re-actualize Foucault's genealogy of biopolitics by focusing on those passages where he describes the ways in which political economy poses the 'nature' and the 'life' of economic processes as a principle of internal limitation to the power of the sovereign; where he claims that such nature corresponds to the practical individuation of milieus of circulation characterized by the co-causality of aleatory series of events; and where he underlines the important distinction between medieval, liberal and neoliberal conceptions of the 'transactional reality' of the market, suggesting that the neoliberal market mobilizes primarily the formal structure of competition rather than the abstract logic of exchange. Finally, the article will also examine the potential of notions of 'social production' and 'sympathetic cooperation' as treated in two very different texts: the liberal political theory of social production proposed by Yochai Benkler's *The Wealth of Networks* (2006); and the post-Marxist economic psychology of sympathetic cooperation of Maurizio Lazzarato's *Puissances de l'invention* (2002). Inasmuch as social production and cooperation, in fact, have become increasingly the focus of much debate around possible alternatives to the market economy and its political rationality, the article will closely look at the different notions of 'nature' and 'life' expressed by these different theories of social production and their potential to open up alternatives to the 'life' individuated and fabricated by liberal and neoliberal biopolitics.

The Nature of Political Economy

The course delivered by Foucault at the Collège de France in 1979, *The Birth of Biopolitics*, while claiming to be concerned with giving consistency to the 'vague notion of biopolitics', is overall mainly preoccupied with outlining the larger political rationalities which, in his analysis, should make biopolitics intelligible. Throughout the course great emphasis is placed in particular on the emergence of economic processes as a principle of internal limitation of sovereignty introduced by a new, post-medieval, European *raison d'État*. In so doing, Foucault demonstrates how political economy, even as it supports the freedoms of circulation that will also require the development of mechanisms of security, allows what the 18th-century art of government called the 'reason of state' to redefine the means to achieve its objectives (such as internal stability coupled with economic enrichment). Here the 'nature' of economic processes is an essential part both of the critique proposed by the first, pre-Marxist political economists regarding the 17th-century authoritarian 'police state', and the instrument of the redefinition of the objectives and methods of government.

The emergence of the notion that economic processes constitute a natural principle of limitation to the absolute power of the sovereign is framed by Foucault in terms of the political problems posed by the

18th-century European state. Foucault describes such a state as having given up its internal imperial ambition ('Rome finally disappears'), having accepted being just one (European) state among other (European) states, and displaced its imperial and colonial *conatus* onto the rest of the world (Venn, 2009). Foucault points out here a particular challenge that the achievement of such internal truce among European states at the expense of the rest of the world posed to the internal functioning of European sovereignty. If externally, that is in its relation to other European states, the power of the state was bound by the so-called 'European balance', internally, its objectives were potentially unlimited. In order 'to maintain an always uneven, competitive equilibrium with other states' (Foucault, 2008: 7), the 18th-century European state strives to exercise unlimited regulation within its borders in relation to the behaviour of its subjects and their economic activity, thus becoming what at the time was called a 'police state'.

Foucault distinguishes between two critiques of the unlimited internal objectives posed by the *raison d'État* and the police state in 18th-century Europe – critiques that continue to reverberate today: the first is the 'extrinsic' critique of juridical thought that seeks the principle of internal limitation of the *raison d'État* through a notion of rights, which are given as anterior and external to sovereignty; the second, posed by political economists, sees such a principle of internal limitation in the evidence constituted by the naturalness of economic processes, and in so doing redefines the whole art of government as such. In the two modes of critique, Foucault remarks, the limitation of sovereignty is achieved in two different ways, with very different implications.

Since the early 18th century, then, juridical thought, according to Foucault, has opposed to the unlimited power of the police state (that is, a condition of unlimited internal sovereignty) an extrinsic critique in the form of the notion of 'rights'.

> External legal limits to the State, to *raison d'État*, means first of all that the limits one tries to impose to the *raison d'État* are those that come from God, or those which were laid down once and for all at the origins, or those which were formulated in the distant past of history. (2008: 10)

Foucault remarks on the 'restrictive, dramatic' functioning of the juridical limitations on the power of the sovereign, 'since basically the law will only object to *raison d'État*, when the latter crosses those legal limits', which will allow the law to declare a government illegitimate and hence 'if necessary to release subjects from their duty of obedience' (2008: 10).

The intrinsic critique of the state of police, however, is defined by Foucault as marking 'an important transformation that in a general way will be a characteristic feature of what could be called modern governmental reason' (2008: 10). This second limitation, in fact, is defined as 'a de facto regulation, a de facto limitation' (2008: 10). It will not be a legal limitation even though, at some point, the law will have to transcribe it in the form of

rules. The infringement of this limitation will not make a government illegitimate, but a 'clumsy, inadequate, government that does not do the proper thing' (2008: 10). This second intrinsic critique, hence, does not pose the question of legitimacy, but that of the efficacy of the actions of government. It will not judge such actions on the basis of a notion of origins, but in terms of an evaluation of effects. The intellectual instrument and the form of rationality that makes possible such self-limitation, in fact, is not the law, but political economy. This principle of limitation, unlike juridical thought, does not rise against the *raison d'État*, but within its general objectives such as the state's enrichment and internal stability. Political economy will thus not object to despotism in principle, as juridical thought does, but will pose the economic question within the field of governmental practice, 'not in terms of what might found it by right, but in terms of its effects: What are the real effects of the exercise of governmentality?' (Foucault, 2008: 15). Hence juridical reason and political economy will come to constitute two different trajectories, two different modes of critique of governamental reason that will proceed from very different premises and with very different outcomes. It is also clear from Foucault's argument that the critique proposed by political economy of the actions of government will have a lot more leverage than the juridical critique based on a notion of rights precisely because it falls within the general logic of *raison d'État* and not outside it, that is in the transcendent and extrinsic domain of the law.

What is also interesting about the role played by political economy in Foucault's genealogy of biopolitics, however, is the relevance of notions of 'nature' and 'life' in the definition of economic processes. Foucault remarks on the different inflections given to the expression 'political economy' around the middle of the 18th century, but ultimately underlines the centrality of the vital nature of economic processes to be found within the writings of the first political economists. It is by asking what could be the nature of the internal limits on the power of the sovereign that political economy formulates the notion of the 'naturalness' of economic processes. It is while answering this type of question, in fact, that 'political economy revealed the existence of phenomena, processes, regularities that necessarily occur as a result of intelligible mechanisms' (Foucault, 2008: 15). This allows Foucault to claim that the whole notion of nature will be completely transformed by the appearance of political economy. For example, for political economy, nature cannot be considered an original and reserved region that sovereign power needs to respect.

> Nature is something that runs under, through and in the exercise of governmentality. It is, if you like, its indispensable hypodermis. It is the other face of something whose visible face, visible for the governors, is their own action. Their action has an underside, or rather, it has another face, and this other face of governmentality, its specific necessity, is precisely what political economy studies. It is not background, but a permanent correlative. Thus,

> the *économistes* explain, the movement of the population to where the wages are highest, for example, is a law of nature; it is a law of nature that a customs duty protecting the high price of the means of subsistence will inevitably entail something like dearth. (Foucault, 2008: 16)

For Foucault, this attribution of 'naturalness' to bioeconomic processes should not be considered either simply as a matter of ideology or of a discovery of something that had until that moment remained hidden. Neither can such a relation between political economy and nature be considered exclusively as an internal product of the evolution of the economic logic of capitalism (which at this stage would still be, according to Marxist thinking, at the stage of 'formal subsumption'). For Foucault it is a matter, once again, of showing how, thanks to a series of practices that are coordinated by a regime of truth, something that does not exist can become something. It is not a matter of ideological mystification or of a new discovery but a matter of practices and their capacity to 'imperiously' mark reality. Hence:

> . . . politics and economy are not things that exist, or errors, or illusions, or ideologies. They are things that do not exist, and yet which are inscribed in reality and follow under a regime of truth dividing the true and the false. (Foucault, 2008: 20)

Later in the course, he will refer to such realities as 'transactional and transitional . . . born precisely from the interplay of relations of power and everything that constantly eludes them' (2008: 297).

What Foucault might mean when he suggests that this nature is fabricated becomes clearer if one returns to the first lectures of the 1977–8 course, *Security, Territory, Population* (2007). There Foucault had set out to describe what he now thought constituted the technology and techniques of power that were specific to the exercise of biopower, that is, the mechanisms of security. In the first lectures of the 1977–8 course, Foucault had described the mechanisms of security as essentially techniques of optimization that addressed themselves to a life understood in terms of an aleatory and indefinite seriality, a process of circulation characterized by the reversibility of effects and causes (lectures of 11, 18 and 25 January 1978).[3]

The mechanisms of security are described by Foucault as techniques that find their sense not so much within a strictly biological logic, but within an overall economic rationality which is applied to something that can be described as a 'reality' or 'physics'. In this sense, the break with both the 'law' and 'discipline' is significant. While the law, according to Foucault's reconstruction, 'works in the imaginary, since the law imagines and can only formulate all the things that could but must not be done only by imagining them' and discipline, starting from the notion that 'man is wicked and has evil thoughts', aims at overcoming the 'tenacious and difficult' nature of reality through a series of artificial regulations, security appears to operate

in a rather different way (2007: 47). Security, Foucault tells us, 'tries to work within reality, by getting the components of reality to work in relation to each other, thanks to and through a series of analyses and specific arrangements' (2007: 47).

The most characteristic traits of the mechanisms of security, then, as biopolitical technologies of power, is that they do not aim to suspend the 'interplay of reality' that supposedly belongs to the domain of nature, but are determined to act within it. The new political rationality applied to biological processes produces a kind of 'acknowledgement' of a reality that is no longer simply imagined or combated, but within which one must 'work'. This reality constitutes, according to the first political economists, the physiocrats, a *physics*. 'Politics has to work within the element of reality that the physiocrats called, precisely, physics, when they said that economics is a physics' (Foucault, 2007: 47). The physics and the reality that the physiocrats refer to is 'the only datum on which politics must act and with which it must act' (2007: 47).

But what does this nature/physics consist of? If, as Foucault claims, the domain of nature is, with the physiocrats and the first political economists, the proper domain of politics, and yet its principle of limitation, this nature, as mentioned above, cannot have the characteristics of a pristine and originary reserve, it must also be the product of a certain fabrication, albeit not of the imaginary kind. This is why the first example of this nature/physics in action within the domain of politics is the town, a natural/artificial space that constitutes the first concrete instance of that abstract general figure of the spaces of security that Foucault names the 'milieu'.

The notion of a 'milieu' is introduced by Foucault in order to explain the kind of space generated by the introduction of economic freedoms (or freedoms of circulation) within the space of the old European city. The suppression of the city walls, which Foucault deems to have been made necessary by such new economic freedoms, opens up the space of the town to a promiscuous and multiple circulation. It can be said to constitute the first, but not the last, act of 'smoothing' of barriers to economic circulation, of which late 20th-century globalization would constitute the latest expression. As a result, the 18th century Western European town comes to be considered essentially in terms of a problem of circulation, where life and trade become intertwined. It is thus a matter of 'organizing circulation, eliminating its dangerous elements, making a division between good and bad circulation, and maximizing the good circulation by diminishing the bad' (Foucault, 2007: 18). This involves ensuring both 'hygiene and ventilation' so as to disperse 'the morbid miasmas accumulated in crowded quarters', as well as facilitating trade within the town and connecting the 'network of streets to external roads' so as to ease and yet control the trade of goods and the movement of people, with all the new problems of surveillance that such movement entails. As economic freedom of circulation is implemented, in fact, the space of the town is exposed to the 'influx of the

floating population of beggars, vagrants, delinquents, criminals, thieves, murderers, and so on . . .' (2007: 18).

The nature/life that is intrinsic to economic processes and is also the domain of politics for the physiocrats is thus far from being that quasi-transcendental life, which, in *The Order of Things* (2001), Foucault had seen as pointing ultimately to the finitude of Man. It is rather the name given to processes of circulation that are essentially defined in terms of their aleatory and indefinite seriality inasmuch as such seriality lends itself to a statistical calculation of probabilities and related costs.

> In short, I think that we can speak here of a technique that is basically organized by reference to the problem of security, that is to say, at bottom, to the problem of the series. An indefinite series of mobile elements: circulation, *x* number of carts, *x* number of passers-by, *x* number of thieves, *x* number of miasmas, and so on. An indefinite series of events that will occur: so many boats will berth, so many carts will arrive, and so on. And equally, an indefinite series of accumulating units: how many inhabitants, how many houses, and so on. I think the management of these series that, because they are open series can only be controlled by an estimate of probabilities, is pretty much the essential characteristic of the mechanism of security. (Foucault, 2007: 20)

The question of the nature that underlines the biopolitical mechanisms of security and that also constitutes the nature of economic processes is thus directly related to the notion of a space that is temporalized inasmuch as it is constituted by 'events, or series of events, or possible elements, of series that will have to be regulated within a multivalent and transformable framework' (2007: 20). The temporal and the uncertain constitute the essential traits of that natural-economic life that the new techniques of power fabricate and stabilize from within, by means of localized, flexible and yet coordinated regulation. Even as the wall-less town is the first concrete example of this kind of space, its abstract notion would properly be, as Foucault argues, the milieu.

The pages where Foucault sketches out the meaning of the notion of the milieu are noticeable in as much as they help to qualify the *bios* of biopolitics as a correlate of a nature/life that is defined in terms of the economic problem of circulation pointing to a spatio-temporal instability that the mechanisms of security aim to optimize. The notion of the milieu is thus essential in materializing that co-causal interrelation of the biological and the economic that Foucault deems characteristic both of the biopolitical mechanisms of security and of the intrinsic limit posed by economic processes to the new art of government. Following on from the work of his mentor Canguilhem, Foucault mentions the ways in which the notion of milieu is at first a physical notion that only later assumes also centrality within biological thinking. In physics, the milieu in fact is 'what is needed to account for action at a distance of one body on another. It is therefore the medium of an action and the element in which it circulates' (Foucault, 2007: 20–21). Foucault argues that it is as if the mechanisms of

security 'work, fabricate, organize, and plan a milieu even before the notion was formed and isolated. The milieu would be then that in which circulation is carried out' (2007: 21). The description of the milieu as the abstract figure of the spaces of security refers essentially to a spatio-temporal topology that accounts for the action at a distance of a body on another, functioning as the support for such actions. By means of the milieu, it becomes possible to conceptualize the short circuits between effects and causes, whereby what is an effect on the one hand will become a cause on the other (Foucault, 2007: 29–32).

Even as Foucault defines the milieu as ultimately the field of intervention that allows power to affect human multiplicities in such a way that they will present themselves as a population (2007: 29), the subsequent evolution of the term within contemporary economic sociology seems to confirm its wider implications. Such a notion, in fact, has been explored by contemporary sociologists, especially in terms of *innovative milieus* and *milieus of creativity*, in ways that could be usefully compared to Foucault's reconstruction of the notion of the milieu in the development of the mechanisms of security (see Castells, 1994; Meusburger et al., 2009). The milieu has thus, in subsequent years, come to express exactly that spatio-temporal topology, both natural and artificial, that is beyond the powers of the sovereign command (that is, it cannot be ordered into existence or forced into obedience), while also accounting for processes of circulation that are ultimately productive. And yet, such a notion seems also to leave open the potential for other modes of individuation, modes that do not necessarily need to be yoked to the rationality of neoliberal economics. As a topological manifold that escapes and exceeds sovereignty, the milieu expresses the unruly potential of series of events unfolding through the non-linear and chaotic 'action-at-a-distance' between dispersed and scattered bodies. If, on the one hand, such open seriality can be stabilized and optimized by means of the mechanisms of security, it is possible to argue that, as a topological manifold, the milieu would also be open to other individuations, less stabilized and more unruly, capable of individuating new transnational and translocal subjectivities (such as, for example, those catalysed by planetary events such as war, oppression, exploitation, racism, environmental destruction and so on). There is thus a fundamental ambivalence to the notions and categories invented by liberal/neoliberal governmentality that can open up onto different existential universes or forms of life.

At the heart of such ambivalence one also finds another key notion of contemporary political economy, such as the network. The spatio-temporal co-causality of series of events which is expressed by the notion of the milieu has become, over the 30 years that separate us from the time of Foucault's courses, increasingly inseparable from the network diagram, as the abstract topological figure which stands for all concrete assemblages of protocols and rules that allow a milieu to be stabilized in such a way as to become productive. As a mechanism of security that works by means of automated calculations of tolerable 'errors' within the view of the overall

stability of processes of circulation, the network has emerged in the last 30 years as the organizational form that stabilizes the milieu, while harnessing the productivity of the series of events that traverse it towards specific objectives. The figure of the network can thus be understood as a technology of regulation of the unruly co-causality of the milieu that opens up onto different modes of individuation (Galloway, 2006). As a mechanism of security the network will thus be characterized by a kind of action that is immanent to that which it tries to regulate, 'organizing, or anyway allowing the development of ever wider circuits' by virtue of a centrifugal integration of new elements (Foucault, 2007: 45). If one follows this line of argument, one is thus confronted with the increasing intersection of network governmentalities that regulate, on the one hand, territorialized milieus of sovereignty and citizenship (Ong, 2006) and, on the other, more de-territorialized milieus of information and communication (Terranova, 2004).

Foucault's overall reconstruction of the relationship established by political economy and by the new art of government between economic processes and natural/biological/physical processes, however, would remain incomplete without his engagement with the most crucial transactional reality evoked by liberal governmentality: the market. It is to Foucault's reconstruction of the role played by the market as a principle of verification of the actions of government that one then needs to turn in order to better focus the transformations undergone by the *bios* from the biological processes of the human species to a nature that is at once more abstract and yet more subjective – such as the *life* that the neoliberal market will turn out to involve.

The Life of the Market

> In other words, the economy always signifies, but not in the sense that it endlessly produces those signs of exchange value of things which in their illusory structures or its structure of simulacrum has nothing to do with the use of things. The economy produces political signs that enable the structures, mechanisms and justifications of power to function. The free market, the economically free market, binds and manifests political bonds. (Foucault, 2008: 85)

The lectures dedicated to the role played by the market within the political rationalities of liberalism first and neoliberalism later are particularly relevant in the context of contemporary contestations of a governmental reason that constantly supports itself by reference to a correct or incorrect functioning of markets. Foucault obviously insists that as a transactional and transitional reality, the market cannot indicate an essence that is progressively clarified by the progress of economic theory. On the contrary, the market plays a key function in determining that 'regime of truth' which coordinates a whole series of practices that ultimately 'mark reality'. While, for Marx, and subsequently for most Marxists, this foregrounding of the market over the real moment of production defines the fetishistic nature of

capitalism and hence its ideological dimension, in Foucault this same process is seen in a different light. The question of the market is not posed in terms of a representation of 'a system which requires both production and exchange, as if it consisted of exchange only' (Hall, 1977: 323),[4] but in terms of that specific regime of truth that allows a new art of government to function. In Foucault's brief and hence necessarily sketchy genealogy of the market, the latter is seen as undergoing at least two fundamental transformations: one taking place in the 18th century and defining the shift from the market as a site of justice to the market as a site of veridiction; and the next taking place in the second half of the 20th century in the shift from a definition of the market based on the abstract logic of exchange to one based on the formal mechanism of competition. In this second shift, it could be argued, the bios of economic processes that was central to liberal governmentality is not so much overcome as made increasingly abstracted and machinic.

The first crucial transformation of the market then takes place in the 18th century, where, according to Foucault, the market stops being what it had been until then to European sovereigns – that is, a site of justice and the domain of a jurisdiction that aimed to prevent and punish fraud – in order to become the location of a certain kind of truth (the truth about the actions of government). If the technology of government that we call liberalism has in fact, for Foucault, as its objective, 'its own self-limitation insofar as it is pegged to the specificity of economic processes', the market plays a key role in defining the actual verification of such limitations. When looking at the formation of the liberal art of government, Foucault had repeatedly remarked on the importance of this 'economic nature' in intrinsically defining its internal objectives and modes of operation. The natural laws of the market constitute the primary referent for a government that, from now on, will present itself always as an 'economic government' (indeed, for Foucault this expression is, as such, a tautology).

For example, Foucault sees the claim by classical political economists that the market obeys 'natural mechanisms' that need to be grasped in their complexity and spontaneity in terms of the limits that political economy was trying to impose on the police state in relation to the specific domain of 'economic freedom'. The laws of the market are said to allow for the formation of a 'natural' price that makes it possible to 'falsify or verify' the practice of government: 'in as much as it enables production, need, supply, demand, value, and price, etcetera, to be linked together, the market constitutes a site of veridiction . . . of verification, falsification for governmental practice' (Foucault, 2008: 32). Hence for the physiocrats, government must arm itself with 'a precise, continuous, clear, and distinct knowledge of what is taking place in society, in the market, and in the economic circuits' and then respect the evidence of economic analysis (Foucault, 2008: 62).[5] What qualifies this attribution of natural traits to the laws of the market in the 18th century? Foucault is very clear that the main qualification of this nature is the limit that it poses on the power of the sovereign, inasmuch as it presents

itself to the sovereign as an intrinsically opaque and obscure domain, that points to a necessary 'blindness of the state', but also of the individual, with regard to economic processes.

In discussing the notion of the 'invisible hand of the market' in Adam Smith, Foucault makes explicit what liberalism might mean when pointing to the naturalness of economic processes. Here Foucault remarks how, in spite of its subsequent fame, this image appears only once in *The Wealth of Nations*, that is in Book IV, when Smith refers to the 'invisible hand' that leads the individual pursuit of profit to constitute the general interest.[6] The invisible hand, Foucault remarks, is that 'bizarre mechanism which makes *homo oeconomicus* function as an individual subject of interest within a totality which eludes him and which nevertheless founds the rationality of his egoistic choices' (2008: 278). Foucault objects here to the usual interpretation given to this image, which is usually taken to signify a kind of remnant of a theological conception.[7] The invisible hand, in this interpretation, would point to the gaze of somebody that 'following the logic of this gaze and what it sees, draws together the threads of all these dispersed interests' (2008: 279). Foucault, however, argues that the emphasis in the image of the invisible hand should not be placed exclusively on the purposive nature of the hand, but also on its 'invisibility'. Such invisibility points to the 'naturally opaque and naturally non-totalizable' qualities of economic processes' (2008: 282). The basic function or role of the theory of the invisible hand is thus for Foucault once again 'to disqualify the political sovereign' (2008: 283).

> Economics is an atheistic discipline; economics is a discipline without God; economics is a discipline without totality. Economics is a discipline that begins to demonstrate not only the pointlessness, but also the impossibility of a sovereign point of view over the totality of the state that he has to govern. Economics steals away from the juridical form of the sovereign exercising sovereignty within a state precisely that which is emerging as the essential element of a society's life, namely economic processes. (Foucault, 2008: 282)

And yet, while remaining fundamentally a 'site of verification or falsification' regarding the actions of government, the market undergoes, according to Foucault, another radical transformation in the second part of the 20th century, that is, in the shift from liberalism to neoliberalism, where it will no longer be conceived of in terms of a logic of exchange between equals, but as a mechanism of competition between formal inequalities. According to Foucault, whereas with liberalism the whole notion of the intrinsic limit on the power of the sovereign with regard to the economic domain is given within a discourse about the naturalness of economic phenomena, with neoliberalism we are confronted with a dramatic shift. Such a shift is defined by Foucault specifically with regard to the different conceptions of the market held by liberal and neoliberal theorists, and specifically by European ordoliberalism. In this shift, the market continues to represent the limit to the actions and powers of the sovereign, and the site of its veridiction, but in radically different terms.

While the principle according to which economic processes naturally resist the actions of the sovereign is maintained and extended (now we will have a state under surveillance by the market), it is the 'nature' of the market as such to undergo an important transformation. Suddenly the market, according to Foucault, stops being a place of nature defined by the logic of exchange in order to become the formal generative structure of a formal and ideal mechanism that is defined essentially as competition.

> For what in fact is competition? It is absolutely not of a given nature. The game, mechanisms, and effects of competition which we identify and enhance are not at all natural phenomena; competition is not the result of a natural interplay of appetites, instincts, behaviors and so on. In reality, the effects of competition are due only to the essence that characterizes and constitutes it. The beneficial effects of competition are not due to a pre-existing nature, to a natural given that it brings with it. They are due to a formal privilege. Competition is an essence. Competition is an eidos. Competition is a principle of formalization. Competition has an internal logic; it has its own structure. Its effects are only produced if this logic is respected. It is, as it were, a formal game between inequalities; it is not a natural game between individuals and behaviors. Just as for Husserl a formal structure is only given to intuition under certain conditions, in the same way competition as an essential economic logic will only appear and produce its effects under certain conditions which have to be carefully and artificially constructed. . . . This means that pure competition is not a primitive given. It can only be the result of lengthy efforts and, in truth, pure competition is never attained. (Foucault, 2008: 120)

If the problem facing liberal political economists, such as Adam Smith, was to know how, within a given political society, it would be possible to carve out and manage a space of free circulation such as the market, neoliberalism poses a different problem. It will have to know how to regulate the overall exercise of political power on the basis of the principles of a market economy defined by the internal logic of competition. Competition, inasmuch as it is not a 'primitive' given, does not lie in its pure form in a distant past, and thus it cannot be simply 'uncovered'. Inasmuch as competition is a structure endowed with rigorous formal properties, explains Foucault, the problem of such political rationality is that of regulating the 'concrete and real space' wherein the ideal/formal structure of competition can function. 'So it is a matter of market economy without *laissez-faire*, that is to say an active policy without state control. Neo-liberalism therefore should not be identified with *laissez-faire*, but rather with permanent activity, vigilance and intervention' (Foucault, 2008: 132). Foucault makes clear that this approach is quite specific to European neoliberalism, and particularly to Austrian ordoliberalism (while US neoliberalism will be characterized by the theory of human capital). And yet Foucault also insists that neoliberal governments will generally tend to be extremely active, with the only difference from liberal government being

the 'style' of such activity, that is, the nature of its interventions, which can be socially extensive, while restricted in specific ways when it comes to economic processes.[8]

Overall, this shift from the liberal 'naturalness' of economic phenomena to the artificial formalism of neoliberal economics is a startling and unexpected move on Foucault's part in ways that seem to displace his previous analysis. As is often the case with Foucault's lectures (see for example the sudden shift in *'Society Must Be Defended'* from biopolitics to Nazism discussed by Macey, 2009), one is confronted here with a very abrupt movement – in this case from the classical political economy of the 17th century to the neoliberal economics of the mid- to late 20th century. The whole 19th century, for example, is elided, and with it neoclassical economics and its crucial notions of marginal utility and general equilibrium (Marshall, 2006 [1890]). As for Keynesianism and the institution of the welfare state, they are mentioned only as the foe that neoliberal economists set out to attack in their radical critique of the state. It is understandable, then, why economists would take exception to some generalizations and elisions that make Foucault's genealogy of liberalism and neoliberalism 'less precise than usual', while, on the other hand, also admitting that, in many ways, 'economics looks more like a Foucauldian discipline now than it did when these lectures were delivered at the Collège de France' (Guala, 2006: 439). In spite of such limitations, however, it could be argued that Foucault's characterization of a radical break between liberal and neoliberal conceptions of the market remains highly suggestive with reference to contemporary political concerns about the role and nature of markets as social and political regulators.

Foucault's argument according to which the 'naturalness' of market laws will be displaced by formal structures also seems to clash with the rife naturalism that has gone together with the popularization of neoliberal economics, especially in its 'new economy' variety (as for example in Kelly, 1995, but also Dawkins, 2006; see below). In a review of *The Birth of Biopolitics* written from the point of view of contemporary economic thinking, Francesco Guala, for example, objects to Foucault's representation of this dramatic shift from 'nature' to 'ideal' essence. According to Guala, the ordoliberals did not really believe that the economist should be looking 'for essences or the abstract analysis of formal concepts' (2006: 435). Guala argues that Foucault is also exaggerating in attributing to the ordoliberals the view that pure market forms cannot evolve spontaneously, while they rather argued that they can, but unevenly, sometimes emerging on their own, sometimes requiring policy intervention. For Guala, for example, a key figure of ordoliberalism such as Walter Eucken in his *Grundlagen* does refer to 'forms', and even sometimes to 'pure forms' (a reference which, he argues, could have engendered Foucault's confusion), but such pure forms can be derived by means of abstraction from concrete economic analysis and extensive empirical and historical investigation. And, Guala especially claims, biological metaphors and naturalistic descriptions of the economy abound

in Hayek's work, which, for Guala, should not be confused with that of the Freiburg economists.

> Hayek's work, which Foucault confusingly associates with the Freiburg economists, is full of biological metaphors and is thoroughly naturalistic in character. As far as he constitutes the link between German and American neoliberalism, Hayek can be held partly responsible also for the evolutionary faith permeating much of the latter. The Ordoliberals are very different, and in a very interesting way. . . . The Austrian distinction between pure and applied economics – in the writings of Menger and Mises, for example – however opens the difficult problem of explaining how the pure concepts of economic theory can be relevant for understanding the real economic world and, most importantly, intervening in it. Eucken seems to have an interesting solution to this problem: the forms distilled from historical investigation may well not be relevant to understanding contemporary economic reality. They can become relevant, however, if we make them so. We can create the conditions for the emergence and the smooth functioning of markets. A perfectly competitive market is a historically contingent entity, 'a sort of subtle and very reliable mechanism, provided it functions well and nothing intervenes to disturb it'. (Guala, 2006: 435)

Hence for Guala the 'pure economic forms' of neoliberalism are the result of a circular movement that distils them by means of historical investigation from concrete economic reality only to return them to reality as models that are re-actualized and re-engendered within a specific practice. This would confirm somehow Foucault's intuition that the neoliberal market is somehow always linked to a formalization, to a kind of artificial return to a formal essence – even when such an essence is abstracted from a concrete historical reality.

Also, when seen from the perspective of the role played by computer simulations within contemporary economic practices and theories, both Foucault's understanding of the market as pure formalism and Guala's contention that biological metaphors and naturalistic images of an evolutionary kind are a fundamental part of American neoliberalism can be re-qualified. It could be argued in fact that the naturalness of economic processes that liberalism opposed to the gaze of the sovereign has been replaced by contemporary economics with a physical/biological constructivist formalism that is claimed to be isomorphic to economic processes. This is particularly evident in the favour met with by biology, physics and mathematics within the field of econometrics, especially through the use of computer models that aim to simulate the temporal unfolding of market-based transactions (Lillo et al., 2008; MacKenzie and Millo, 2003).[9] On the other hand, the definition of the market as a 'competition' or a 'formal game between inequalities' can be seen at work in the proliferation of 'games', that is sets of generative rules with specific effects of subjectivation, within the techno-cultural, domains of television, computing and inter-networking (see Bratich, 2007; Couldry and Littler, 2008; Dyer-Witheford and de Peuter, 2009).

Hence it could be argued that the 'life' of markets becomes on the one hand increasingly indexed, formalized and virtualized by means of mathematical formalizations, while on the other hand it is also concretely actualized in the form of serial acts of communication through which such formalizations unfold within specific milieus. As a result, the nature of markets will no longer be given, as Foucault argued, within a naturalistic anthropology of exchange, but within the virtual/actual circuits expressed by the inter-networked subjectivity of economic agents across the now inseparable domains of culture, nature and technology (Knorr Cetina, 2006; Knorr Cetina and Bruegger, 2000; Terranova, 2009). As the 'ideal nature' of economic processes is actualized within formal games of competition and concrete inter-networked milieus, the life of the market becomes increasingly both abstract and machinic. But what would be the implications of such a shift for the initial concerns that have informed this reading of Foucault's genealogy of the implications of political economy and biopolitics? In particular, do they open up to a possible contestation of neoliberal governmentality that would not proceed from an ideologically informed reading of neoliberalism while also opening up the notion of a 'real subsumption of life' by capital? Is it possible, by following Foucault's argument and method, and in the light of developments of the last 30 years such as the use of econometric computer simulations, the proliferation of competitive games in popular culture and the theorizations of markets as inter-networked subjectivities, to formulate a non-ideological critique of neoliberal governmentalities? Such a critique would be non-ideological inasmuch as it would not consider the market as a fetishistic ideology which tends to mask the real relations of production, but as a regime of truth and a technology of power that produces specific forms of life extending across circuits of production and consumption, affecting the individuation of milieus and, at the limits, the quality of the 'life of the spirit' – that is, subjectivity. At the same time, such a critique would also allow for a redefinition of the Marxist notion of 'real subsumption of life under capital' in terms of a complex historical trajectory where the relation labour/life on the one hand and capital on the other does not constitute the ultimate referent of all relations of power under conditions of neoliberal governmentality. In order to do so, however, it seems necessary to go beyond Foucault's argument in order to include recent developments in such tactical analysis, such as those theories that postulate the emergence of a new 'non-market', social mode of production and those which argue for a redefinition of the *bios* of economic processes as something that stretches beyond the biological life of the population to touch onto an 'a-organic' life defined in terms of the powers of time-memory and its virtualities.

Social Cooperation and A-organic Life

The notion that markets are endowed with a kind of 'life' has been an admittedly controversial but persistent motif in the 1990s debate on the 'new economy' of the internet. In no other economic field have notions of

self-organization inspired by biological and physical models been so crucial. Scientific theories such as neo-evolutionism and chaos theory have been mobilized to account for the peculiar character of the internet as an informational milieu able to support and accelerate the emergence of new economic, but also cultural and social forms – a perspective spread by a successful new genre of popular science literature that never ceases to account for the continuity of the natural, the economic and the biological (see Axelrod and Cohen, 2001; Ball, 2006; Kelly, 1999).

Most of this literature has served to popularize the notion of the internet as a kind of 'bio-medium', a new synthesis of the natural and the artificial that reinforces neoliberal understandings of the free market. However, some authors writing from *within* the liberal tradition have also posed the possibility that the internet is enabling the rise of a 'non-market' mode of production. Such a 'non-market' mode of production would thus constitute a new economic reality – in the sense that Foucault would give to the term, that is, something that could constitute an intrinsic limit to neoliberal governmentality. Non-market production, in fact, is defined as driven by mechanisms of social cooperation rather than economic competition, and as intrinsically more 'effective' than market-based production – at least within some domains. The question that is asked here is whether such new theories can be seen to support the formulation of an alternative political rationality or whether they would only allow for a further refinement of neoliberalism as Foucault understood it.

For example, in his widely read *The Wealth of Networks: How Social Production Transforms Markets and Freedom*, Yale law professor Yochai Benkler produces an explanation of 'nonmarket production' from a liberal perspective which is 'centered on social relations, but operating in the domain of economics, rather than sociology' (2006: 16). According to Benkler, the 'networked information economy' has allowed the concrete emergence of a new economic reality, social production, that represents a genuine innovation when compared to the other two dominant forms of economic organization: the firm and the market. Social or non-market production emerges from 'the very core of our economic engine', affecting first of all the key economic sector of 'the production and exchange of information, and through it information-based goods, tools, services and capabilities'. Such a shift would suggest 'a genuine limit on the extent of the market . . . growing from within the very market that it limits in its most advanced loci' (2006: 19). Benkler sets out to describe 'sustained productive enterprises that take the form of decentralized and nonmarket-based production, and explain why productivity and growth are consistent with a shift towards such modes of production' (2006: 34). Social production mobilizes the 'life of the social', that is, the productive power of social relations between free individuals who act 'as human beings and as social beings rather than as market actors through the price system' (2006: 7). Thanks to the networked information economy, social production would have become directly 'effective' (hence productive) as demonstrated by the success of

'free software, distributed computing, and other forms of peer production [that] offer clear examples of large-scale, measurably effective sharing practices' (2006: 121).

The most innovative element of Benkler's analysis, within the framework of liberal theory, is the notion that the distance between the 'nature of political economy' and the 'nature of civil society' can be bridged by social production: 'a good deal more that human beings value can now be done by individuals who interact with each other socially, as human beings and social beings, rather than as market actors through the price system' (2006: 7). This would produce a new quality of economic life that would no longer be based on a split within the subjectivity of *homo oeconomicus* between 'economic interest' (based on a calculation of utilities) and the 'disinterested, but partial interests' that, according to Foucault, liberal political theory confined to the 'transactional reality' of civil society (see Lazzarato, 2009). Social life and economic life would thus find a point of convergence where the former would no longer find its expression exclusively within the reproductive sphere of civil society but would become directly productive in the economic domain. We would thus be confronted with the historical emergence not only of a new mode of production, but also a new mechanism – cooperation – that would relieve 'the enormous social pressure' that the logic of the market exerts on existing social structures (2006: 19). As Benkler emphasizes, this would not necessarily spell the end of 'standard economic analysis', and more specifically economic understanding of human economic behaviour or economic theory's belief in the 'emerging patterns' produced by the abstract nature of economic life.

> We need to assume no fundamental change in the nature of humanity; we need not declare the end of economics as we know it . . . behaviors and motivation patterns familiar to us from social relations generally continue to cohere in their own patterns. What has changed is that now these patterns of behavior have become effective beyond the domains of building social relations of mutual interest and fulfilling our emotional and psychological needs of companionship and mutual recognition. They have come to play a substantial role as modes of motivating, informing, and organizing productive behavior at the very core of the information economy. (Benkler, 2006: 91–2)

Benkler's account of the new economic reality of social production thus saves 'the nature of humanity', that is neoliberal postulates around the nature of social and economic life, within a new economic integrated life whose engine would be the 'social relation of mutuality' springing from within the emotional and psychological needs of autonomous individuals. The nature of political economy will also be safeguarded and re-actualized within social production, which would however have the merit of compensating for the pressure of market mechanisms on society while at least partially re-composing the division between social and economic life.

It could be argued that theories of social production such as the one outlined by Benkler offer liberal and neoliberal economics a refinement of

its logic that does not significantly break with its overall political rationality. Non-market production, in fact, is based in social cooperation, but it becomes economically effective, that is it achieves the status of an economic phenomenon, because 'it increases the overall productivity in the sectors where it is effective . . . and presents new sources of competition to incumbents that produce information goods for which there are now socially produced substitutes' (Benkler, 2006: 122). The mechanisms of social cooperation would thus simply correct some inefficiencies inherent in the mechanisms of economic competition, satisfy those needs that are not catered for by markets and even feed directly into them – improving the productivity of economic life as a whole, now reconfigured as an ecology of different institutional and organizational forms. However, social production becomes measurably effective, that is, it acquires the abstract value that makes it an economic phenomenon, only as long it manages to spur innovation and hence competition in the market economy. Although nothing in principle prevents social production from outperforming competitive markets as a more efficient economic form, it still seems destined to remain subaltern to the logic of the neoliberal market as a whole.[10]

In a way it seems as if, once passed through the 'reflective prism' of political economy, social production loses all potential to actually produce and sustain radically different forms of life – which would neither coexist nor compete with neoliberal governmentality, but which could question its very logic. As Foucault taught, the encounter between a form of knowledge and a social phenomenon does not have the same implications as its encounter with a physical phenomenon. A change of scientific paradigm, such as the Copernican revolution, did not affect the movement of the planets, but what political economy says about social production will affect what social production will become. And yet nothing prevents social production – that is, the capacity of free social cooperation to produce new forms of life – from entering a different reflective prism – connecting to other kinds of knowledge, that are less accommodating towards the neoliberal way of life and that potentially relay back to more radical practices.

Social production, and especially cooperation, are also key concepts developed by another author, Maurizio Lazzarato, who writes from a very different perspective than Benkler, that is, within a framework that mobilizes and extends Marxism through the 'philosophy of difference' to be found in the writings of authors such as Bergson, Tarde, Deleuze and Guattari and also Foucault. In particular, in his book on Gabriel Tarde's economic psychology, Lazzarato endorses Tarde's argument, formulated at the end of the 19th century, that 'sympathetic cooperation', that is, autonomous, independent and creative cooperation, is the 'ontological and historical premise of the production of economic value and of the division of labour' (Lazzarato, 2002: 8).[11] For Tarde, in fact, unlike the political economists or Marxists, the source of wealth lies 'neither in land, nor labour, nor capital, nor utility, but within *invention* and *association*' (2002: 8). Sympathetic cooperation is the ontological basis of economic value once the latter is understood in

terms of the production and diffusion of the new – that is, in terms of 'the emergence of new economic, social and aesthetic relations' (2002: 8).

Furthermore, according to Lazzarato, sympathetic cooperation also implies a 'vitalism', but 'a *temporal* vitalism, that is no longer *organic*, a vitalism that relays back to the virtual and no longer exclusively to biological processes' (1997: 116).[12] Such 'a-organic life' would be significantly different from the life of biopolitics, inasmuch as it would not refer back to the homeostatic optimization of the vital processes of the population, but would imply essentially the 'life of the spirit' – that is, the life of subjectivity as memory (including sensory-motor memory), understood as implicating the ontological powers of time (see also Grosz, 2004).

In *Puissances de l'invention: la psychologie économique de Gabriel Tarde contre l'économie politique* (2002), Lazzarato returns to a key biological image on which to ground another theory of social production as the primary condition for the production of economic value: the brain. The brain is obviously not to be understood as a biological organ, but as an image of thought that draws on some of the peculiar characteristics of the brain as organ: the structural in-differentiation of brain cells, their relative homogeneity in spite of the more or less specific distribution of functions within each lobe. Such relative homogeneity of brain cells would fit much better the description of a social life where the segmentation operated by the division of labour (such as class) or by biological ruptures in the continuum of life (sex, gender and race) would coexist with the capacity of each individual cell to participate in multiple associations that are relatively de-territorialized from their specific function.

> The equality and uniformity of the elements that constitute the brain, their relative functional indifference, provide the conditions for a richer and more varied singularization of the events that affect it and of the thoughts that it produces. By emancipating itself from the organ, the function produces a new plasticity and a new mobility that is the condition for a freer invention. Non-organic cooperation opens the possibility of a superior harmonization and explicates the tendency to the equality that opposes organic differentiation . . .
>
> The *general intellect* is not the fruit of the natural history of capitalism but is already ontologically contained within the emancipation from the organic division of traditional aristocratic societies. (Lazzarato, 2002: 35)

The image of the brain then performs two functions. In the first place, it allows us to imagine a socius where each individual element is bound at the same time to a specific function, but also to a more fluid, less segmented dynamics engendering what cultural theory used to call 'multiple identities'. Thus one can be caught within the division of labour in the workplace, while also simultaneously being part of different networks or associations. Second, the image of the brain makes it possible to account for a subjective life that is woven out of the specific powers and forces that are attributed to such a brain: the effort of paying attention, that is of retaining and re-actualizing

impressions, the forces of believing, desiring, feeling, and the 'social quantities' hence produced (beliefs, desires, feelings).[13] Clearly, then, the brain that Lazzarato–Tarde mobilize as an image for thinking 'non-organic' cooperation is not literally the biological brain, but neither is it the individual brain. Beliefs, desires and feelings, in fact, are forces in the sense that:

> . . . they circulate like flows or currents between brains. The latter hence function as relays within a network of cerebral or psychic forces, by allowing them to pass through (imitation) or to bifurcate (invention). . . . On the other hand, however, flows of desires and beliefs exceed brains from all sides. Brains are not the origins of flows, but on the contrary, they are contained within them. The ontology of the 'Net' is to be found within such currents, within these networks of cerebral forces, within these powers of differentiation and imitation. (Lazzarato, 2002: 27)

The engine of social production would hence not lie within the interior of the autonomous individual but within the in-between of the social relation. It would be constituted through that which Lazzarato–Tarde define as the 'primitive social fact', 'as action-at-a-distance by a spirit (or memory-brain) on another spirit (on another memory-brain)' (Lazzarato, 2002: 31). This action-at-a-distance is defined by Tarde through the metaphor of photography: it is a matter of 'impression', a 'quasi-photographic reproduction of a cerebral cliché on a photographic plate' (2002: 31). It is also assimilated to an 'act of possession', where the individual spirit or monad allows itself to be possessed by another one in a quasi-erotic relation that holds varying degrees of reciprocity and which can have different durations.[14]

Hence, for Lazzarato–Tarde, the process of subjectivation cannot originate in the individual brain but must unfold *within* these cerebral networks and can be assimilated to 'a fold, a retention, a turning of the flows upon themselves'. Tarde's metaphors for such a process of subjectivation are, once again, natural, but resolutely a-organic: the wave and the sea.

> The wave, the individual brain, is the result of a process of individuation of the movements of the sea, the smooth space of associated brains. The wave is produced at the level of the surface through an in-rolling of the currents that traverse the sea in its depths in all directions. (Lazzarato, 2002: 27–8)

Like a wave, hence, subjectivation would not be the product of an original individualization, but it would be a question of 'rhythms, speeds, of contractions and dilations, within a milieu that is never static, but which is itself a Brownian, molecular movement' (2002: 28). It is constituted out of the very seriality of events that defined the nature of political economy, but with a completely different inflection where the production of economic value does not presuppose the optimization of bioeconomic processes, but the invention and diffusion of new values and new forms of life.

The notion of sympathetic cooperation proposed by Lazzarato appears of particular value inasmuch as it makes it possible to think of social co-

operation as the a priori of all economic processes, rather than one particular form among others or an a posteriori reconciliation of economic and social life. It argues, in fact, that economic life cannot be considered as a distinct domain from the social life that underlies it. It grounds the productivity of social life in the relational action of psychological or spiritual forces, that is, within the life of the 'soul or spirit'. It makes it possible to think the current production of economic value as that of a measure that only partially captures the immanent process of production of value that unfolds in the in-between of social relations. It counters the 'exclusion of sympathy and love, strongly present within utopian socialism' and makes it possible to rethink the foundation of political communities that are not based on interests but on common beliefs, desires and affects; finally, it opens the possibility of thinking a political rationality that allows for 'a polytheism of beliefs and desires that are composed through a de-multiplication and a differentiation of the associative principle [rather than] within a single large organization (State or party)' (Lazzarato, 2002: 27).

Conclusion

This article has charted one possible pathway through Foucault's courses on the genealogy of biopolitics, which sidesteps some common interpretations of biopolitics that emphasize its connection to the aporias of sovereignty and the law (see Agamben, 1998; Esposito, 2008; Revel, 2009), while also emphasizing its value in refocusing contemporary questions about the nature of economic processes. Foucault's genealogy of biopolitics in particular has allowed us to understand what contemporary Marxists have defined as the 'real subsumption of life under capital' as part of a complex historical trajectory, where the problems posed to sovereignty by the serial aleatoriness of events of circulation have been resolved by the individuation of a life of economic processes on which a new political rationality and new mechanisms of power have been built. Rather than denouncing such recourse to nature and life as an ideological mystification, this article has articulated a possible argument whereby such an invocation of nature could actually be seen as a valuable invention by liberalism, inasmuch as, at least to start with, it has served the purpose of articulating a political space that was originally subtracted from the power of the sovereign command. Furthermore, the notion of the milieu as articulated by the first political economists and reconstructed by Foucault constitutes an important notion through which to think the de-territorialized temporal spatiality opened up by the new, more or less restricted and modulated, economic freedoms of circulation and the function of networks as technologies of regulation. Finally, by underlining the important distinction between liberal and neoliberal conceptions of the market, Foucault's analysis helps us to make more intelligible the peculiar formal naturalism of neoliberal economics that has resulted in the double constitution of markets as mathematical formalizations and concrete machinic assemblages of subjectivation.

At a moment when neoliberal economics, and the political rationality that supports that approach, appear to be in crisis, is it possible to articulate another understanding of the implication between life, nature, physics and the economy that would make the latter the object not so much of new regulation but of a new constitutive process? If the nature of economic processes has been made to constitute 'the essential element of a society's life', how can it also be made the site of new kinds of struggles, not simply around the distribution of wealth within a stable political and economic paradigm, but around the invention of new forms of life?

Foucault's effort to make intelligible the political rationalities of liberalism and neoliberalism by means of their mobilization of notions of life and nature has thus been valuable in assessing recent theories of 'social production' and 'sympathetic cooperation' inasmuch as they mobilize different notions of the 'life and nature' of economic processes. Can such theories provide viable alternatives to the neoliberal paradigm of market production as the concrete instantiation of an abstract *eidos* of competition? Can relations of cooperation displace the mechanisms of competition as the basis on which to found a new political rationality? Two examples of theories of social production or cooperation have been discussed in this article. Liberal accounts of social production, as exemplified by Yochai Benkler's work, seem to open up a different economic model for post-neoliberal governmentality. However, inasmuch as such accounts remain faithful to some key assumptions of neoliberal economics, they tend to make social production subaltern to market-based production and hence do not appear to question neoliberal governmentality as a whole – but only to refine it. As valuable as such refinement is, especially when compared with the other contemporary evolution of neoliberal governmentality, that is, neoconservatism, it seems ultimately of limited use to those who reject the overall thrust of market-based life. The second example, Lazzarato's theory of 'sympathetic cooperation', elaborated by means of a philosophy of difference, seems to challenge neoliberal governmentality in more substantial ways. It questions both the human nature of liberal theory and the neoliberal formal nature of markets as competition. It makes the mechanism of competition just one possible means of organizing economic life and one that, anyway, is always dependent on the cooperative powers of the associative, a-organic life of the socius. It argues for social cooperation as the key mechanism in the production of a value that can no longer be abstractly economic – but is inseparable from subjective, social values such as truth-values, aesthetic-values, utility-values, existential-values. It thus introduces an immanent ethics into a social-economic life where value emerges out of the 'powers of conjunctions and disjunctions [and] forces of composition and decomposition of affective relations' (Lazzarato, 2004: 24).

Such theories have been taken here as examples of the different ways in which a new economic reality, such as social production, can be thought of as a means to challenge and rethink the nature of markets and political economy. Like Foucault's own work, they have been taken as reflective

relays that can be fruitfully connected to a number of practices. If an alternative to neoliberal governmentality can be invented, in fact, it will certainly not be by virtue of the application of a theory or by grounding 'a political practice in truth . . .' but by drawing on thinking 'as a multiplier of the forms and domains for the intervention of political action' (Foucault, 1984: xiv).

Notes

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1. For an early detailed engagement with the Foucauldian analysis of liberal and neoliberal governmentalities, which, however, has different concerns than the present article, see of course Burcher et al. (1991) and Barry et al. (1996). Foucault's analysis of the relation between governmentality, biopolitics and the government of subjectivity has also been elaborated by Rose (1989, 2007).

2. The notion of 'bio-capital' is not included in this list because the term usually refers to the specific political economy of the contemporary biotechnological industries or the transformation of biological life into surplus value (see Cooper, 2008; Rajan, 2006).

3. The notion of mechanisms that work in order to minimize the potentially catastrophic potential of disruptive events presents interesting resonances, albeit undeveloped in the lectures, with economic notions of 'equilibrium', but also with more problematic notions of 'homeostasis' and 'metastability'. For a critique of the economic notion of equilibrium see Lazzarato (2002); for a cybernetic take on homeostasis see Wiener (1988) and also as critiqued by Hayles (1999); for an interpretation of security mechanisms as implying a notion of metastability see Massumi (2009).

4. In the early Stuart Hall, this 'key premise of much political economy' fundamentally expressed the functioning of ideology, which was articulated in three moments:

> [The market] has the function, at one and the same time, of: (a) transforming one relation into its opposite (*camera oscura*); (b) making the latter, which is *part of* the relations of production and exchange under capitalism, appear as or *stand for* the whole thing (this is the theory of *fetishism*, developed in Chapter I of *Capital I*); (c) making the latter – the real foundations of capitalist society, in production – *disappear from view*. Hence, we can only 'see' that it is in production that labour is exploited and the surplus value extracted. (1977: 323, emphasis in original)

5. Foucault obviously qualifies his statement through a series of provisos. In order to understand how this could happen, it is important to establish a 'polygonal or polyhedric' relation between different phenomena (the influx of gold from the colonies, a certain monetary situation, demographic growth, etc.); there is no single *cause* for the constitution of the market as a site of truth; always, there are at work,

within a given epoch, a certain number of ways of doing things, which can coexist while remaining heterogeneous in relation to each other (whereby heterogeneity does not constitute a principle of exclusion, but allows for conjunctions and connections by means of bridges, transits, junctures, passages etc.; Foucault, 2008: 43).

6. In the lecture of 17 January 1979, Foucault concluded his analysis of the internal principle of limitation of the *raison d'État* proposed by the economists, by pointing out how the latter had formulated a general category which was able to think about the whole constituted by public power and market exchange as that of 'interest'. The category of interest, Foucault argues, is that which allows social utility and economic profit to function together by providing governmental power with 'the only thing on which . . . [it] can have a hold' (Foucault, 2008: 46). According to the new *raison d'État*, the latter can no longer intervene directly on people and things, but can act only on the basis of and through the interface of interest.

7. On this point see also Giorgio Agamben's (2007) argument that biopolitics can also be considered as the political expression of a kind of economic theology derived (like the political theology of sovereignty) from Christian theology.

8. For example, see the way in which this formal logic has become the specific way in which the public sector is governed in neoliberal democracies. Far from expressing a simple process of privatization and commodification of public services, the neoliberal government of the public sector takes place in accordance with the artificial introduction of the formal principles of competition, aiming at producing formal inequalities where before there was supposed to be equal distribution of resources. Competition is thus artificially engendered by means of a relentless introduction of new regulations, new forms of assessment and measures that will result in the production of ranking systems (formal inequalities), which will spur competition between different institutions and hence supposedly ensure the 'growth' of efficiency. For an early assessment of the shift introduced by the enforcing of neoliberal policies in higher education see Readings (1997); and for a more recent one see De Angelis and Harvie (2006) and Roggero (2009).

9. As part of the Topological Approach to Cultural Dynamics EU-funded project (www.atacd.net), on 9–10 October 2008 a colloquium was held at the School of Oriental and African Studies, University of London, on the subject of the use of computer simulation in the market for financial derivatives. The whole reader pack can be downloaded at http://www.atacd.net/index.php?option=com_content&task=view&id=31&Itemid=42

10. One could argue against it using the Marxist critique of early economic theories of self-organizing markets: that it continues to mystify the antagonism and asymmetry that lies within the interior of economic life, such as the relation between capital and labour, which would coexist somehow with the new capacity of subjects to cooperate within an economic process that capital does not directly organize. If such asymmetry/antagonism continues to persist at the interior of economic relations of production, such as in the relation between employers and employees, then in what way can a subject who participates in both – that is, in social and market production – achieve such reconciliation? In most cases, the reintegration of social and economic life would remain fatally flawed and tense. Subjective economic life would remain split: between a labour force that is subject to the command of the capitalist enterprise; an exchange-based, competition-driven economic rational subject competitively operating by means of a calculation of

utilities in the marketplace; and finally a new socially productive being, unfolding within the new collaborative milieus of the 'networked information economy'.

11. All translations from Lazzarato are mine.

12. It is important to underline how this notion of a-organic life does not replace the notion of biological life, but, in Lazzarato's view, constitutes the site of a double individuation. What is invented at the level of a-organic life, that is, at the level of time and its virtualities, and within the network of inter-cerebral, sub-representative molecular forces, needs to be actualized in the concrete composition of bodies and in the expression of new forms of life. The two levels are thus autonomous but inextricably interrelated as in the two attributes of the Spinozist substance or the two floors of the Leibnizist monads (see Lazzarato, 2004).

13. For another perspective on the value of thinking culturally and politically by means of the image of the brain see Connolly (2002).

14. As Michael Taussig (1993) has also argued in a different context, action-at-a-distance would thus be a mimetic act, a matter of 'copy and contact' that would express the tendency of subjectivity to 'becoming other'.

References

Agamben, Giorgio (1998) *Homo Sacer: Sovereign Power and Bare Life* , trans. Daniel Heller-Roazen. Stanford, CA: Stanford University Press.

Agamben, Giorgio (2007) *Il Regno e la Gloria: Per una genealogia teologica dell'economia e del governo*. Milan: Neri Pozza editore.

Axelrod, Robert and Michael D. Cohen (2001) *Harnessing Complexity: The Organizational Implications of a Scientific Frontier*. New York: Basic Books.

Ball, Philip (2006) *Critical Mass: How One Thing Leads to Another*. London: Farrar, Straus and Giroux.

Barry, Andrew, Thomas Osborne and Nicholas Rose (1996) *Foucault and Political Reason: Liberalism, Neo-liberalism, and Rationalities of Government*. Chicago: University of Chicago Press.

Benkler, Yochai (2006) *The Wealth of Networks: How Social Production Transforms Markets and Freedoms*. New Haven, CT: Yale University Press.

Bratich, Jack Z. (2007) 'Programming Reality: Control Societies, New Subjects, and the Powers of Transformation', pp. 6–22 in Dana Heller (ed.) *Makeover Television: Reality Remodeled*. London: I.B. Tauris.

Burcher, Graham, Colin Gordon and Peter Miller (eds) (1991) *The Foucault Effect: Studies in Governmentality*. Chicago: University if Chicago Press.

Castells, Manuel (1994) *Technopoles of the World: The Making of 21st-century Industrial Complexes*. London: Routledge.

Connolly, William E. (2002) *Neuropolitics: Thinking, Culture, Speed*. Minneapolis: University of Minnesota Press.

Cooper, Melinda (2008) *Life as Surplus: Biotechnology and Capitalism in the Neoliberal Era*. Seattle, WA: University of Washington Press.

Couldry, Nick and Jo Littler (2008) 'The Work of Work: Reality TV and the Negotiation of Neoliberal Labour', in Thomas Austin and Wilma de Jong (eds) *Rethinking Documentary: New Perspectives and Practices*. Milton Keynes: Open University Press.

Dawkins, Richard (2006) *The Selfish Gene: 30th Anniversary Edition with a New Introduction by the Author*. Oxford: Oxford University Press.

De Angelis, Massimo and David Harvie (2006) 'Cognitive Capitalism and the Rat Race: How Capital Measures Ideas and Affects in UK Higher Education', paper delivered at the International Conference on Immaterial Labour, Multitudes and New Social Subjects: Class Composition in Cognitive Capitalism, 29–30 April, King's College, University of Cambridge, URL (consulted October 2009): http://www.geocities.com/immateriallabour/angelisharviepaper2006.html

Dyer-Witheford Nick and Greg de Peuter (2009) *Games of Empire*. Minneapolis: University of Minnesota Press.

Esposito, Roberto (2008) *Bios: Biopolitics and Philosophy*, trans. Timothy Campbell. Minneapolis: University of Minnesota Press.

Foucault, Michel (1984) 'Preface', in Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*. London: Athlone Press.

Foucault, Michel (2001) *The Order of Things: An Archaelogy of the Human Sciences*. London and New York: Routledge.

Foucault, Michel (2007) *Security, Territory, Population: Lectures at the Collège de France, 1977–1978*, edited by Michel Sellenart, trans. Graham Burchell. Basingstoke: Palgrave Macmillan.

Foucault, Michel (2008) *The Birth of Biopolitics: Lectures at the Collège de France, 1978–1979*, edited by Michel Sellenart, Arnold I. Davidson, Alessandro Fontana and François Ewald, trans. Graham Burchell. Basingstoke: Palgrave Macmillan.

Fumagalli, Andrea (2007) *Bioeconomia e capitalismo cognitivo: verso un nuovo paradigma di accumulazione*. Roma: Carrocci editore.

Galloway, Alexander R. (2006) *Protocol: How Control Exists after Decentralization*. Minneapolis: University of Minnesota Press.

Grosz, Elizabeth (2004) *The Nick of Time: Politics, Evolution and the Untimely*. Durham, NC: Duke University Press.

Guala, Francesco (2006) 'Review of Michel Foucault's *The Birth of Biopolitics*', *Economics and Philosophy* 22: 429–39.

Hall, Stuart (1977) 'Culture, the Media and the "Ideological Effect"', pp. 311–48 in James Curran, Michael Gurevich and Janet Wollaccott (eds) *Mass Communications and Society*. Milton Keynes: Open University.

Hardt, Michael and Antonio Negri (2000) *Empire*. Cambridge, MA: Harvard University Press.

Hayles, N. Katherine (1999) *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*. Chicago, IL: University of Chicago Press.

Kelly, Kevin (1995) *Out of Control: The New Biology of Machines, Social Systems and the Economic World*. New York: Basic Books.

Kelly, Kevin (1999) *New Rules for the New Economy*. London: Penguin.

Knorr Cetina, Karen (2006) 'The Market' [Special Issue on Problematizing Global Knowledge], *Theory, Culture & Society* 23(2–3): 551–6.

Knorr Cetina, Karen and Urs Bruegger (2000) 'The Market as an Object of Attachment: Exploring Postsocial Relations in Financial Markets', *Canadian Journal of Sociology* 25(2): 141–68.

Lazzarato, Maurizio (1997) *Lavoro immateriale: forme di vita e produzione di soggettività*. Verona: Ombre Corte.

Lazzarato, Maurizio (2002) *Puissances de l'invention: la psychologie économique de Gabriel Tarde contre l'économie politique*. Paris: Les Empêcheurs de Penser en Rond.

Lazzarato, Maurizio (2004) *La politica dell'evento*. Cosenza: Rubbettino editore,

Lazzarato, Maurizio (2009) 'Neoliberalism in Action: Inequality, Insecurity, and the Reconstitution of the Social', *Theory, Culture & Society* 26(6).

Lillo, Fabrizio, Esteban Moro, Gabriella Vaglica and Rosario N. Mantegna (2008) 'Specialization and Herding Behavior of Trading Firms in a Financial Market', *New Journal of Physics* 10: 2–14.

Macey, David (2009) 'Biopolitics, Political Economy and Power: A Transcolonial Genealogy of Inequality', *Theory, Culture & Society* 26(6).

Marshall, Alfred (2006 [1890]) *Principles of Economics*, abridged edn. New York: Cosimo Classics.

Massumi, Brian (2009) 'National Enterprise Emergency', *Theory, Culture & Society* 26(6).

MacKenzie, Donald and Yuval Millo (2003) 'Constructing a Market, Performing Theory: The Historical Sociology of a Financial Derivatives Exchange', *American Journal of Sociology* 109(1): 107–45.

Meusburger, Peter, Joachim Funke and Edgar Wunder (eds) (2009) *Milieus of Creativity: An Interdisciplinary Approach to Spatiality and Creativity*. New York: Springer.

Ong, Aihwa (2006) *Neoliberalism as Exception: Mutations in Sovereignty and Citizenship*. Durham, NC: Duke University Press.

Rajan, Kaushik Sunder (2006) *Biocapital: The Constitution of Postgenomic Life*. Durham, NC: Duke University Press.

Readings, Bill (1997) *The University in Ruins*. Cambridge, MA: Harvard University Press.

Revel, Judith (2009) 'Identity, Nature, Life: Three Biopolitical Deconstructions', *Theory, Culture & Society* 26(6).

Roggero, Gigi (2009) *La produzione del sapere vivo: crisi dell'università e trasformazione del lavoro tra le due sponde dell'Atlantico*. Verona: Ombre Corte.

Rose, Nicholas (1989) *Governing the Soul: The Shaping of the Private Self*. London and New York: Free Association Books.

Rose, Nicholas (2007) *The Politics of Life Itself: Biomedicine, Power and Subjectivity in the Twenty-first Century*. Princeton, NJ: Princeton University Press.

Taussig, Michael (1993) *Mimesis and Alterity: A Particular History of the Senses*. London and New York: Routledge.

Terranova, Tiziana (2004) *Network Culture: Politics for the Information Age*. London: Pluto Press.

Terranova, Tiziana (2009) '*New Economy*, finanziarizzazione e produzione sociale nel Web 2.0', pp. 135–50 in Andrea Fumagalli and Sandro Mezzadra (eds) *Crisi dell'economia globale: mercati finanziari, lotte sociali e nuovi scenari politici*. Verona: Ombre Corte/Uninomade.

Venn, Couze (2009) 'Liberal Political Economy, Biopolitics and Colonialism: A Transcolonial Genealogy of Inequality', *Theory, Culture & Society* 26(6).

Wiener, Norbert (1988) *The Human Use of Human Beings: Cybernetics and Society*. London: Free Association

Tiziana Terranova teaches, researches and writes about the culture and political economy of new media. She has studied, taught and researched such subjects at various UK universities. She is currently Associate Professor in the Sociology of Communications at the Università degli Studi di Napoli 'L'Orientale' where she is also vice-director of the PhD Programme in Cultural and Postcolonial Studies. She is the author of *Network Culture: Politics for the Information Age* (Pluto Press, 2004) and numerous other essays and reviews for newspapers, magazines and journals (*Il Manifesto*; *Mute*; *Social Text*; *Theory, Culture & Society*). [email: tterranova@unior.it]