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Rethinking Biopolitics: The New Materialism and the Political Economy of Life

Forty years ago, the French philosopher and historian Michel Foucault first pronounced in a lecture the semantic merger of life and politics that would shape his subsequent work and the ensuing theoretical debates (Foucault 2000a, 137).¹ His notion of “biopolitics” points to a historical shift at the threshold of modernity. According to Foucault, biopolitics marks a discontinuity in political practice since it places life at the center of political rationalities and technologies. He distinguishes historically and analytically between two dimensions of biopolitics: the disciplining of the individual body and the social regulation of the population. Furthermore, Foucault’s concept signals a theoretical critique of the sovereign paradigm of power. According to this model, power is exercised as interdiction and repression in a framework of law and legality. In contrast Foucault stresses the productive capacity of power, which cannot be reduced to the ancient sovereign “right of death.” While sovereignty seized hold of life in order to suppress it, the new life-administering power is dedicated to inciting, reinforcing, monitoring and optimizing the forces under its control (Foucault 1980; 2003).

There has been a remarkable interest in the Foucauldian notion of biopolitics since his

death in 1984. It is possible to discern several distinct lines of reception. First there are theoretical proposals that seek to “update” Foucault’s work for an analytics of contemporary societies. Gilles Deleuze and Donna Haraway have explicitly challenged the logics of discipline and idea of the body as an integral natural entity by pointing to new mechanisms of control and changing medical and scientific concepts of the body (Deleuze 1995; Haraway 1991). Secondly, we can identify endeavors that suggest an alternative genealogy of biopolitics. Giorgio Agamben and Achille Mbembe have emphasized that biopolitical interventions are not limited to Western modernity; they can be traced back to Greek antiquity (Agamben 1998) and extend beyond the Western hemisphere into the (post-)colonial past (Mbembe 2003). The third area of inquiry concentrates on the mode of the political: what rationality or logic characterizes biopolitical practices and what counterforces do these practices mobilize? How does biopolitics differentiate itself analytically and historically from other eras and from other political formations? Here the writings of Michael Hardt and Antonio Negri, and the work of Roberto Esposito are of crucial interest. While the former identify a new form of biopolitical production, characterized by the tight interlocking of economic structures with juridico-political arrangements, Esposito draws our attention to a “paradigm of immunization” which, he argues, allows the two opposing dimensions of biopolitics – advancement and development of life, on the one hand, and its destruction and elimination, on the other – to be conceived of as two constitutive aspects of modern political thought (Hardt and Negri 2000; 2004; Esposito 2008). The fourth line of reception originates in science and technology studies, medical sociology, and anthropology, as well as in feminist theory and gender studies. The main focus here is on the matter of life. If, as a consequence of bio-scientific innovations, the living body is regarded today less as an organic substratum than as molecular software that can be read and rewritten, then the question as to the foundations, means, and ends of biopolitics needs to be posed in a different manner. In this area of research the writings of Paul Rabinow and Nikolas Rose are of vital importance (Rabinow 1992; Rabinow and Rose 2006; Rose 2007).²

My contribution explores promising areas of research that have so far received little attention in work on biopolitics. I will focus especially on two of them: first on the so-called new materialism, which proposes to reconsider and reevaluate materiality by conceiving of matter as active, forceful and plural rather than passive, inactive and unitary (Bennett 2004; Alaimo and Hekman 2008; Colebrook 2008; Coole and Frost 2010b); and secondly on work on the “bioeconomy” which investigates the systematic relations between (neo-liberal) capitalism on the one hand and changing concepts of life and the emergence of a biotech

industry on the other (for an overview see Helmreich 2008; Birch and Tyfield 2013). As I will argue, both lines of research open up new directions in the analysis of biopolitics by inquiring into the mode of politics and the matter of life. Both go beyond Foucault's original formulation of biopolitics, which was centered around the poles of population and individual, and seek to address a different topography of power. While the new materialism questions the traditional concept of life that takes for granted the distinction between organic and inorganic, or between matter and life, in order to investigate "vibrant matter" (Bennett 2010), theorists of the bioeconomy shift the analytical interest from the state, population policies and national governance, to economic processes and capitalist strategies that take the preservation or enhancement of vitality and well-being as their object (see e.g. Rajan 2006; Cooper 2008).

After briefly presenting the two areas of research, I will explore the perspectives of Foucault's work vis-à-vis the two challenges. I will argue for a closer realignment of the concepts of biopolitics and governmentality as a way of addressing the two challenges and overcoming the (anthropocentric) limitations of Foucault's work. The focus is on an alternative concept of government that Foucault only briefly discusses in his lectures on governmentality: the idea that "to govern means to govern things" (2007, 97). I suggest that the idea of a "government of things" makes it possible to arrive at a different concept of matter and of the political economy of life.

1. Challenge I: From Biopolitics to Bioeconomy

Biotechnological innovations and biomedical developments have often generated high expectations and hopes. They have been associated with the idea that new markets, services and products will emerge to profoundly change and revolutionize societies and economies. This vision has been taken up in ambitious political action plans by the Organisation for Economic Cooperation and Development (OECD) and the European Union, and in national initiatives, and postulates that the boundaries and the substance of the economic have to be redefined. The economy, according to this projection, will soon transform itself into a "bioeconomy."

In 2006, the OECD published *The Bioeconomy to 2030: Designing a Policy Agenda*. "Bioeconomy" is defined in this programmatic text as a society's sum total of economic operations which use the potential value of biological products and processes in order to create new growth and prosperity for citizens and nations (OECD 2006, 3). At approximately the same time as the OECD document appeared, the European Commission (EC) adopted a

plan with a similar goal. The EC stressed the potential of a “knowledge-based bioeconomy” (KBBE) that would simultaneously strengthen European competitiveness in international markets, help to protect the environment, and develop more sustainable forms of energy, food, and biological renewable materials (European Commission 2005).

Both the EC’s and the OECD’s programs are meant to promote new products and services derived from bio-scientific innovations, as are national initiatives like the creation of the Bioeconomy Council in Germany, in 2009, to recommend strategies and action plans for a sustainable bioeconomy. Central to this vision, therefore, is the constitution and regulation of markets rather than a fundamental realignment of the economy, as the term “bioeconomy” tends to suggest.

This enlarged meaning of the word also appears in academic works which, in contrast to the political programs, observe a decisive and structural transformation of economic relations. In the past decade, scholars have proposed a variety of new terms and concepts to critically evaluate the articulation of biotechnological innovations and transformations, in economic structures and contemporary capitalist regimes. These propositions include: “recombinant capital” (Thacker 2005), “bio-informational capitalism” (Peters 2012), “biomedical mode of reproduction” (Thompson 2005), “biovalue” (Waldby 2000), “biocapital” (Sunder Rajan 2006), “lively capital” (Sunder Rajan 2012) and “life as surplus” (Cooper 2008).

The concepts often differ significantly, and they all merit an extensive discussion – something that is beyond the scope of this chapter. Here, I will focus on one of the most influential accounts conceptualizing the link between capitalism and the life sciences: the concept of biocapital in Kaushik Sunder Rajan’s book *Biocapital: The Constitution of Postgenomic Life* (2006). While Sunder Rajan did not coin the term “biocapital,”³ his book has done much to popularize the concept by providing an insightful account of the relationship between bioscientific innovations and transformations in contemporary capitalism. From a theoretical standpoint, Sunder Rajan links Foucault’s concept of biopolitics to Marx’s critique of political economy, situating both within his anthropological analysis (*Ibid*, 3-15, 78-79). His empirical thesis is that the emergence of the biosciences marks a new form and a new phase of capitalism (*Ibid*, 3). He argues that the constitution of biocapital can be mapped through a dual perspective:

[O]n the one hand, what forms of alienation, expropriation, and divestiture are necessary for a “culture of biotechnology innovation” to take root? On the other hand,

how are individual and collective subjectivities and citizenships both shaped and conscripted by these technologies that concern “life itself”? (*Ibid*, 78)

The book is based on a multiplicity of field studies, observations, and interviews with scientists, physicians, entrepreneurs, and government representatives in the United States and India. It combines detailed ethnographic research with comprehensive theoretical reflection. Although the book’s subject matter is broad, the empirical focus of its analysis is centered on the development of pharmaceuticals and, especially, how genomic research has transformed their production. An important aspect of contemporary pharmaceutical research is that it aims to create “personalized medicine,” that is to say, medicine the production of which is based on the genetic traits of the patient.

Sunder Rajan argues that the scientific production of knowledge can no longer be separated from the capitalist production of value. Two risk discourses permeate each other in this area of pharmaceutical research: the medical risk that current and future patients have of suffering from a major illness and the financial risk of pharmaceutical companies whose great investment in research and development will, it is hoped, ultimately result in commodities. Sunder Rajan describes this branch of industry as a special form of capitalism: a speculative capitalism that is based less on the manufacture of concrete products than on hopes and expectations, bringing together, into an “organic” synthesis, the hope of patients that new medical treatments will be developed, and the zeal of risk capitalism for future profits. An important aspect of the book and its analysis of biocapital is the emphasis it puts on the speculative dimension of biocapital. Sunder Rajan stresses the importance of visions, hype, and promises. From this starting point, he is able to make the argument that, since the circulation of capital cannot be separated from expectations and hope, the production of economic value is tied to moral values and ethical questions (*Ibid*, 41, 56).

Sunder Rajan’s work on biocapital is part of a more general theoretical reconsideration. In a very influential and insightful article, Stefan Helmreich has identified two distinctive clusters of theories or “species of biocapital”: first, a Marxist-feminist cluster including the work of social scientists like Sarah Franklin, Margaret Lock and Charis Thompson, which is concerned with (re-)production and focuses on the analysis of biological matter (Franklin 2003; 2006; Lock 2001; Franklin and Lock 2003a; Thompson 2005); second, a Weberian-Marxist cluster interested in questions of meaning and focusing on how “relations of production are described alongside accountings of ethical subjectivity” (Helmreich 2008, 471). In addition to Sunder Rajan’s work, the second cluster contains

contributions by Eugene Thacker (2005), Mike Fortun (2008) and others. Helmreich rightly notes that all “species of biocapital” present a specific fusion of Marx’s political economy and Foucault’s concept of biopolitics, and that there are often overlaps between the two clusters of theories (2008, 471).

However, the exact theoretical relation between Marx and Foucault, between “bioeconomy” and “biopolitics,” often remains unclear. While some scholars seem to subscribe to the idea of a “new phase of capitalism”, engendered by the emergence of a biotech industry and new biotechnological innovations (e.g. Cooper 2008), others prefer to distance themselves from Marxist theory and to diagnose a straightforward shift from biopolitics to bioeconomics (e.g. Rose 2001, 15). In a critical review of the literature on “bioeconomy”, “biovalue” and “biocapital”, Kean Birch and David Tyfield have identified several inconsistencies and ambiguities in this area of research (2013, 307-313). First, there is an issue with how to link “vitality” and value, especially in the concept of biovalue originally formulated by Catherine Waldby (2000, 33). The concept seems to be based on the idea of an already present and ever-abundant vitality that pertains to biological material – an idea that conflicts or even contradicts the insight that health and well-being are, at least in part, socially mediated or constructed. Birch and Tyfield stress that biological matter cannot be the source of value in itself; rather, it is the knowledge that makes it possible to transform cells, tissue and genes into commodities that is valuable. Secondly, they argue that the analytic distinction between economic value and ethical values tends to collapse in many works on the bioeconomy. According to Birch and Tyfield, many writings tend to downplay the importance of political-economic processes by overemphasizing ethical values and subjectivities. Finally, they argue that Marxist concepts like surplus, capital and value are only selectively adopted without adequately addressing their original formulations in Marxism, especially in the labor theory of value. Birch and Tyfield hold that this unclear appropriation of Marxist terminology “renders these STS theories of the bioeconomy opaque” (2013, 307).

Following Birch and Tyfield, one might critically inquire into the general danger of fetishizing the notion of “bio” (2013, 309). It is necessary to investigate the (analytical and critical) value of notions like biovalue, biocapital and bioeconomy; otherwise, critical analysis runs the risk of either essentializing biological processes as something original and vital that is captured and exploited by capitalism, or taking the rhetoric of the bioeconomy as a new area of production and industry at face value.

Despite all the critical points one might want to raise concerning theoretical ambiguities or inconsistencies, the fact remains that we can give credit to work on the political economy of

life for extending the traditional focus on political institutions and actors, to address economic structures and dynamics. This work also goes beyond the Foucauldian poles of individuals and populations, to take into account the non-human or life-forms beyond the human: genes, cells, embryos, organs and tissue (Helmreich 2008, 464). At this point the theoretical interest in the bioeconomy links up with the debate about the new materialism. While scholars working on the “bioeconomy” address living matter in their analyses, new materialists tend to define matter as living.

2. Challenge II: From Biopower to Thingpower

Recently, social and political theory has demonstrated a renewed theoretical interest in matter and materiality. The “new materialism”, as it is sometimes called (e.g. Hird 2004; Ahmed 2008; Coole and Frost 2010a; Dolphijn and van der Tuin 2012), does not represent a homogeneous style of thought or a single theoretical position but encompasses a plurality of different approaches and disciplinary perspectives, ranging from science and technology studies, via feminist theory and political philosophy, to geography (Latour and Weibel 2005; Alaimo and Hekman 2008; Bennett 2010; Braun and Whatmore 2010a). The new materialist scholarship shares the conviction that the “linguistic turn” or primarily textual accounts are insufficient for an adequate understanding of the complex and dynamic interplay of meaning and matter. New materialists often stress that the focus on discourse, language and culture not only leads to impoverished theoretical accounts and conceptual flaws but also results in serious political problems and ethical quandaries, as it fails to address central challenges facing contemporary societies, especially economic change and the environmental crisis.⁴ The “material turn” (Bennett and Joyce 2010) criticizes the idea of the natural world and technical artifacts as a mere resource or raw material for technological progress, economic production or social construction. It aims at a new understanding of ontology, epistemology, ethics and politics, to be achieved by overcoming anthropocentrism and humanism, the split between nature and culture, linguistic or discursive idealism, social constructivism, positivism, and naturalism. Central to this movement is the extension of the concept of agency and power to the non-human, thereby also calling into question conventional understandings of life.

One of the most important representatives of the new materialism is Jane Bennett. Her starting point in *Vibrant Matter: A Political Ecology of Things* (2010) is the assumption that matter must be addressed as an active part of a political process that has so far been dominated by human subjectivity. The aim of the book is to rethink the traditional distinctions between matter and life, inorganic and organic, passive object and active subject (2004, 353-354). Instead, Bennett invites us to conceive of a “vitality of matter” (2010, vii), a concept that disturbs and upsets this conventional mindset:

By “vitality” I mean the capacity of things – edibles, commodities, storms, metals – not only to impede or block the will and designs of humans but also to act as quasi agents or forces with trajectories, propensities, or tendencies of their own. (2010, viii)

Seen in this light, agency is no longer an exclusive property of human beings. Rather, the force of non-human actors in events needs to be acknowledged. Bennett employs and synthesizes a heterogeneous bunch of theoretical concepts and ideas, from Lucretius, Spinoza, Adorno, Latour, Thoreau, Bergson, Dewey, and Deleuze and Guattari, to arrive at a different concept of agency. First, she argues that agency needs to be “distributed across a wider range of ontological types” (*Ibid*, 9) that cuts across the human-non-human divide so that things like food and minerals, can be reconceptualized as actants. Secondly, she moves beyond the focus on individual bodies and their borders to propose a concept of action that is conceived of as the effect of certain configurations of human and non-human forces. Bennett coins the term “thing power” to account for the ability of inanimate things to produce effects by operating in conjunction with other material bodies.

In relation to the problem of biopolitics, one might diagnose a certain ambiguity in Bennett’s work. She claims that “everything is, in a sense, alive” (*Ibid*, 117). However, this position is only partly convincing. While it is certainly right to conceive of life not as a property that pertains to specific bodies but as a process or rather the outcome of certain materializations, it might be more accurate to distinguish between differently composed materialities and various complexities of conjunctions between bodies – in which the distinction between animate and inanimate bodies may play a crucial role. Bruce Braun and Sarah Whatmore rightly ask whether it might be more pertinent to attend to “the *specificity* of the matter at hand, as opposed to a generic analogy to ‘life’ that could be described as a metaphysics” (Braun and Whatmore 2010b, xxix, emphasis in original; see also Braun 2008, 675-677).⁵

However, the new materialism does not represent a homogeneous strand of thought or a single theoretical perspective, but encompasses a plurality of different approaches that converge on at least one point: the claim that matter is not a stable and given property but rather the fluid and contingent effect of practices. Its theoretical strength lies in the fact that it makes it possible to question the seemingly stable borderline between the organic and the inorganic and the idea of life as a fundamental biological fact.

To sum up, the research on the bioeconomy and the new materialism poses important challenges and seriously affects the concept of biopolitics. First, it seems that Foucault’s concept of power does not provide a dynamic concept of materiality that takes account of the materialization of human as well as non-human bodies (Barad 2007, 200). His anthropocentrism fails to see that biopolitical interventions encompass the “‘making-up’ of

both people and things” (Rutherford 1999, 44; emphasis in original). In Foucault’s writings, and in most work in his legacy, the notion of biopolitics remains intimately linked to the constitution and transformation of human bodies, defining “the entry of phenomena peculiar to the life of the human species into the order of knowledge and power” (Foucault 1980, 141-142). Secondly, Foucault’s concept of biopolitics is apparently unprepared to adequately address the political economy of life. It focusses on political rationalities and strategies at the expense of analyzing the complex of economic processes, bio-scientific innovations and technological developments that allow access to “life itself” (Franklin 2000). It seems that Foucault’s concept of biopolitics is incapable of accounting for how the politicization of life is intertwined with its economization, and cannot provide the conceptual tools for a critical analysis of the bioeconomy.

In the following, I propose to resituate the concept of biopolitics within an analytics of government, as a way of overcoming some of the limitations of Foucault’s original work and addressing the critical points raised by work on the bioeconomy and in the new materialism.

3. The Government of Things

In his writings on discipline in the mid-1970s Foucault repeatedly pointed out that the power of the economy was vested in a prior “economy of power” (2008, 65), because the accumulation of capital presumes technologies of production and forms of labor that make it possible to put to use a multitude of human beings in an organized and profitable manner. By this theoretical reorientation, Foucault hoped to complement and extend Marx’s critique of political economy to a critique of “political anatomy” (1977, 221). In his lectures of 1978 and 1979 at the Collège de France Foucault takes this form of analysis one step further, combining the “microphysics of power” (*Ibid*, 28) with the macropolitical question of the state. He shows that the economy defines a distinctive dimension or plane of existence under quite specific historical and institutional conditions that are linked to the emergence of liberal government. As a result, the economy cannot be conceived of as a given object independent of and external to political regulation. Quite on the contrary, the “art of government” (Foucault 2007, 92) is not limited to the field of politics as separated from the economy; instead the constitution of a conceptually and practically distinguished space, characterized by autonomous laws and a proper rationality, is itself an internal differentiation of “economic” government: “a form of schematization peculiar to a particular technology of government” (Foucault 2008, 319).

There is a second theoretical displacement in the lecture series on governmentality in relation to Foucault's previous work, especially the work on biopolitics. When in the lectures of 1978 and 1979 Foucault defines "liberalism as the general framework of biopolitics" (2008, 22), this results from the self-critical insight that his analysis, until then, had been one-sided and unsatisfactory, because it focused mainly on processes involving population regulation, and the corporeal disciplining of human bodies. In *Discipline and Punish* (Foucault 1977) and *The History of Sexuality, Volume 1* (Foucault 1980), the investigation of subjectification processes essentially limits itself to subjugation and corporeal dressage, hence to the dimension of *zoé*, with techniques of self-formation receiving little attention. With the problem of government, the perspective broadens and the question of moral and political existence also emerges: the problem, then, of *bíos*.⁶ Beyond technologies of bodily disciplining and the regulation of the population, attention is now also drawn to the self-constitution of individual and collective subjects – what Foucault in his later work came to call "political technologies of individuals" and "technologies of the self" (Foucault 2000b, 404, and 1997a, 223).⁷

Taken together, these two theoretical shifts result in a closer realignment of the concepts of governmentality and biopolitics. The idea of biopolitics as an "art of government" makes it possible to address the challenges of the new materialism and of work on the "bioeconomy." Foucault's revised perspective on biopolitics enables us to study the interplay of moral values and economic value. It investigates the entanglement of concepts of life, vitality and health on the one hand, and the constitution of markets and products on the other. The new analytical focus results in the concept of a "vital politics." This idea stems from Alexander Rüstow, one of the most important representatives of postwar German liberalism, whom Foucault briefly touches on in the 1979 lecture (Foucault 2008, 148; 157). By "vital politics," Rüstow means a form of politics "that considers all factors upon which happiness, well-being, and satisfaction in reality depend" (1955, 70). This politics is, he indicates, by no means limited to action by the state, but "is politics in the broadest possible sense..., all social measures and experimental arrangements" (1957, 235); it relies on social ties and spiritual cohesion and reactivates moral values and cultural traditions, its goal being to insert an "ever more dense net and weave of living ties [lebendiger Bindungen] into the entire social realm" (*Ibid*, 238). This is a task of innovation that needs to take in all societal elements and levels, while simultaneously acknowledging their self-directing competencies.

Foucault's analytics of government takes account of these vital political ambitions of (neo-)liberal governmental practice, tying the analysis of physical-biological being to an

examination of subjectification processes and moral-political modes of existence. This theoretical interest becomes clear when he discusses Moheau's *Recherches et considerations sur la population de la France* in his lectures, describing the author as "the first great theorist of what we could call biopolitics" (Foucault 2007, 22).⁸ Foucault no longer refers to the biological or physical dimension of biopolitics alone, but cites approvingly Moheau's idea that government means to "govern the physical *and* moral existence of their subjects" (Moheau, cited in *Ibid*, 23, emphasis by Lemke).

The concept of a "government of things" that Foucault introduces in the lectures of 1978 and 1979 at the Collège de France makes it possible to respond to the critical points new materialist scholars raise vis-à-vis Foucault's concept of biopolitics. It not only investigates the relations between the physical and the moral, but combines this analysis with a focus on the interactions between the natural and the artificial.⁹ The idea of a "government of things" was originally proposed by Guillaume de la Perrière in an early modern tract on the art of government.¹⁰ Here, government is conceived of as "the right dispositions of things arranged so as to lead to a suitable end" (de la Perrière, cited in Foucault 2007, 96). According to Foucault, de la Perrière's notion of a "government of things" does not constitute an additional domain of government apart and separate from the government of men. Rather than restaging "an opposition between things and men," it relies on "a sort of complex of men and things" (*Ibid.*). It is worth quoting the whole passage:

The things government must be concerned about, La Perrière says, are men in their relationships, bonds, and complex involvements with things like wealth, resources, means of subsistence, and, of course, the territory with its borders, qualities, climate, dryness, fertility, and so on. "Things" are men in their relationships with things like customs, habits, ways of acting and thinking. Finally, they are men in their relationships with things like accidents, misfortunes, famine, epidemics, and death. (*Ibid.*)

Following Foucault's interpretation, the "art of government" does not conceive of interactions between two stable and fixed entities – "humans" and "things". Rather, Foucault employs a relational approach. This is why "things" appears in inverted commas. In fact, the qualification "human" or "thing" and the political and moral distinction between them is itself an instrument and effect of the art of government, and does not constitute its origin or point of departure. Thus, the "government of things" does not rely on a foundational sorting of

subjects and objects. Quite on the contrary, Foucault questions the idea that contrasts active subjects with passive objects. He employs the term “subject-object” (2007, 44; 77) to address the phenomenon of the population as on the one hand a material body, “on which and towards which mechanisms are directed,” and on the other “a subject, since it is called upon to conduct itself in such and such a fashion” (*Ibid*, 42-43). In this perspective, the art of government determines what is defined as subject and object, as human and non-human. It establishes and enacts the boundaries between socially relevant and politically accepted existence and “pure matter,” something that does not possess legal-moral protection and is “reduced” to “things.”¹¹

The idea of a “government of things” takes a more concrete form when Foucault analyses the concept of the milieu (2007, 20-23; 77-78). He argues that the milieu defines an “intersection between a multiplicity of living individuals working and coexisting with each other in a set of material elements that act on them and on which they act in turn” (*Ibid*, 22). Here, Foucault quite clearly accepts the idea that agency is not exclusively a property of humans; rather, agential power originates in relations between humans and non-human entities. Also, the milieu articulates the link between the natural and the artificial without systematically distinguishing between them. According to Foucault, the milieu provides the “point of articulation” (*Ibid.*) between the “natural” and the “artificial,” the physical and the moral. Here we note that Foucault does not take non-human nature for granted, but is interested in how it is articulated within practices – practices that are here conceived as “more-than-human” practices.¹²

The idea of a government of things helps to enact a different understanding of biopolitics that no longer exclusively addresses “the basic biological features of the human species” (*Ibid*, 2). This important theoretical shift entails two important dimensions. First, we see a move beyond a concept of biopolitics as limited to the physical and biological existence to a “government of things” that takes into account the “intrication of men and things” (*Ibid*, 97), the natural and the artificial, the physical and the moral. Secondly, the biological can only play out in a certain “milieu.” In the perspective of a government of things, neither nature nor life is a self-evident and stable entity or property. Foucault refers to “a multiplicity of individuals who are and fundamentally and essentially only exist biologically bound to the materiality within which they live” (*Ibid*, 21). In this perspective, life is not a given but depends on conditions of existence within and beyond life processes.¹³

4. The Historical Ontology of Life

New materialists sometimes claim that Foucault has to be subsumed under the category of social constructivism and anthropocentrism (see e.g. Braun 2008, 668). The charge is that Foucault's work remains within the "traditional humanist orbit" (Barad 2007, 235), restricting agency to human subjects without taking into consideration the agential properties of non-human forces. In this light, some argue that Foucault's notion of biopower "might have been adequate to eighteenth- and nineteenth-century practices, but not contemporary ones" (Barad 2007, 200; see also Haraway 1997, 12).

This chapter suggests a more nuanced assessment based on elements in Foucault's work on governmentality. The concept of a "government of things" does not take life as an essence or a pre-given that at some point in history enters "into the order of knowledge and power" (Foucault 1980, 141-142); quite on the contrary, it inquires into the conditions of the emergence of "life" as a distinctive domain of practice and thought. The "historical nominalism" Foucault proposes in the governmentality lectures (2008, 318), in analyzing "politics" and "the economy", is also useful for investigating the matter of life. According to Foucault, these entities are "things that do not exist and yet which are inscribed in reality and fall under a regime of truth dividing the true and the false" (*Ibid*, 20). Like "politics" and "the economy," "life" is not an object that is always already there, nor can it be reduced to an (illusionary or ideological) effect brought about by scientific practices. Rather, it has to be conceptualized as a "transactional reality" (see *ibid*, 297), that is to say a dynamic ensemble of matter and meaning that finally makes it possible to account for the "historical ontology" (Foucault 1997b, 315) of life.

The "relational materialism" (Mol 2013, 381) of a "government of things" might prove more fruitful in exploring the material and technical conditions that produce "life," dependent on, and operating in, historical specific conjunctions with other bodies, than the idea of an all-encompassing "vitality of matter" and an original "force of things" (Bennett 2004). Furthermore, it might be helpful in evading the "fetishisation of the 'bio'" (Birch and Tyfield 2013, 309) in much of the literature on biocapital, bioeconomy, and so on, as it does not endorse the idea of a singular and stable substance and an originary force of life. This perspective also invites us to reconsider the notion of resistance, or rather a certain concept of resistance, that tends to re-inscribe passivity or rearticulate the opposition of activity versus passivity, instead of conceiving of the agential properties of human and non-human bodies, and their eventfulness and indeterminacy (see Braun and Whatmore 2010b: xx-xxii).

Finally, in Foucault's account, the "bioeconomy" is not a "new face, and a new phase of capitalism" (Sunder Rajan 2006, 3); rather, the economy has been a political economy of

life from its very beginnings. Already in his early work, Foucault reminds us that the eighteenth century emergence of political economy cannot be separated from the beginnings of modern biology. Liberal concepts of autonomy and freedom are closely connected to biological concepts of self-preservation and self-regulation that came to prevail over the previously dominant physical-mechanistic model for investigating the body. Originating by 1800, biology was based on an organizational principle understanding the visible phenomena of life as emerging essentially at random, without a set plan. Internal organization thus replaced an external order corresponding to the plans of a higher authority beyond life, with “life” functioning as an abstract and dynamic principle equally inherent in all organisms. Categories such as self-preservation, reproduction, and development now came to characterize living bodies, placed at a greater distance from artificial creations than had been the case before (Foucault 1970).¹⁴

It has to be stressed that Foucault’s writing did not so much systematically pursue as offer promising suggestions for the analytic perspective outlined here. He never concretized his remarks on the relation between biopolitics and (neo-)liberalism, though this was meant to stand at the center of the 1979 lecture (see Foucault 2008, 21–2; 78). Nor did he ever actively develop the idea of government liberated from its anthropocentric connotations. However, while Foucault chose not to directly address the problem of human and non-human relations, or to extend his ideas on the political economy of life, the concept of a “government of things” addresses many critical points subsequently raised by new materialists and scholars of the bioeconomy in their readings of his work – and this analytical perspective might be helpful in overcoming some of their own shortcomings and limitations.

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² For a more extensive discussion of the different lines of reception, see Folkers and Lemke 2014.

³ See e.g. Franklin and Lock 2003b, 8.

⁴ In their edited volume *New Materialisms: Ontology, Agency, and Politics*, Diana Coole and Samantha Frost delineate three distinctive themes or topics in new materialist scholarship: (1) an “ontological reorientation” that takes up, or is even based on, developments in the natural sciences; (2) “consideration of a raft of biopolitical and bioethical issues concerning the status of life and of the human”; (3) “a critical and nondogmatic reengagement with political economy” (Coole and Frost 2010b, 6-7; see also Dolphijn and van der Tuin 2012).

⁵ As Bryan E. Bannon commented in his review of *Vibrant Matter*:

It is unproblematic to assert that all existing bodies are affective and susceptible to affectation, and one need not equate this two-sided capacity with life, even the asubjective life of metal that Bennett describes. If life is a *field of intensities* in the way Bennett describes, then, far from being a property, it is a particular way of *relating* to the affections that surround an assemblage. Thus, on Bennett’s own account, it is possible to assert that matter itself is not alive per se, but that life denotes a particular intricacy of responsiveness with complex alliances between smaller constituent assemblages. (Bannon 2011, 3; emphasis in original)

⁶ I here take up Giorgio Agamben’s distinction between *zoé* and *bíos* as two forms of life (Agamben 1998).

⁷ For a more extensive argument on this theoretical shift, see Lemke 2011. It is not only Foucault’s concept of biopolitics that changes after *The History of Sexuality, Volume 1*; his view of liberalism itself undergoes a shift of emphasis. Whereas in a text from 1977 he still understands political economy rather traditionally as an external limitation on power by law, in the lectures of 1978 and 1979 it stands for an inner self-limitation on power (Senellart 2004).

⁸ The book was first published in 1778 in Paris (for bibliographical information and the debate on the contested identity of the author, see Foucault 2007, 27 n.39).

⁹ For a more detailed account of the idea of a “government of things” in Foucault’s work and how it might be linked to the debate on the new materialism, see Lemke 2014.

¹⁰ Foucault is referring to the book *Le Miroire politique, œuvre non moins utile que nécessaire à tout monarches, roys, princes, seigneurs, magistrats, et autres surintendants et gouverneurs de Republicques* (Lyon 1555).

¹¹ See Agamben's work (1998), and especially his notion of "bare life" in this respect.

¹² The term "more-than-human" was coined by Braun and Whatmore (2010b, xii). On Foucault's interpretation of the "naturalism" (2008, 61) of liberalism and its focus on the "market milieu" (*ibid.*, 259) as a self-regulating matter of government, see Folkers 2013; see also Terranova 2009.

¹³ The philosopher of biology John Dupré has recently suggested that "functional biological wholes, the entities that we primarily think of as organisms, are in fact cooperating assemblies of a wide variety of lineage-forming entities" (Dupré 2012, 126). Dupré rejects the assumption that all cells in an organism belong to the same species. Quite on the contrary, "living things" according to this account are "extremely diverse and opportunistic compilations of elements from many distinct sources" (*Ibid.*). Dupré argues for a redefinition of "organisms" as "cooperating assemblies." In this perspective, human life only exists as the effect of symbiotic systems linking "human" and "non-human" life:

A functioning human organism is a symbiotic system containing a multitude of microbial cells – bacteria, archaea, and fungi – without which the whole would be seriously dysfunctional and ultimately non-viable. Most of these reside in the gut, but they are also found on the skin, and in all body cavities. In fact about 90 per cent of the cells that make up the human body belong to such microbial symbionts and, owing to their great diversity, they contribute something like 99 per cent of the genes in the human body. (*Ibid.*, 125)

For a "thing materialism" which points to the mineral conditions for the emergence of biological entities (bone), see Bennett (2004, 360).

¹⁴ Citing Foucault (2008, 16), Brian Massumi rightly stresses the importance of nature for the workings of (neo-)liberal governmentality:

"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.[...] The laws of nature are the formal mirroring, for the system, of the system's own pattern of actions. They are

the form in which the system internalizes the activity of its outside as its own.
(Massumi 2009, 165-66)